



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 150

- $A_1 = t_w = 0.6330$ in
- $A_2 = t_f = 1.0480$ in
- $B_1 = d = 24.5620$ in
- $B_2 = b_f = 14.0630$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U0-L1

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.2210	7.0315	99.9948	0.4748	0.0000	0.0000	0.4748
2	Flange Plates		29.4760	7.0315	207.2608	485.7848	0.0000	0.0000	485.7848
3	Cover Plate		0.0000	7.0315	0.0000	0.0000	0.0000	0.0000	0.0000
Total			43.70		307.26	486.26		0.00	486.26
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0315	in	S _{top} =	69.15	in ³	y-bar =	7.0315	in	S _{top} =	69.15	in ³
I _x =	486.26	in ⁴	S _{bott.} =	69.15	in ³	I _x =	486.26	in ⁴	S _{bott.} =	69.15	in ³
c _{top} =	7.0315	in	A =	43.6970	in ²	c _{top} =	7.0315	in	A =	43.6970	in ²
c _{bottom} =	7.0315	in	r _x =	3.3359	in	c _{bottom} =	7.0315	in	r _x =	3.3359	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	14.2210	12.2810	174.6478	598.1357	0.0000	0.0000	598.1357	
2	Left Flange	14.7380	0.5240	7.7227	1.3489	11.7570	2037.1936	2038.5425	
	Right Flange	14.7380	24.0380	354.2726	1.3489	11.7570	2037.1936	2038.5425	
3	Left Plate	0.0000	0.0000	0.0000	0.0000	12.2810	0.0000	0.0000	
	Right Plate	0.0000	24.5620	0.0000	0.0000	12.2810	0.0000	0.0000	
Total		43.70		536.64	600.83		4074.39	4675.22	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2810	in	S _{right} = 380.69 in ³	x-bar =	12.2810	in	S _{right} = 380.69 in ³
I _y =	4675.22	n ⁴	S _{left} = 380.69 in ³	I _y =	4675.22	n ⁴	S _{left} = 380.69 in ³
C _{right} =	12.2810	in	A = 43.6970 in ²	C _{right} =	12.2810	in	A = 43.6970 in ²
C _{left} =	12.2810	in	r _y = 10.3437 in	C _{left} =	12.2810	in	r _y = 10.3437 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 150

- $A_1 = t_w = 0.6330$ in
- $A_2 = t_f = 1.0480$ in
- $B_1 = d = 24.5620$ in
- $B_2 = b_f = 14.0630$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U1-L2

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x, gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.2210	7.0315	99.9948	0.4748	0.0000	0.0000	0.4748
2	Flange Plates		29.4760	7.0315	207.2608	485.7848	0.0000	0.0000	485.7848
3	Cover Plate		0.0000	7.0315	0.0000	0.0000	0.0000	0.0000	0.0000
Total			43.70		307.26	486.26		0.00	486.26
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0315	in	$S_{top} =$	69.15	in ³	y-bar =	7.0315	in	$S_{top} =$	69.15	in ³
$I_x =$	486.26	in ⁴	$S_{bott.} =$	69.15	in ³	$I_x =$	486.26	in ⁴	$S_{bott.} =$	69.15	in ³
$c_{top} =$	7.0315	in	A =	43.6970	in ²	$c_{top} =$	7.0315	in	A =	43.6970	in ²
$c_{bottom} =$	7.0315	in	$r_x =$	3.3359	in	$c_{bottom} =$	7.0315	in	$r_x =$	3.3359	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.2210	12.2810	174.6478	598.1357	0.0000	0.0000	598.1357
2	Left Flange		14.7380	0.5240	7.7227	1.3489	11.7570	2037.1936	2038.5425
	Right Flange		14.7380	24.0380	354.2726	1.3489	11.7570	2037.1936	2038.5425
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.2810	0.0000	0.0000
	Right Plate		0.0000	24.5620	0.0000	0.0000	12.2810	0.0000	0.0000
Total			43.70		536.64	600.83		4074.39	4675.22
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2810	in	S _{right} = 380.69 in ³	x-bar =	12.2810	in	S _{right} = 380.69 in ³
I _y =	4675.22	n ⁴	S _{left} = 380.69 in ³	I _y =	4675.22	n ⁴	S _{left} = 380.69 in ³
C _{right} =	12.2810	in	A = 43.6970 in ²	C _{right} =	12.2810	in	A = 43.6970 in ²
C _{left} =	12.2810	in	r _y = 10.3437 in	C _{left} =	12.2810	in	r _y = 10.3437 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 120

- $A_1 = t_w = 0.5590$ in
- $A_2 = t_f = 0.9220$ in
- $B_1 = d = 24.3100$ in
- $B_2 = b_f = 12.0890$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U2-L3

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.5585	6.0445	75.9098	0.3270	0.0000	0.0000	0.3270
2	Flange Plates		22.2921	6.0445	134.7447	271.4881	0.0000	0.0000	271.4881
3	Cover Plate		0.0000	6.0445	0.0000	0.0000	0.0000	0.0000	0.0000
Total			34.85		210.65	271.82		0.00	271.82
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0445	in	S _{top} =	44.97	in ³	y-bar =	6.0445	in	S _{top} =	44.97	in ³
I _x =	271.82	in ⁴	S _{bott.} =	44.97	in ³	I _x =	271.82	in ⁴	S _{bott.} =	44.97	in ³
c _{top} =	6.0445	in	A =	34.8506	in ²	c _{top} =	6.0445	in	A =	34.8506	in ²
c _{bottom} =	6.0445	in	r _x =	2.7927	in	c _{bottom} =	6.0445	in	r _x =	2.7927	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	12.5585	12.1550	152.6485	528.2115	0.0000	0.0000	528.2115	
2	Left Flange	11.1461	0.4610	5.1383	0.7896	11.6940	1524.2194	1525.0090	
	Right Flange	11.1461	23.8490	265.8223	0.7896	11.6940	1524.2194	1525.0090	
3	Left Plate	0.0000	0.0000	0.0000	0.0000	12.1550	0.0000	0.0000	
	Right Plate	0.0000	24.3100	0.0000	0.0000	12.1550	0.0000	0.0000	
Total		34.85		423.61	529.79		3048.44	3578.23	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1550 in	S _{right} =	294.38 in ³	x-bar =	12.1550 in	S _{right} =	294.38 in ³
I _y =	3578.23 in ⁴	S _{left} =	294.38 in ³	I _y =	3578.23 in ⁴	S _{left} =	294.38 in ³
C _{right} =	12.1550 in	A =	34.8506 in ²	C _{right} =	12.1550 in	A =	34.8506 in ²
C _{left} =	12.1550 in	r _y =	10.1328 in	C _{left} =	12.1550 in	r _y =	10.1328 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 100

- $A_1 = t_w = 0.4700$ in
- $A_2 = t_f = 0.7670$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 12.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U3-L4

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	6.0000	63.3541	0.1944	0.0000	0.0000	0.1944
2	Flange Plates		18.4080	6.0000	110.4480	220.8960	0.0000	0.0000	220.8960
3	Cover Plate		0.0000	6.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			28.97		173.80	221.09		0.00	221.09
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0000	in	S _{top} =	36.85	in ³	y-bar =	6.0000	in	S _{top} =	36.85	in ³
I _x =	221.09	in ⁴	S _{bott.} =	36.85	in ³	I _x =	221.09	in ⁴	S _{bott.} =	36.85	in ³
c _{top} =	6.0000	in	A =	28.9670	in ²	c _{top} =	6.0000	in	A =	28.9670	in ²
c _{bottom} =	6.0000	in	r _x =	2.7627	in	c _{bottom} =	6.0000	in	r _x =	2.7627	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	12.0000	126.7082	444.1134	0.0000	0.0000	444.1134
2	Left Flange		9.2040	0.3835	3.5297	0.4512	11.6165	1242.0160	1242.4673
	Right Flange		9.2040	23.6165	217.3663	0.4512	11.6165	1242.0160	1242.4673
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.0000	0.0000	0.0000
	Right Plate		0.0000	24.0000	0.0000	0.0000	12.0000	0.0000	0.0000
Total			28.97		347.60	445.02		2484.03	2929.05
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.0000	in	S _{right} = 244.09 in ³	x-bar =	12.0000	in	S _{right} = 244.09 in ³
I _y =	2929.05	n ⁴	S _{left} = 244.09 in ³	I _y =	2929.05	n ⁴	S _{left} = 244.09 in ³
C _{right} =	12.0000	in	A = 28.9670 in ²	C _{right} =	12.0000	in	A = 28.9670 in ²
C _{left} =	12.0000	in	r _y = 10.0557 in	C _{left} =	12.0000	in	r _y = 10.0557 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U4-L5

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		0.0000	7.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			37.78		264.47	408.29		0.00	408.29
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	S _{top} =	58.33	in ³	y-bar =	7.0000	in	S _{top} =	58.33	in ³
I _x =	408.29	in ⁴	S _{bott.} =	58.33	in ³	I _x =	408.29	in ⁴	S _{bott.} =	58.33	in ³
c _{top} =	7.0000	in	A =	37.7816	in ²	c _{top} =	7.0000	in	A =	37.7816	in ²
c _{bottom} =	7.0000	in	r _x =	3.2873	in	c _{bottom} =	7.0000	in	r _x =	3.2873	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.1250	155.2681	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	0.4460	5.5696	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	23.8040	297.2644	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.1250	0.0000	0.0000
	Right Plate		0.0000	24.2500	0.0000	0.0000	12.1250	0.0000	0.0000
Total			37.78		458.10	540.26		3406.70	3946.96
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.1250	in	S _{right} =	325.52	in ³	x-bar =	12.1250	in	S _{right} =	325.52	in ³
I _y =	3946.96	in ⁴	S _{left} =	325.52	in ³	I _y =	3946.96	in ⁴	S _{left} =	325.52	in ³
C _{right} =	12.1250	in	A =	37.7816	in ²	C _{right} =	12.1250	in	A =	37.7816	in ²
C _{left} =	12.1250	in	r _y =	10.2210	in	C _{left} =	12.1250	in	r _y =	10.2210	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 150

- $A_1 = t_w = 0.6330$ in
- $A_2 = t_f = 1.0480$ in
- $B_1 = d = 24.5620$ in
- $B_2 = b_f = 14.0630$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U6-L5

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.2210	7.0315	99.9948	0.4748	0.0000	0.0000	0.4748
2	Flange Plates		29.4760	7.0315	207.2608	485.7848	0.0000	0.0000	485.7848
3	Cover Plate		0.0000	7.0315	0.0000	0.0000	0.0000	0.0000	0.0000
Total			43.70		307.26	486.26		0.00	486.26
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0315	in	S _{top} =	69.15	in ³	y-bar =	7.0315	in	S _{top} =	69.15	in ³
I _x =	486.26	in ⁴	S _{bott.} =	69.15	in ³	I _x =	486.26	in ⁴	S _{bott.} =	69.15	in ³
c _{top} =	7.0315	in	A =	43.6970	in ²	c _{top} =	7.0315	in	A =	43.6970	in ²
c _{bottom} =	7.0315	in	r _x =	3.3359	in	c _{bottom} =	7.0315	in	r _x =	3.3359	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.2210	12.2810	174.6478	598.1357	0.0000	0.0000	598.1357
2	Left Flange		14.7380	0.5240	7.7227	1.3489	11.7570	2037.1936	2038.5425
	Right Flange		14.7380	24.0380	354.2726	1.3489	11.7570	2037.1936	2038.5425
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.2810	0.0000	0.0000
	Right Plate		0.0000	24.5620	0.0000	0.0000	12.2810	0.0000	0.0000
Total			43.70		536.64	600.83		4074.39	4675.22
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.2810	in	S _{right} =	380.69	in ³	x-bar =	12.2810	in	S _{right} =	380.69	in ³
I _y =	4675.22	n ⁴	S _{left} =	380.69	in ³	I _y =	4675.22	n ⁴	S _{left} =	380.69	in ³
C _{right} =	12.2810	in	A =	43.6970	in ²	C _{right} =	12.2810	in	A =	43.6970	in ²
C _{left} =	12.2810	in	r _y =	10.3437	in	C _{left} =	12.2810	in	r _y =	10.3437	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.6875$ in
- $B_3 = b = 14.0000$ in



Member U7-L6

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		19.2500	7.0000	134.7500	314.4167	0.0000	0.0000	314.4167
Total			57.03		399.22	722.70		0.00	722.70
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	7.0000	in	$S_{top} = 103.24$	in ³	y-bar =	7.0000	in	$S_{top} = 103.24$	in ³		
$I_x =$	722.70	in ⁴	$S_{bott.} = 103.24$	in ³	$I_x =$	722.70	in ⁴	$S_{bott.} = 103.24$	in ³		
$c_{top} =$	7.0000	in	A =	57.0316	in ²	$c_{top} =$	7.0000	in	A =	57.0316	in ²
$c_{bottom} =$	7.0000	in	$r_x =$	3.5598	in	$c_{bottom} =$	7.0000	in	$r_x =$	3.5598	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y, gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	12.8056	12.8125	164.0720	538.6056	0.0000	0.0000	538.6056	
2	Left Flange	12.4880	1.1335	14.1551	0.8280	11.6790	1703.3512	1704.1792	
	Right Flange	12.4880	24.4915	305.8499	0.8280	11.6790	1703.3512	1704.1792	
3	Left Plate	9.6250	0.3438	3.3086	0.3791	12.4688	1496.3961	1496.7752	
	Right Plate	9.6250	25.2813	243.3320	0.3791	12.4688	1496.3961	1496.7752	
Total		57.03		730.72	541.02		6399.49	6940.51	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
x-bar =	12.8125	in	S _{right} =	541.70	in ³	x-bar =	12.8125	in	S _{right} =	541.70	in ³
I _y =	6940.51	n ⁴	S _{left} =	541.70	in ³	I _y =	6940.51	n ⁴	S _{left} =	541.70	in ³
C _{right} =	12.8125	in	A =	57.0316	in ²	C _{right} =	12.8125	in	A =	57.0316	in ²
C _{left} =	12.8125	in	r _y =	11.0316	in	C _{left} =	12.8125	in	r _y =	11.0316	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.6250$ in
- $B_3 = b = 14.0000$ in



Member U8-L7

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		17.5000	7.0000	122.5000	285.8333	0.0000	0.0000	285.8333
Total			55.28		386.97	694.12		0.00	694.12
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	S _{top} =	99.16	in ³	y-bar =	7.0000	in	S _{top} =	99.16	in ³
I _x =	694.12	in ⁴	S _{bott.} =	99.16	in ³	I _x =	694.12	in ⁴	S _{bott.} =	99.16	in ³
c _{top} =	7.0000	in	A =	55.2816	in ²	c _{top} =	7.0000	in	A =	55.2816	in ²
c _{bottom} =	7.0000	in	r _x =	3.5435	in	c _{bottom} =	7.0000	in	r _x =	3.5435	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y, gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	12.8056	12.7500	163.2717	538.6056	0.0000	0.0000	538.6056	
2	Left Flange	12.4880	1.0710	13.3746	0.8280	11.6790	1703.3512	1704.1792	
	Right Flange	12.4880	24.4290	305.0694	0.8280	11.6790	1703.3512	1704.1792	
3	Left Plate	8.7500	0.3125	2.7344	0.2848	12.4375	1353.5498	1353.8346	
	Right Plate	8.7500	25.1875	220.3906	0.2848	12.4375	1353.5498	1353.8346	
Total		55.28		704.84	540.83		6113.80	6654.63	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.7500	in	S _{right} = 521.93 in ³	x-bar =	12.7500	in	S _{right} = 521.93 in ³
I _y =	6654.63	in ⁴	S _{left} = 521.93 in ³	I _y =	6654.63	in ⁴	S _{left} = 521.93 in ³
C _{right} =	12.7500	in	A = 55.2816 in ²	C _{right} =	12.7500	in	A = 55.2816 in ²
C _{left} =	12.7500	in	r _y = 10.9716 in	C _{left} =	12.7500	in	r _y = 10.9716 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 160

- $A_1 = t_w = 0.6650$ in
- $A_2 = t_f = 1.1240$ in
- $B_1 = d = 24.7140$ in
- $B_2 = b_f = 14.0950$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U9-L8

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	7.0475	105.2889	0.5506	0.0000	0.0000	0.5506
2	Flange Plates		31.6856	7.0475	223.3040	524.5783	0.0000	0.0000	524.5783
3	Cover Plate		0.0000	7.0475	0.0000	0.0000	0.0000	0.0000	0.0000
Total			46.63		328.59	525.13		0.00	525.13
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0475	in	S _{top} =	74.51	in ³	y-bar =	7.0475	in	S _{top} =	74.51	in ³
I _x =	525.13	in ⁴	S _{bott.} =	74.51	in ³	I _x =	525.13	in ⁴	S _{bott.} =	74.51	in ³
c _{top} =	7.0475	in	A =	46.6255	in ²	c _{top} =	7.0475	in	A =	46.6255	in ²
c _{bottom} =	7.0475	in	r _x =	3.3560	in	c _{bottom} =	7.0475	in	r _x =	3.3560	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	12.3570	184.6122	628.3732	0.0000	0.0000	628.3732
2	Left Flange		15.8428	0.5620	8.9036	1.6679	11.7950	2204.0796	2205.7476
	Right Flange		15.8428	24.1520	382.6348	1.6679	11.7950	2204.0796	2205.7476
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.3570	0.0000	0.0000
	Right Plate		0.0000	24.7140	0.0000	0.0000	12.3570	0.0000	0.0000
Total			46.63		576.15	631.71		4408.16	5039.87
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3570	in	S _{right} = 407.86 in ³	x-bar =	12.3570	in	S _{right} = 407.86 in ³
I _y =	5039.87	in ⁴	S _{left} = 407.86 in ³	I _y =	5039.87	in ⁴	S _{left} = 407.86 in ³
C _{right} =	12.3570	in	A = 46.6255 in ²	C _{right} =	12.3570	in	A = 46.6255 in ²
C _{left} =	12.3570	in	r _y = 10.3968 in	C _{left} =	12.3570	in	r _y = 10.3968 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U10-L9

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		0.0000	7.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			37.78		264.47	408.29		0.00	408.29
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	$S_{top} =$	58.33	in ³	y-bar =	7.0000	in	$S_{top} =$	58.33	in ³
$I_x =$	408.29	in ⁴	$S_{bott.} =$	58.33	in ³	$I_x =$	408.29	in ⁴	$S_{bott.} =$	58.33	in ³
$c_{top} =$	7.0000	in	A =	37.7816	in ²	$c_{top} =$	7.0000	in	A =	37.7816	in ²
$c_{bottom} =$	7.0000	in	$r_x =$	3.2873	in	$c_{bottom} =$	7.0000	in	$r_x =$	3.2873	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.1250	155.2681	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	0.4460	5.5696	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	23.8040	297.2644	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.1250	0.0000	0.0000
	Right Plate		0.0000	24.2500	0.0000	0.0000	12.1250	0.0000	0.0000
Total			37.78		458.10	540.26		3406.70	3946.96
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.1250	in	S _{right} =	325.52	in ³	x-bar =	12.1250	in	S _{right} =	325.52	in ³
I _y =	3946.96	in ⁴	S _{left} =	325.52	in ³	I _y =	3946.96	in ⁴	S _{left} =	325.52	in ³
C _{right} =	12.1250	in	A =	37.7816	in ²	C _{right} =	12.1250	in	A =	37.7816	in ²
C _{left} =	12.1250	in	r _y =	10.2210	in	C _{left} =	12.1250	in	r _y =	10.2210	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U10-L11

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		0.0000	7.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			37.78		264.47	408.29		0.00	408.29
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	$S_{top} =$	58.33	in ³	y-bar =	7.0000	in	$S_{top} =$	58.33	in ³
$I_x =$	408.29	in ⁴	$S_{bott.} =$	58.33	in ³	$I_x =$	408.29	in ⁴	$S_{bott.} =$	58.33	in ³
$c_{top} =$	7.0000	in	A =	37.7816	in ²	$c_{top} =$	7.0000	in	A =	37.7816	in ²
$c_{bottom} =$	7.0000	in	$r_x =$	3.2873	in	$c_{bottom} =$	7.0000	in	$r_x =$	3.2873	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.1250	155.2681	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	0.4460	5.5696	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	23.8040	297.2644	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.1250	0.0000	0.0000
	Right Plate		0.0000	24.2500	0.0000	0.0000	12.1250	0.0000	0.0000
Total			37.78		458.10	540.26		3406.70	3946.96
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.1250	in	S _{right} =	325.52	in ³	x-bar =	12.1250	in	S _{right} =	325.52	in ³
I _y =	3946.96	in ⁴	S _{left} =	325.52	in ³	I _y =	3946.96	in ⁴	S _{left} =	325.52	in ³
C _{right} =	12.1250	in	A =	37.7816	in ²	C _{right} =	12.1250	in	A =	37.7816	in ²
C _{left} =	12.1250	in	r _y =	10.2210	in	C _{left} =	12.1250	in	r _y =	10.2210	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U11-L12

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		0.0000	7.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			37.78		264.47	408.29		0.00	408.29
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	S _{top} =	58.33	in ³	y-bar =	7.0000	in	S _{top} =	58.33	in ³
I _x =	408.29	in ⁴	S _{bott.} =	58.33	in ³	I _x =	408.29	in ⁴	S _{bott.} =	58.33	in ³
c _{top} =	7.0000	in	A =	37.7816	in ²	c _{top} =	7.0000	in	A =	37.7816	in ²
c _{bottom} =	7.0000	in	r _x =	3.2873	in	c _{bottom} =	7.0000	in	r _x =	3.2873	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.1250	155.2681	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	0.4460	5.5696	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	23.8040	297.2644	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.1250	0.0000	0.0000
	Right Plate		0.0000	24.2500	0.0000	0.0000	12.1250	0.0000	0.0000
Total			37.78		458.10	540.26		3406.70	3946.96
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.1250	in	S _{right} =	325.52	in ³	x-bar =	12.1250	in	S _{right} =	325.52	in ³
I _y =	3946.96	in ⁴	S _{left} =	325.52	in ³	I _y =	3946.96	in ⁴	S _{left} =	325.52	in ³
C _{right} =	12.1250	in	A =	37.7816	in ²	C _{right} =	12.1250	in	A =	37.7816	in ²
C _{left} =	12.1250	in	r _y =	10.2210	in	C _{left} =	12.1250	in	r _y =	10.2210	in



Made By DWC
Checked By KMW

Date 1/30/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 140

- $A_1 = t_w = 0.6010$ in
- $A_2 = t_f = 0.9700$ in
- $B_1 = d = 24.4060$ in
- $B_2 = b_f = 14.0310$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U12-L13

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		13.5021	7.0155	94.7237	0.4064	0.0000	0.0000	0.4064
2	Flange Plates		27.2201	7.0155	190.9629	446.5667	0.0000	0.0000	446.5667
3	Cover Plate		0.0000	7.0155	0.0000	0.0000	0.0000	0.0000	0.0000
Total			40.72		285.69	446.97		0.00	446.97
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	5.0000	0.1875	-0.9375	7.2223	-6.7709	-0.0027	0.2116	-0.0420	-0.0447
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.94		-6.77	0.00		-0.04	-0.04

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0155	in	S _{top} =	63.71	in ³	y-bar =	7.0106	in	S _{top} =	63.71	in ³
I _x =	446.97	in ⁴	S _{bott.} =	63.71	in ³	I _x =	446.93	in ⁴	S _{bott.} =	63.75	in ³
c _{top} =	7.0155	in	A =	40.7222	in ²	c _{top} =	7.0155	in	A =	39.7847	in ²
c _{bottom} =	7.0155	in	r _x =	3.3130	in	c _{bottom} =	7.0106	in	r _x =	3.3517	in



Made By DWC
Checked By KMW

Date 1/30/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		13.5021	12.2030	164.7657	567.8982	0.0000	0.0000	567.8982
2	Left Flange		13.6101	0.4850	6.6009	1.0671	11.7180	1868.8195	1869.8866
	Right Flange		13.6101	23.9210	325.5665	1.0671	11.7180	1868.8195	1869.8866
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.2030	0.0000	0.0000
	Right Plate		0.0000	24.4060	0.0000	0.0000	12.2030	0.0000	0.0000
Total			40.72		496.93	570.03		3737.64	4307.67
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1875	5.0000	-0.9375	3.4700	-3.2531	-1.9531	8.9388	-74.9080	-76.8612
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.94		-3.25	-1.95		-74.91	-76.86

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.2030	in	S _{right} =	353.00	in ³	x-bar =	12.4088	in	S _{right} =	352.65	in ³
I _y =	4307.67	n ⁴	S _{left} =	353.00	in ³	I _y =	4230.81	n ⁴	S _{left} =	340.95	in ³
C _{right} =	12.2030	in	A =	40.7222	in ²	C _{right} =	11.9972	in	A =	39.7847	in ²
C _{left} =	12.2030	in	r _y =	10.2850	in	C _{left} =	12.4088	in	r _y =	10.3123	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 120

- $A_1 = t_w = 0.5590$ in
- $A_2 = t_f = 0.9220$ in
- $B_1 = d = 24.3100$ in
- $B_2 = b_f = 12.0890$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U13-L14

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.5585	6.0445	75.9098	0.3270	0.0000	0.0000	0.3270
2	Flange Plates		22.2921	6.0445	134.7447	271.4881	0.0000	0.0000	271.4881
3	Cover Plate		0.0000	6.0445	0.0000	0.0000	0.0000	0.0000	0.0000
Total			34.85		210.65	271.82		0.00	271.82
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0445	in	S _{top} =	44.97	in ³	y-bar =	6.0445	in	S _{top} =	44.97	in ³
I _x =	271.82	in ⁴	S _{bott.} =	44.97	in ³	I _x =	271.82	in ⁴	S _{bott.} =	44.97	in ³
c _{top} =	6.0445	in	A =	34.8506	in ²	c _{top} =	6.0445	in	A =	34.8506	in ²
c _{bottom} =	6.0445	in	r _x =	2.7927	in	c _{bottom} =	6.0445	in	r _x =	2.7927	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	12.5585	12.1550	152.6485	528.2115	0.0000	0.0000	528.2115	
2	Left Flange	11.1461	0.4610	5.1383	0.7896	11.6940	1524.2194	1525.0090	
	Right Flange	11.1461	23.8490	265.8223	0.7896	11.6940	1524.2194	1525.0090	
3	Left Plate	0.0000	0.0000	0.0000	0.0000	12.1550	0.0000	0.0000	
	Right Plate	0.0000	24.3100	0.0000	0.0000	12.1550	0.0000	0.0000	
Total		34.85		423.61	529.79		3048.44	3578.23	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1550	in	S _{right} = 294.38 in ³	x-bar =	12.1550	in	S _{right} = 294.38 in ³
I _y =	3578.23	n ⁴	S _{left} = 294.38 in ³	I _y =	3578.23	n ⁴	S _{left} = 294.38 in ³
C _{right} =	12.1550	in	A = 34.8506 in ²	C _{right} =	12.1550	in	A = 34.8506 in ²
C _{left} =	12.1550	in	r _y = 10.1328 in	C _{left} =	12.1550	in	r _y = 10.1328 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 100

- $A_1 = t_w = 0.4700$ in
- $A_2 = t_f = 0.7670$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 12.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U14-L15

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x, gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	6.0000	63.3541	0.1944	0.0000	0.0000	0.1944
2	Flange Plates		18.4080	6.0000	110.4480	220.8960	0.0000	0.0000	220.8960
3	Cover Plate		0.0000	6.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			28.97		173.80	221.09		0.00	221.09
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0000	in	$S_{top} =$	36.85	in ³	y-bar =	6.0000	in	$S_{top} =$	36.85	in ³
$I_x =$	221.09	in ⁴	$S_{bott.} =$	36.85	in ³	$I_x =$	221.09	in ⁴	$S_{bott.} =$	36.85	in ³
$c_{top} =$	6.0000	in	A =	28.9670	in ²	$c_{top} =$	6.0000	in	A =	28.9670	in ²
$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in	$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	12.0000	126.7082	444.1134	0.0000	0.0000	444.1134
2	Left Flange		9.2040	0.3835	3.5297	0.4512	11.6165	1242.0160	1242.4673
	Right Flange		9.2040	23.6165	217.3663	0.4512	11.6165	1242.0160	1242.4673
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.0000	0.0000	0.0000
	Right Plate		0.0000	24.0000	0.0000	0.0000	12.0000	0.0000	0.0000
Total			28.97		347.60	445.02		2484.03	2929.05
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.0000	in	S _{right} = 244.09 in ³	x-bar =	12.0000	in	S _{right} = 244.09 in ³
I _y =	2929.05	in ⁴	S _{left} = 244.09 in ³	I _y =	2929.05	in ⁴	S _{left} = 244.09 in ³
C _{right} =	12.0000	in	A = 28.9670 in ²	C _{right} =	12.0000	in	A = 28.9670 in ²
C _{left} =	12.0000	in	r _y = 10.0557 in	C _{left} =	12.0000	in	r _y = 10.0557 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 100

- $A_1 = t_w = 0.4700$ in
- $A_2 = t_f = 0.7670$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 12.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U16-L15

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	6.0000	63.3541	0.1944	0.0000	0.0000	0.1944
2	Flange Plates		18.4080	6.0000	110.4480	220.8960	0.0000	0.0000	220.8960
3	Cover Plate		0.0000	6.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			28.97		173.80	221.09		0.00	221.09
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0000	in	$S_{top} =$	36.85	in ³	y-bar =	6.0000	in	$S_{top} =$	36.85	in ³
$I_x =$	221.09	in ⁴	$S_{bott.} =$	36.85	in ³	$I_x =$	221.09	in ⁴	$S_{bott.} =$	36.85	in ³
$c_{top} =$	6.0000	in	A =	28.9670	in ²	$c_{top} =$	6.0000	in	A =	28.9670	in ²
$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in	$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	12.0000	126.7082	444.1134	0.0000	0.0000	444.1134
2	Left Flange		9.2040	0.3835	3.5297	0.4512	11.6165	1242.0160	1242.4673
	Right Flange		9.2040	23.6165	217.3663	0.4512	11.6165	1242.0160	1242.4673
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.0000	0.0000	0.0000
	Right Plate		0.0000	24.0000	0.0000	0.0000	12.0000	0.0000	0.0000
Total			28.97		347.60	445.02		2484.03	2929.05
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.0000	in	S _{right} = 244.09 in ³	x-bar =	12.0000	in	S _{right} = 244.09 in ³
I _y =	2929.05	in ⁴	S _{left} = 244.09 in ³	I _y =	2929.05	in ⁴	S _{left} = 244.09 in ³
C _{right} =	12.0000	in	A = 28.9670 in ²	C _{right} =	12.0000	in	A = 28.9670 in ²
C _{left} =	12.0000	in	r _y = 10.0557 in	C _{left} =	12.0000	in	r _y = 10.0557 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 120

- $A_1 = t_w = 0.5590$ in
- $A_2 = t_f = 0.9220$ in
- $B_1 = d = 24.3100$ in
- $B_2 = b_f = 12.0890$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U17-L16

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.5585	6.0445	75.9098	0.3270	0.0000	0.0000	0.3270
2	Flange Plates		22.2921	6.0445	134.7447	271.4881	0.0000	0.0000	271.4881
3	Cover Plate		0.0000	6.0445	0.0000	0.0000	0.0000	0.0000	0.0000
Total			34.85		210.65	271.82		0.00	271.82
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0445	in	S _{top} =	44.97	in ³	y-bar =	6.0445	in	S _{top} =	44.97	in ³
I _x =	271.82	in ⁴	S _{bott.} =	44.97	in ³	I _x =	271.82	in ⁴	S _{bott.} =	44.97	in ³
c _{top} =	6.0445	in	A =	34.8506	in ²	c _{top} =	6.0445	in	A =	34.8506	in ²
c _{bottom} =	6.0445	in	r _x =	2.7927	in	c _{bottom} =	6.0445	in	r _x =	2.7927	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.5585	12.1550	152.6485	528.2115	0.0000	0.0000	528.2115
2	Left Flange		11.1461	0.4610	5.1383	0.7896	11.6940	1524.2194	1525.0090
	Right Flange		11.1461	23.8490	265.8223	0.7896	11.6940	1524.2194	1525.0090
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.1550	0.0000	0.0000
	Right Plate		0.0000	24.3100	0.0000	0.0000	12.1550	0.0000	0.0000
Total			34.85		423.61	529.79		3048.44	3578.23
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1550	in	S _{right} = 294.38 in ³	x-bar =	12.1550	in	S _{right} = 294.38 in ³
I _y =	3578.23	in ⁴	S _{left} = 294.38 in ³	I _y =	3578.23	in ⁴	S _{left} = 294.38 in ³
C _{right} =	12.1550	in	A = 34.8506 in ²	C _{right} =	12.1550	in	A = 34.8506 in ²
C _{left} =	12.1550	in	r _y = 10.1328 in	C _{left} =	12.1550	in	r _y = 10.1328 in



Made By DWC
Checked By KMW

Date 1/30/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U18-L17

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		0.0000	7.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			37.78		264.47	408.29		0.00	408.29
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	22.4660	0.0625	-1.4041	7.2538	-10.1852	-0.0005	0.2635	-0.0975	-0.0980
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.40		-10.19	0.00		-0.10	-0.10

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	S _{top} =	58.33	in ³	y-bar =	6.9902	in	S _{top} =	58.31	in ³
I _x =	408.29	in ⁴	S _{bott.} =	58.33	in ³	I _x =	408.19	in ⁴	S _{bott.} =	58.39	in ³
c _{top} =	7.0000	in	A =	37.7816	in ²	c _{top} =	7.0000	in	A =	36.3775	in ²
c _{bottom} =	7.0000	in	r _x =	3.2873	in	c _{bottom} =	6.9902	in	r _x =	3.3498	in



Made By DWC
Checked By KMW

Date 1/30/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.1250	155.2681	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	0.4460	5.5696	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	23.8040	297.2644	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.1250	0.0000	0.0000
	Right Plate		0.0000	24.2500	0.0000	0.0000	12.1250	0.0000	0.0000
Total			37.78		458.10	540.26		3406.70	3946.96
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0625	22.4660	-1.4041	12.1250	-17.0250	-59.0576	0.0000	0.0000	-59.0576
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.40		-17.03	-59.06		0.00	-59.06

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250	in	S _{right} = 325.52 in ³	x-bar =	12.1250	in	S _{right} = 320.65 in ³
I _y =	3946.96	in ⁴	S _{left} = 325.52 in ³	I _y =	3887.91	in ⁴	S _{left} = 320.65 in ³
C _{right} =	12.1250	in	A = 37.7816 in ²	C _{right} =	12.1250	in	A = 36.3775 in ²
C _{left} =	12.1250	in	r _y = 10.2210 in	C _{left} =	12.1250	in	r _y = 10.3381 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U19-L18

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x, gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		0.0000	7.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			37.78		264.47	408.29		0.00	408.29
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	$S_{top} =$	58.33	in ³	y-bar =	7.0000	in	$S_{top} =$	58.33	in ³
$I_x =$	408.29	in ⁴	$S_{bott.} =$	58.33	in ³	$I_x =$	408.29	in ⁴	$S_{bott.} =$	58.33	in ³
$c_{top} =$	7.0000	in	A =	37.7816	in ²	$c_{top} =$	7.0000	in	A =	37.7816	in ²
$c_{bottom} =$	7.0000	in	$r_x =$	3.2873	in	$c_{bottom} =$	7.0000	in	$r_x =$	3.2873	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.1250	155.2681	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	0.4460	5.5696	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	23.8040	297.2644	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.1250	0.0000	0.0000
	Right Plate		0.0000	24.2500	0.0000	0.0000	12.1250	0.0000	0.0000
Total			37.78		458.10	540.26		3406.70	3946.96
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.1250	in	S _{right} =	325.52	in ³	x-bar =	12.1250	in	S _{right} =	325.52	in ³
I _y =	3946.96	in ⁴	S _{left} =	325.52	in ³	I _y =	3946.96	in ⁴	S _{left} =	325.52	in ³
C _{right} =	12.1250	in	A =	37.7816	in ²	C _{right} =	12.1250	in	A =	37.7816	in ²
C _{left} =	12.1250	in	r _y =	10.2210	in	C _{left} =	12.1250	in	r _y =	10.2210	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.3750$ in
- $B_3 = b = 14.0000$ in



Member U20-L19

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		10.5000	7.0000	73.5000	171.5000	0.0000	0.0000	171.5000
Total			48.28		337.97	579.79		0.00	579.79
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	S _{top} =	82.83	in ³	y-bar =	7.0000	in	S _{top} =	82.83	in ³
I _x =	579.79	in ⁴	S _{bott.} =	82.83	in ³	I _x =	579.79	in ⁴	S _{bott.} =	82.83	in ³
c _{top} =	7.0000	in	A =	48.2816	in ²	c _{top} =	7.0000	in	A =	48.2816	in ²
c _{bottom} =	7.0000	in	r _x =	3.4653	in	c _{bottom} =	7.0000	in	r _x =	3.4653	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.5000	160.0703	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	0.8210	10.2526	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	24.1790	301.9474	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		5.2500	0.1875	0.9844	0.0615	12.3125	795.8877	795.9492
	Right Plate		5.2500	24.8125	130.2656	0.0615	12.3125	795.8877	795.9492
Total			48.28		603.52	540.38		4998.48	5538.86
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.5000	in	S _{right} =	443.11	in ³	x-bar =	12.5000	in	S _{right} =	443.11	in ³
I _y =	5538.86	in ⁴	S _{left} =	443.11	in ³	I _y =	5538.86	in ⁴	S _{left} =	443.11	in ³
C _{right} =	12.5000	in	A =	48.2816	in ²	C _{right} =	12.5000	in	A =	48.2816	in ²
C _{left} =	12.5000	in	r _y =	10.7107	in	C _{left} =	12.5000	in	r _y =	10.7107	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U20-L21

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		0.0000	7.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			37.78		264.47	408.29		0.00	408.29
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	S _{top} =	58.33	in ³	y-bar =	7.0000	in	S _{top} =	58.33	in ³
I _x =	408.29	in ⁴	S _{bott.} =	58.33	in ³	I _x =	408.29	in ⁴	S _{bott.} =	58.33	in ³
c _{top} =	7.0000	in	A =	37.7816	in ²	c _{top} =	7.0000	in	A =	37.7816	in ²
c _{bottom} =	7.0000	in	r _x =	3.2873	in	c _{bottom} =	7.0000	in	r _x =	3.2873	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.1250	155.2681	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	0.4460	5.5696	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	23.8040	297.2644	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.1250	0.0000	0.0000
	Right Plate		0.0000	24.2500	0.0000	0.0000	12.1250	0.0000	0.0000
Total			37.78		458.10	540.26		3406.70	3946.96
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.1250	in	S _{right} =	325.52	in ³	x-bar =	12.1250	in	S _{right} =	325.52	in ³
I _y =	3946.96	in ⁴	S _{left} =	325.52	in ³	I _y =	3946.96	in ⁴	S _{left} =	325.52	in ³
C _{right} =	12.1250	in	A =	37.7816	in ²	C _{right} =	12.1250	in	A =	37.7816	in ²
C _{left} =	12.1250	in	r _y =	10.2210	in	C _{left} =	12.1250	in	r _y =	10.2210	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 110

- $A_1 = t_w = 0.5130$ in
- $A_2 = t_f = 0.8470$ in
- $B_1 = d = 24.1600$ in
- $B_2 = b_f = 12.0430$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U21-L22

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x, gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		11.5251	6.0215	69.3981	0.2528	0.0000	0.0000	0.2528
2	Flange Plates		20.4008	6.0215	122.8437	246.5677	0.0000	0.0000	246.5677
3	Cover Plate		0.0000	6.0215	0.0000	0.0000	0.0000	0.0000	0.0000
Total			31.93		192.24	246.82		0.00	246.82
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0215	in	$S_{top} =$	40.99	in ³	y-bar =	6.0215	in	$S_{top} =$	40.99	in ³
$I_x =$	246.82	in ⁴	$S_{bott.} =$	40.99	in ³	$I_x =$	246.82	in ⁴	$S_{bott.} =$	40.99	in ³
$c_{top} =$	6.0215	in	A =	31.9259	in ²	$c_{top} =$	6.0215	in	A =	31.9259	in ²
$c_{bottom} =$	6.0215	in	$r_x =$	2.7805	in	$c_{bottom} =$	6.0215	in	$r_x =$	2.7805	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		11.5251	12.0800	139.2227	484.7450	0.0000	0.0000	484.7450
2	Left Flange		10.2004	0.4235	4.3199	0.6098	11.6565	1385.9719	1386.5817
	Right Flange		10.2004	23.7365	242.1223	0.6098	11.6565	1385.9719	1386.5817
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.0800	0.0000	0.0000
	Right Plate		0.0000	24.1600	0.0000	0.0000	12.0800	0.0000	0.0000
Total			31.93		385.66	485.96		2771.94	3257.91
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.0800	in	S _{right} = 269.69 in ³	x-bar =	12.0800	in	S _{right} = 269.69 in ³
I _y =	3257.91	in ⁴	S _{left} = 269.69 in ³	I _y =	3257.91	in ⁴	S _{left} = 269.69 in ³
C _{right} =	12.0800	in	A = 31.9259 in ²	C _{right} =	12.0800	in	A = 31.9259 in ²
C _{left} =	12.0800	in	r _y = 10.1018 in	C _{left} =	12.0800	in	r _y = 10.1018 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U22-L23

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		0.0000	7.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			37.78		264.47	408.29		0.00	408.29
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	S _{top} =	58.33	in ³	y-bar =	7.0000	in	S _{top} =	58.33	in ³
I _x =	408.29	in ⁴	S _{bott.} =	58.33	in ³	I _x =	408.29	in ⁴	S _{bott.} =	58.33	in ³
c _{top} =	7.0000	in	A =	37.7816	in ²	c _{top} =	7.0000	in	A =	37.7816	in ²
c _{bottom} =	7.0000	in	r _x =	3.2873	in	c _{bottom} =	7.0000	in	r _x =	3.2873	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.1250	155.2681	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	0.4460	5.5696	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	23.8040	297.2644	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.1250	0.0000	0.0000
	Right Plate		0.0000	24.2500	0.0000	0.0000	12.1250	0.0000	0.0000
Total			37.78		458.10	540.26		3406.70	3946.96
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.1250	in	S _{right} =	325.52	in ³	x-bar =	12.1250	in	S _{right} =	325.52	in ³
I _y =	3946.96	in ⁴	S _{left} =	325.52	in ³	I _y =	3946.96	in ⁴	S _{left} =	325.52	in ³
C _{right} =	12.1250	in	A =	37.7816	in ²	C _{right} =	12.1250	in	A =	37.7816	in ²
C _{left} =	12.1250	in	r _y =	10.2210	in	C _{left} =	12.1250	in	r _y =	10.2210	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U23-L24

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		0.0000	7.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			37.78		264.47	408.29		0.00	408.29
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	S _{top} =	58.33	in ³	y-bar =	7.0000	in	S _{top} =	58.33	in ³
I _x =	408.29	in ⁴	S _{bott.} =	58.33	in ³	I _x =	408.29	in ⁴	S _{bott.} =	58.33	in ³
c _{top} =	7.0000	in	A =	37.7816	in ²	c _{top} =	7.0000	in	A =	37.7816	in ²
c _{bottom} =	7.0000	in	r _x =	3.2873	in	c _{bottom} =	7.0000	in	r _x =	3.2873	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	12.8056	12.1250	155.2681	538.6056	0.0000	0.0000	538.6056	
2	Left Flange	12.4880	0.4460	5.5696	0.8280	11.6790	1703.3512	1704.1792	
	Right Flange	12.4880	23.8040	297.2644	0.8280	11.6790	1703.3512	1704.1792	
3	Left Plate	0.0000	0.0000	0.0000	0.0000	12.1250	0.0000	0.0000	
	Right Plate	0.0000	24.2500	0.0000	0.0000	12.1250	0.0000	0.0000	
Total		37.78		458.10	540.26		3406.70	3946.96	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250	in	S _{right} = 325.52 in ³	x-bar =	12.1250	in	S _{right} = 325.52 in ³
I _y =	3946.96	in ⁴	S _{left} = 325.52 in ³	I _y =	3946.96	in ⁴	S _{left} = 325.52 in ³
C _{right} =	12.1250	in	A = 37.7816 in ²	C _{right} =	12.1250	in	A = 37.7816 in ²
C _{left} =	12.1250	in	r _y = 10.2210 in	C _{left} =	12.1250	in	r _y = 10.2210 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 100

- $A_1 = t_w = 0.4700$ in
- $A_2 = t_f = 0.7670$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 12.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U24-L25

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	6.0000	63.3541	0.1944	0.0000	0.0000	0.1944
2	Flange Plates		18.4080	6.0000	110.4480	220.8960	0.0000	0.0000	220.8960
3	Cover Plate		0.0000	6.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			28.97		173.80	221.09		0.00	221.09
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0000	in	S _{top} =	36.85	in ³	y-bar =	6.0000	in	S _{top} =	36.85	in ³
I _x =	221.09	in ⁴	S _{bott.} =	36.85	in ³	I _x =	221.09	in ⁴	S _{bott.} =	36.85	in ³
c _{top} =	6.0000	in	A =	28.9670	in ²	c _{top} =	6.0000	in	A =	28.9670	in ²
c _{bottom} =	6.0000	in	r _x =	2.7627	in	c _{bottom} =	6.0000	in	r _x =	2.7627	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	12.0000	126.7082	444.1134	0.0000	0.0000	444.1134
2	Left Flange		9.2040	0.3835	3.5297	0.4512	11.6165	1242.0160	1242.4673
	Right Flange		9.2040	23.6165	217.3663	0.4512	11.6165	1242.0160	1242.4673
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.0000	0.0000	0.0000
	Right Plate		0.0000	24.0000	0.0000	0.0000	12.0000	0.0000	0.0000
Total			28.97		347.60	445.02		2484.03	2929.05
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.0000	in	S _{right} =	244.09	in ³	x-bar =	12.0000	in	S _{right} =	244.09	in ³
I _y =	2929.05	n ⁴	S _{left} =	244.09	in ³	I _y =	2929.05	n ⁴	S _{left} =	244.09	in ³
C _{right} =	12.0000	in	A =	28.9670	in ²	C _{right} =	12.0000	in	A =	28.9670	in ²
C _{left} =	12.0000	in	r _y =	10.0557	in	C _{left} =	12.0000	in	r _y =	10.0557	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 100

- $A_1 = t_w = 0.4700$ in
- $A_2 = t_f = 0.7670$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 12.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U26-L25

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	6.0000	63.3541	0.1944	0.0000	0.0000	0.1944
2	Flange Plates		18.4080	6.0000	110.4480	220.8960	0.0000	0.0000	220.8960
3	Cover Plate		0.0000	6.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			28.97		173.80	221.09		0.00	221.09
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0000	in	$S_{top} =$	36.85	in ³	y-bar =	6.0000	in	$S_{top} =$	36.85	in ³
$I_x =$	221.09	in ⁴	$S_{bott.} =$	36.85	in ³	$I_x =$	221.09	in ⁴	$S_{bott.} =$	36.85	in ³
$c_{top} =$	6.0000	in	A =	28.9670	in ²	$c_{top} =$	6.0000	in	A =	28.9670	in ²
$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in	$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	12.0000	126.7082	444.1134	0.0000	0.0000	444.1134
2	Left Flange		9.2040	0.3835	3.5297	0.4512	11.6165	1242.0160	1242.4673
	Right Flange		9.2040	23.6165	217.3663	0.4512	11.6165	1242.0160	1242.4673
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.0000	0.0000	0.0000
	Right Plate		0.0000	24.0000	0.0000	0.0000	12.0000	0.0000	0.0000
Total			28.97		347.60	445.02		2484.03	2929.05
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.0000	in	S _{right} =	244.09	in ³	x-bar =	12.0000	in	S _{right} =	244.09	in ³
I _y =	2929.05	n ⁴	S _{left} =	244.09	in ³	I _y =	2929.05	n ⁴	S _{left} =	244.09	in ³
C _{right} =	12.0000	in	A =	28.9670	in ²	C _{right} =	12.0000	in	A =	28.9670	in ²
C _{left} =	12.0000	in	r _y =	10.0557	in	C _{left} =	12.0000	in	r _y =	10.0557	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 100

- $A_1 = t_w = 0.4700$ in
- $A_2 = t_f = 0.7670$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 12.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U27-L26

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	6.0000	63.3541	0.1944	0.0000	0.0000	0.1944
2	Flange Plates		18.4080	6.0000	110.4480	220.8960	0.0000	0.0000	220.8960
3	Cover Plate		0.0000	6.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			28.97		173.80	221.09		0.00	221.09
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0000	in	S _{top} =	36.85	in ³	y-bar =	6.0000	in	S _{top} =	36.85	in ³
I _x =	221.09	in ⁴	S _{bott.} =	36.85	in ³	I _x =	221.09	in ⁴	S _{bott.} =	36.85	in ³
c _{top} =	6.0000	in	A =	28.9670	in ²	c _{top} =	6.0000	in	A =	28.9670	in ²
c _{bottom} =	6.0000	in	r _x =	2.7627	in	c _{bottom} =	6.0000	in	r _x =	2.7627	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	12.0000	126.7082	444.1134	0.0000	0.0000	444.1134
2	Left Flange		9.2040	0.3835	3.5297	0.4512	11.6165	1242.0160	1242.4673
	Right Flange		9.2040	23.6165	217.3663	0.4512	11.6165	1242.0160	1242.4673
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.0000	0.0000	0.0000
	Right Plate		0.0000	24.0000	0.0000	0.0000	12.0000	0.0000	0.0000
Total			28.97		347.60	445.02		2484.03	2929.05
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.0000	in	S _{right} =	244.09	in ³	x-bar =	12.0000	in	S _{right} =	244.09	in ³
I _y =	2929.05	n ⁴	S _{left} =	244.09	in ³	I _y =	2929.05	n ⁴	S _{left} =	244.09	in ³
C _{right} =	12.0000	in	A =	28.9670	in ²	C _{right} =	12.0000	in	A =	28.9670	in ²
C _{left} =	12.0000	in	r _y =	10.0557	in	C _{left} =	12.0000	in	r _y =	10.0557	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 110

- $A_1 = t_w = 0.5130$ in
- $A_2 = t_f = 0.8470$ in
- $B_1 = d = 24.1600$ in
- $B_2 = b_f = 12.0430$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U28-L27

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		11.5251	6.0215	69.3981	0.2528	0.0000	0.0000	0.2528
2	Flange Plates		20.4008	6.0215	122.8437	246.5677	0.0000	0.0000	246.5677
3	Cover Plate		0.0000	6.0215	0.0000	0.0000	0.0000	0.0000	0.0000
Total			31.93		192.24	246.82		0.00	246.82
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0215	in	S _{top} =	40.99	in ³	y-bar =	6.0215	in	S _{top} =	40.99	in ³
I _x =	246.82	in ⁴	S _{bott.} =	40.99	in ³	I _x =	246.82	in ⁴	S _{bott.} =	40.99	in ³
c _{top} =	6.0215	in	A =	31.9259	in ²	c _{top} =	6.0215	in	A =	31.9259	in ²
c _{bottom} =	6.0215	in	r _x =	2.7805	in	c _{bottom} =	6.0215	in	r _x =	2.7805	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		11.5251	12.0800	139.2227	484.7450	0.0000	0.0000	484.7450
2	Left Flange		10.2004	0.4235	4.3199	0.6098	11.6565	1385.9719	1386.5817
	Right Flange		10.2004	23.7365	242.1223	0.6098	11.6565	1385.9719	1386.5817
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.0800	0.0000	0.0000
	Right Plate		0.0000	24.1600	0.0000	0.0000	12.0800	0.0000	0.0000
Total			31.93		385.66	485.96		2771.94	3257.91
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.0800	in	S _{right} = 269.69 in ³	x-bar =	12.0800	in	S _{right} = 269.69 in ³
I _y =	3257.91	in ⁴	S _{left} = 269.69 in ³	I _y =	3257.91	in ⁴	S _{left} = 269.69 in ³
C _{right} =	12.0800	in	A = 31.9259 in ²	C _{right} =	12.0800	in	A = 31.9259 in ²
C _{left} =	12.0800	in	r _y = 10.1018 in	C _{left} =	12.0800	in	r _y = 10.1018 in



Made By DWC
Checked By KMW

Date 1/31/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 110

- $A_1 = t_w = 0.5130$ in
- $A_2 = t_f = 0.8470$ in
- $B_1 = d = 24.1600$ in
- $B_2 = b_f = 12.0430$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U29-L28

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		11.5251	6.0215	69.3981	0.2528	0.0000	0.0000	0.2528
2	Flange Plates		20.4008	6.0215	122.8437	246.5677	0.0000	0.0000	246.5677
3	Cover Plate		0.0000	6.0215	0.0000	0.0000	0.0000	0.0000	0.0000
Total			31.93		192.24	246.82		0.00	246.82
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.3125	2.0000	-0.6250	7.2780	-4.5488	-0.2083	1.3526	-1.1435	-1.3519
2	0.3125	2.0000	-0.6250	7.2780	-4.5488	-0.2083	1.3526	-1.1435	-1.3519
3	22.4660	0.3125	-7.0206	6.1218	-42.9785	-0.0571	0.1964	-0.2708	-0.3279
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-8.27		-52.08	-0.47		-2.56	-3.03

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0215	in	S _{top} =	40.99	in ³	y-bar =	5.9254	in	S _{top} =	40.49	in ³
I _x =	246.82	in ⁴	S _{bott.} =	40.99	in ³	I _x =	243.79	in ⁴	S _{bott.} =	41.14	in ³
c _{top} =	6.0215	in	A =	31.9259	in ²	c _{top} =	6.0215	in	A =	23.6553	in ²
c _{bottom} =	6.0215	in	r _x =	2.7805	in	c _{bottom} =	5.9254	in	r _x =	3.2103	in



Made By DWC
Checked By KMW

Date 1/31/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		11.5251	12.0800	139.2227	484.7450	0.0000	0.0000	484.7450
2	Left Flange		10.2004	0.4235	4.3199	0.6098	11.6565	1385.9719	1386.5817
	Right Flange		10.2004	23.7365	242.1223	0.6098	11.6565	1385.9719	1386.5817
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.0800	0.0000	0.0000
	Right Plate		0.0000	24.1600	0.0000	0.0000	12.0800	0.0000	0.0000
Total			31.93		385.66	485.96		2771.94	3257.91
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	2.0000	0.3125	-0.6250	0.6908	-0.4317	-0.0051	11.3893	-81.0719	-81.0770
2	2.0000	0.3125	-0.6250	23.4693	-14.6683	-0.0051	11.3893	-81.0719	-81.0770
3	0.3125	22.4660	-7.0206	12.0800	-84.8092	-295.2882	0.0000	0.0000	-295.2882
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-8.27		-99.91	-295.30		-162.14	-457.44

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.0800	in	S _{right} = 269.69 in ³	x-bar =	12.0800	in	S _{right} = 231.83 in ³
I _y =	3257.91	in ⁴	S _{left} = 269.69 in ³	I _y =	2800.47	in ⁴	S _{left} = 231.83 in ³
C _{right} =	12.0800	in	A = 31.9259 in ²	C _{right} =	12.0800	in	A = 23.6553 in ²
C _{left} =	12.0800	in	r _y = 10.1018 in	C _{left} =	12.0800	in	r _y = 10.8806 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 100

- $A_1 = t_w = 0.4700$ in
- $A_2 = t_f = 0.7670$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 12.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U30-L29

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	6.0000	63.3541	0.1944	0.0000	0.0000	0.1944
2	Flange Plates		18.4080	6.0000	110.4480	220.8960	0.0000	0.0000	220.8960
3	Cover Plate		0.0000	6.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			28.97		173.80	221.09		0.00	221.09
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0000	in	S _{top} =	36.85	in ³	y-bar =	6.0000	in	S _{top} =	36.85	in ³
I _x =	221.09	in ⁴	S _{bott.} =	36.85	in ³	I _x =	221.09	in ⁴	S _{bott.} =	36.85	in ³
c _{top} =	6.0000	in	A =	28.9670	in ²	c _{top} =	6.0000	in	A =	28.9670	in ²
c _{bottom} =	6.0000	in	r _x =	2.7627	in	c _{bottom} =	6.0000	in	r _x =	2.7627	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	12.0000	126.7082	444.1134	0.0000	0.0000	444.1134
2	Left Flange		9.2040	0.3835	3.5297	0.4512	11.6165	1242.0160	1242.4673
	Right Flange		9.2040	23.6165	217.3663	0.4512	11.6165	1242.0160	1242.4673
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.0000	0.0000	0.0000
	Right Plate		0.0000	24.0000	0.0000	0.0000	12.0000	0.0000	0.0000
Total			28.97		347.60	445.02		2484.03	2929.05
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.0000	in	S _{right} = 244.09 in ³	x-bar =	12.0000	in	S _{right} = 244.09 in ³
I _y =	2929.05	in ⁴	S _{left} = 244.09 in ³	I _y =	2929.05	in ⁴	S _{left} = 244.09 in ³
C _{right} =	12.0000	in	A = 28.9670 in ²	C _{right} =	12.0000	in	A = 28.9670 in ²
C _{left} =	12.0000	in	r _y = 10.0557 in	C _{left} =	12.0000	in	r _y = 10.0557 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U30-L31

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		0.0000	7.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			37.78		264.47	408.29		0.00	408.29
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	$S_{top} =$	58.33	in ³	y-bar =	7.0000	in	$S_{top} =$	58.33	in ³
$I_x =$	408.29	in ⁴	$S_{bott.} =$	58.33	in ³	$I_x =$	408.29	in ⁴	$S_{bott.} =$	58.33	in ³
$c_{top} =$	7.0000	in	A =	37.7816	in ²	$c_{top} =$	7.0000	in	A =	37.7816	in ²
$c_{bottom} =$	7.0000	in	$r_x =$	3.2873	in	$c_{bottom} =$	7.0000	in	$r_x =$	3.2873	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.1250	155.2681	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	0.4460	5.5696	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	23.8040	297.2644	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.1250	0.0000	0.0000
	Right Plate		0.0000	24.2500	0.0000	0.0000	12.1250	0.0000	0.0000
Total			37.78		458.10	540.26		3406.70	3946.96
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.1250	in	S _{right} =	325.52	in ³	x-bar =	12.1250	in	S _{right} =	325.52	in ³
I _y =	3946.96	in ⁴	S _{left} =	325.52	in ³	I _y =	3946.96	in ⁴	S _{left} =	325.52	in ³
C _{right} =	12.1250	in	A =	37.7816	in ²	C _{right} =	12.1250	in	A =	37.7816	in ²
C _{left} =	12.1250	in	r _y =	10.2210	in	C _{left} =	12.1250	in	r _y =	10.2210	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 160

- $A_1 = t_w = 0.6650$ in
- $A_2 = t_f = 1.1240$ in
- $B_1 = d = 24.7140$ in
- $B_2 = b_f = 14.0950$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U31-L32

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	7.0475	105.2889	0.5506	0.0000	0.0000	0.5506
2	Flange Plates		31.6856	7.0475	223.3040	524.5783	0.0000	0.0000	524.5783
3	Cover Plate		0.0000	7.0475	0.0000	0.0000	0.0000	0.0000	0.0000
Total			46.63		328.59	525.13		0.00	525.13
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0475	in	S _{top} =	74.51	in ³	y-bar =	7.0475	in	S _{top} =	74.51	in ³
I _x =	525.13	in ⁴	S _{bott.} =	74.51	in ³	I _x =	525.13	in ⁴	S _{bott.} =	74.51	in ³
c _{top} =	7.0475	in	A =	46.6255	in ²	c _{top} =	7.0475	in	A =	46.6255	in ²
c _{bottom} =	7.0475	in	r _x =	3.3560	in	c _{bottom} =	7.0475	in	r _x =	3.3560	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	12.3570	184.6122	628.3732	0.0000	0.0000	628.3732
2	Left Flange		15.8428	0.5620	8.9036	1.6679	11.7950	2204.0796	2205.7476
	Right Flange		15.8428	24.1520	382.6348	1.6679	11.7950	2204.0796	2205.7476
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.3570	0.0000	0.0000
	Right Plate		0.0000	24.7140	0.0000	0.0000	12.3570	0.0000	0.0000
Total			46.63		576.15	631.71		4408.16	5039.87
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3570	in	S _{right} = 407.86 in ³	x-bar =	12.3570	in	S _{right} = 407.86 in ³
I _y =	5039.87	in ⁴	S _{left} = 407.86 in ³	I _y =	5039.87	in ⁴	S _{left} = 407.86 in ³
C _{right} =	12.3570	in	A = 46.6255 in ²	C _{right} =	12.3570	in	A = 46.6255 in ²
C _{left} =	12.3570	in	r _y = 10.3968 in	C _{left} =	12.3570	in	r _y = 10.3968 in



Made By DWC
Checked By KMW

Date 1/31/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.4375$ in
- $B_3 = b = 14.0000$ in



Member U32-L33

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		12.2500	7.0000	85.7500	200.0833	0.0000	0.0000	200.0833
Total			50.03		350.22	608.37		0.00	608.37
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1250	14.0000	-1.7500	7.0000	-12.2500	-28.5833	0.0237	-0.0010	-28.5843
2	22.4660	0.1250	-2.8083	7.3835	-20.7347	-0.0037	0.4072	-0.4656	-0.4693
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-4.56		-32.98	-28.59		-0.47	-29.05

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	S _{top} =	86.91	in ³	y-bar =	6.9763	in	S _{top} =	82.76	in ³
I _x =	608.37	in ⁴	S _{bott.} =	86.91	in ³	I _x =	579.32	in ⁴	S _{bott.} =	83.04	in ³
c _{top} =	7.0000	in	A =	50.0316	in ²	c _{top} =	7.0000	in	A =	45.4734	in ²
c _{bottom} =	7.0000	in	r _x =	3.4871	in	c _{bottom} =	6.9763	in	r _x =	3.5693	in



Made By DWC
Checked By KMW

Date 1/31/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.5625	160.8706	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	0.8835	11.0331	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	24.2415	302.7279	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		6.1250	0.2188	1.3398	0.0977	12.3438	933.2550	933.3527
	Right Plate		6.1250	24.9063	152.5508	0.0977	12.3438	933.2550	933.3527
Total			50.03		628.52	540.46		5273.21	5813.67
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	14.0000	0.1250	-1.7500	0.0625	-0.1094	-0.0023	12.9811	-294.8884	-294.8907
2	0.1250	22.4660	-2.8083	12.5625	-35.2786	-118.1153	0.4811	-0.6499	-118.7651
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-4.56		-35.39	-118.12		-295.54	-413.66

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.5625	in	S _{right} = 462.78 in ³	x-bar =	13.0436	in	S _{right} = 446.97 in ³
I _y =	5813.67	in ⁴	S _{left} = 462.78 in ³	I _y =	5400.01	in ⁴	S _{left} = 414.00 in ³
C _{right} =	12.5625	in	A = 50.0316 in ²	C _{right} =	12.0814	in	A = 45.4734 in ²
C _{left} =	12.5625	in	r _y = 10.7796 in	C _{left} =	13.0436	in	r _y = 10.8973 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 150

- $A_1 = t_w = 0.6330$ in
- $A_2 = t_f = 1.0480$ in
- $B_1 = d = 24.5620$ in
- $B_2 = b_f = 14.0630$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U33-L34

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.2210	7.0315	99.9948	0.4748	0.0000	0.0000	0.4748
2	Flange Plates		29.4760	7.0315	207.2608	485.7848	0.0000	0.0000	485.7848
3	Cover Plate		0.0000	7.0315	0.0000	0.0000	0.0000	0.0000	0.0000
Total			43.70		307.26	486.26		0.00	486.26
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0315	in	S _{top} =	69.15	in ³	y-bar =	7.0315	in	S _{top} =	69.15	in ³
I _x =	486.26	in ⁴	S _{bott.} =	69.15	in ³	I _x =	486.26	in ⁴	S _{bott.} =	69.15	in ³
c _{top} =	7.0315	in	A =	43.6970	in ²	c _{top} =	7.0315	in	A =	43.6970	in ²
c _{bottom} =	7.0315	in	r _x =	3.3359	in	c _{bottom} =	7.0315	in	r _x =	3.3359	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.2210	12.2810	174.6478	598.1357	0.0000	0.0000	598.1357
2	Left Flange		14.7380	0.5240	7.7227	1.3489	11.7570	2037.1936	2038.5425
	Right Flange		14.7380	24.0380	354.2726	1.3489	11.7570	2037.1936	2038.5425
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.2810	0.0000	0.0000
	Right Plate		0.0000	24.5620	0.0000	0.0000	12.2810	0.0000	0.0000
Total			43.70		536.64	600.83		4074.39	4675.22
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2810	in	S _{right} = 380.69 in ³	x-bar =	12.2810	in	S _{right} = 380.69 in ³
I _y =	4675.22	n ⁴	S _{left} = 380.69 in ³	I _y =	4675.22	n ⁴	S _{left} = 380.69 in ³
C _{right} =	12.2810	in	A = 43.6970 in ²	C _{right} =	12.2810	in	A = 43.6970 in ²
C _{left} =	12.2810	in	r _y = 10.3437 in	C _{left} =	12.2810	in	r _y = 10.3437 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 100

- $A_1 = t_w = 0.4700$ in
- $A_2 = t_f = 0.7670$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 12.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U34-L35

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	6.0000	63.3541	0.1944	0.0000	0.0000	0.1944
2	Flange Plates		18.4080	6.0000	110.4480	220.8960	0.0000	0.0000	220.8960
3	Cover Plate		0.0000	6.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			28.97		173.80	221.09		0.00	221.09
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0000	in	S _{top} =	36.85	in ³	y-bar =	6.0000	in	S _{top} =	36.85	in ³
I _x =	221.09	in ⁴	S _{bott.} =	36.85	in ³	I _x =	221.09	in ⁴	S _{bott.} =	36.85	in ³
c _{top} =	6.0000	in	A =	28.9670	in ²	c _{top} =	6.0000	in	A =	28.9670	in ²
c _{bottom} =	6.0000	in	r _x =	2.7627	in	c _{bottom} =	6.0000	in	r _x =	2.7627	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	12.0000	126.7082	444.1134	0.0000	0.0000	444.1134
2	Left Flange		9.2040	0.3835	3.5297	0.4512	11.6165	1242.0160	1242.4673
	Right Flange		9.2040	23.6165	217.3663	0.4512	11.6165	1242.0160	1242.4673
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.0000	0.0000	0.0000
	Right Plate		0.0000	24.0000	0.0000	0.0000	12.0000	0.0000	0.0000
Total			28.97		347.60	445.02		2484.03	2929.05
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.0000	in	S _{right} = 244.09 in ³	x-bar =	12.0000	in	S _{right} = 244.09 in ³
I _y =	2929.05	in ⁴	S _{left} = 244.09 in ³	I _y =	2929.05	in ⁴	S _{left} = 244.09 in ³
C _{right} =	12.0000	in	A = 28.9670 in ²	C _{right} =	12.0000	in	A = 28.9670 in ²
C _{left} =	12.0000	in	r _y = 10.0557 in	C _{left} =	12.0000	in	r _y = 10.0557 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 100

- $A_1 = t_w = 0.4700$ in
- $A_2 = t_f = 0.7670$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 12.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U36-L35

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	6.0000	63.3541	0.1944	0.0000	0.0000	0.1944
2	Flange Plates		18.4080	6.0000	110.4480	220.8960	0.0000	0.0000	220.8960
3	Cover Plate		0.0000	6.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			28.97		173.80	221.09		0.00	221.09
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0000	in	S _{top} =	36.85	in ³	y-bar =	6.0000	in	S _{top} =	36.85	in ³
I _x =	221.09	in ⁴	S _{bott.} =	36.85	in ³	I _x =	221.09	in ⁴	S _{bott.} =	36.85	in ³
c _{top} =	6.0000	in	A =	28.9670	in ²	c _{top} =	6.0000	in	A =	28.9670	in ²
c _{bottom} =	6.0000	in	r _x =	2.7627	in	c _{bottom} =	6.0000	in	r _x =	2.7627	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	10.5590	12.0000	126.7082	444.1134	0.0000	0.0000	444.1134	
2	Left Flange	9.2040	0.3835	3.5297	0.4512	11.6165	1242.0160	1242.4673	
	Right Flange	9.2040	23.6165	217.3663	0.4512	11.6165	1242.0160	1242.4673	
3	Left Plate	0.0000	0.0000	0.0000	0.0000	12.0000	0.0000	0.0000	
	Right Plate	0.0000	24.0000	0.0000	0.0000	12.0000	0.0000	0.0000	
Total		28.97		347.60	445.02		2484.03	2929.05	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.0000	in	S _{right} = 244.09 in ³	x-bar =	12.0000	in	S _{right} = 244.09 in ³
I _y =	2929.05	in ⁴	S _{left} = 244.09 in ³	I _y =	2929.05	in ⁴	S _{left} = 244.09 in ³
C _{right} =	12.0000	in	A = 28.9670 in ²	C _{right} =	12.0000	in	A = 28.9670 in ²
C _{left} =	12.0000	in	r _y = 10.0557 in	C _{left} =	12.0000	in	r _y = 10.0557 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 150

- $A_1 = t_w = 0.6330$ in
- $A_2 = t_f = 1.0480$ in
- $B_1 = d = 24.5620$ in
- $B_2 = b_f = 14.0630$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U37-L36

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.2210	7.0315	99.9948	0.4748	0.0000	0.0000	0.4748
2	Flange Plates		29.4760	7.0315	207.2608	485.7848	0.0000	0.0000	485.7848
3	Cover Plate		0.0000	7.0315	0.0000	0.0000	0.0000	0.0000	0.0000
Total			43.70		307.26	486.26		0.00	486.26
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0315	in	S _{top} =	69.15	in ³	y-bar =	7.0315	in	S _{top} =	69.15	in ³
I _x =	486.26	in ⁴	S _{bott.} =	69.15	in ³	I _x =	486.26	in ⁴	S _{bott.} =	69.15	in ³
c _{top} =	7.0315	in	A =	43.6970	in ²	c _{top} =	7.0315	in	A =	43.6970	in ²
c _{bottom} =	7.0315	in	r _x =	3.3359	in	c _{bottom} =	7.0315	in	r _x =	3.3359	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.2210	12.2810	174.6478	598.1357	0.0000	0.0000	598.1357
2	Left Flange		14.7380	0.5240	7.7227	1.3489	11.7570	2037.1936	2038.5425
	Right Flange		14.7380	24.0380	354.2726	1.3489	11.7570	2037.1936	2038.5425
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.2810	0.0000	0.0000
	Right Plate		0.0000	24.5620	0.0000	0.0000	12.2810	0.0000	0.0000
Total			43.70		536.64	600.83		4074.39	4675.22
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.2810	in	S _{right} =	380.69	in ³	x-bar =	12.2810	in	S _{right} =	380.69	in ³
I _y =	4675.22	n ⁴	S _{left} =	380.69	in ³	I _y =	4675.22	n ⁴	S _{left} =	380.69	in ³
C _{right} =	12.2810	in	A =	43.6970	in ²	C _{right} =	12.2810	in	A =	43.6970	in ²
C _{left} =	12.2810	in	r _y =	10.3437	in	C _{left} =	12.2810	in	r _y =	10.3437	in



Made By DWC
Checked By KMW

Date 1/31/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.4375$ in
- $B_3 = b = 14.0000$ in



Member U38-L37

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		12.2500	7.0000	85.7500	200.0833	0.0000	0.0000	200.0833
Total			50.03		350.22	608.37		0.00	608.37
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	22.4660	0.2500	-5.6165	7.1600	-40.2141	-0.0293	0.1802	-0.1824	-0.2117
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-5.62		-40.21	-0.03		-0.18	-0.21

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	S _{top} =	86.91	in ³	y-bar =	6.9798	in	S _{top} =	86.88	in ³
I _x =	608.37	in ⁴	S _{bott.} =	86.91	in ³	I _x =	608.16	in ⁴	S _{bott.} =	87.13	in ³
c _{top} =	7.0000	in	A =	50.0316	in ²	c _{top} =	7.0000	in	A =	44.4151	in ²
c _{bottom} =	7.0000	in	r _x =	3.4871	in	c _{bottom} =	6.9798	in	r _x =	3.7004	in



Made By DWC
Checked By KMW

Date 1/31/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.5625	160.8706	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	0.8835	11.0331	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	24.2415	302.7279	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		6.1250	0.2188	1.3398	0.0977	12.3438	933.2550	933.3527
	Right Plate		6.1250	24.9063	152.5508	0.0977	12.3438	933.2550	933.3527
Total			50.03		628.52	540.46		5273.21	5813.67
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.2500	22.4660	-5.6165	12.5625	-70.5573	-236.2305	0.0000	0.0000	-236.2305
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-5.62		-70.56	-236.23		0.00	-236.23

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.5625	in	S _{right} = 462.78 in ³	x-bar =	12.5625	in	S _{right} = 443.98 in ³
I _y =	5813.67	n ⁴	S _{left} = 462.78 in ³	I _y =	5577.44	n ⁴	S _{left} = 443.98 in ³
C _{right} =	12.5625	in	A = 50.0316 in ²	C _{right} =	12.5625	in	A = 44.4151 in ²
C _{left} =	12.5625	in	r _y = 10.7796 in	C _{left} =	12.5625	in	r _y = 11.2060 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 150

- $A_1 = t_w = 0.6330$ in
- $A_2 = t_f = 1.0480$ in
- $B_1 = d = 24.5620$ in
- $B_2 = b_f = 14.0630$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U39-L38

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.2210	7.0315	99.9948	0.4748	0.0000	0.0000	0.4748
2	Flange Plates		29.4760	7.0315	207.2608	485.7848	0.0000	0.0000	485.7848
3	Cover Plate		0.0000	7.0315	0.0000	0.0000	0.0000	0.0000	0.0000
Total			43.70		307.26	486.26		0.00	486.26
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0315	in	S _{top} =	69.15	in ³	y-bar =	7.0315	in	S _{top} =	69.15	in ³
I _x =	486.26	in ⁴	S _{bott.} =	69.15	in ³	I _x =	486.26	in ⁴	S _{bott.} =	69.15	in ³
c _{top} =	7.0315	in	A =	43.6970	in ²	c _{top} =	7.0315	in	A =	43.6970	in ²
c _{bottom} =	7.0315	in	r _x =	3.3359	in	c _{bottom} =	7.0315	in	r _x =	3.3359	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.2210	12.2810	174.6478	598.1357	0.0000	0.0000	598.1357
2	Left Flange		14.7380	0.5240	7.7227	1.3489	11.7570	2037.1936	2038.5425
	Right Flange		14.7380	24.0380	354.2726	1.3489	11.7570	2037.1936	2038.5425
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.2810	0.0000	0.0000
	Right Plate		0.0000	24.5620	0.0000	0.0000	12.2810	0.0000	0.0000
Total			43.70		536.64	600.83		4074.39	4675.22
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.2810	in	S _{right} =	380.69	in ³	x-bar =	12.2810	in	S _{right} =	380.69	in ³
I _y =	4675.22	n ⁴	S _{left} =	380.69	in ³	I _y =	4675.22	n ⁴	S _{left} =	380.69	in ³
C _{right} =	12.2810	in	A =	43.6970	in ²	C _{right} =	12.2810	in	A =	43.6970	in ²
C _{left} =	12.2810	in	r _y =	10.3437	in	C _{left} =	12.2810	in	r _y =	10.3437	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U40-L39

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x, gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		0.0000	7.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			37.78		264.47	408.29		0.00	408.29
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	$S_{top} =$	58.33	in ³	y-bar =	7.0000	in	$S_{top} =$	58.33	in ³
$I_x =$	408.29	in ⁴	$S_{bott.} =$	58.33	in ³	$I_x =$	408.29	in ⁴	$S_{bott.} =$	58.33	in ³
$c_{top} =$	7.0000	in	A =	37.7816	in ²	$c_{top} =$	7.0000	in	A =	37.7816	in ²
$c_{bottom} =$	7.0000	in	$r_x =$	3.2873	in	$c_{bottom} =$	7.0000	in	$r_x =$	3.2873	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.1250	155.2681	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	0.4460	5.5696	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	23.8040	297.2644	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.1250	0.0000	0.0000
	Right Plate		0.0000	24.2500	0.0000	0.0000	12.1250	0.0000	0.0000
Total			37.78		458.10	540.26		3406.70	3946.96
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.1250	in	S _{right} =	325.52	in ³	x-bar =	12.1250	in	S _{right} =	325.52	in ³
I _y =	3946.96	in ⁴	S _{left} =	325.52	in ³	I _y =	3946.96	in ⁴	S _{left} =	325.52	in ³
C _{right} =	12.1250	in	A =	37.7816	in ²	C _{right} =	12.1250	in	A =	37.7816	in ²
C _{left} =	12.1250	in	r _y =	10.2210	in	C _{left} =	12.1250	in	r _y =	10.2210	in



Made By DWC
Checked By KMW

Date 2/1/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 100

- $A_1 = t_w = 0.4700$ in
- $A_2 = t_f = 0.7670$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 12.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U40-L41

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	6.0000	63.3541	0.1944	0.0000	0.0000	0.1944
2	Flange Plates		18.4080	6.0000	110.4480	220.8960	0.0000	0.0000	220.8960
3	Cover Plate		0.0000	6.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			28.97		173.80	221.09		0.00	221.09
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.2500	5.7650	-1.4413	9.1175	-13.1406	-3.9917	3.5867	-18.5410	-22.5327
2	0.2500	5.7650	-1.4413	9.1175	-13.1406	-3.9917	3.5867	-18.5410	-22.5327
3	22.4660	0.2500	-5.6165	6.1100	-34.3168	-0.0293	0.5792	-1.8843	-1.9136
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-8.50		-60.60	-8.01		-38.97	-46.98

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0000	in	$S_{top} =$	36.85	in ³	y-bar =	5.5308	in	$S_{top} =$	29.02	in ³
$I_x =$	221.09	in ⁴	$S_{bott.} =$	36.85	in ³	$I_x =$	174.11	in ⁴	$S_{bott.} =$	31.48	in ³
$c_{top} =$	6.0000	in	A =	28.9670	in ²	$c_{top} =$	6.0000	in	A =	20.4680	in ²
$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in	$c_{bottom} =$	5.5308	in	$r_x =$	2.9166	in



Made By DWC
Checked By KMW

Date 2/1/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	10.5590	12.0000	126.7082	444.1134	0.0000	0.0000	444.1134	
2	Left Flange	9.2040	0.3835	3.5297	0.4512	11.6165	1242.0160	1242.4673	
	Right Flange	9.2040	23.6165	217.3663	0.4512	11.6165	1242.0160	1242.4673	
3	Left Plate	0.0000	0.0000	0.0000	0.0000	12.0000	0.0000	0.0000	
	Right Plate	0.0000	24.0000	0.0000	0.0000	12.0000	0.0000	0.0000	
Total		28.97		347.60	445.02		2484.03	2929.05	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	5.7650	0.2500	-1.4413	0.6420	-0.9253	-0.0075	11.3580	-185.9273	-185.9348
2	5.7650	0.2500	-1.4413	23.3580	-33.6647	-0.0075	11.3580	-185.9273	-185.9348
3	0.2500	22.4660	-5.6165	12.0000	-67.3980	-236.2305	0.0000	0.0000	-236.2305
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-8.50		-101.99	-236.25		-371.85	-608.10

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.0000	in	S _{right} = 244.09 in ³	x-bar =	12.0000	in	S _{right} = 193.41 in ³
I _y =	2929.05	in ⁴	S _{left} = 244.09 in ³	I _y =	2320.95	in ⁴	S _{left} = 193.41 in ³
C _{right} =	12.0000	in	A = 28.9670 in ²	C _{right} =	12.0000	in	A = 20.4680 in ²
C _{left} =	12.0000	in	r _y = 10.0557 in	C _{left} =	12.0000	in	r _y = 10.6487 in



Made By DWC
Checked By KMW

Date 2/1/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 120

- $A_1 = t_w = 0.5590$ in
- $A_2 = t_f = 0.9220$ in
- $B_1 = d = 24.3100$ in
- $B_2 = b_f = 12.0890$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U41-L42

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.5585	6.0445	75.9098	0.3270	0.0000	0.0000	0.3270
2	Flange Plates		22.2921	6.0445	134.7447	271.4881	0.0000	0.0000	271.4881
3	Cover Plate		0.0000	6.0445	0.0000	0.0000	0.0000	0.0000	0.0000
Total			34.85		210.65	271.82		0.00	271.82
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	22.4660	0.2500	-5.6165	6.1990	-34.8167	-0.0293	0.1842	-0.1905	-0.2198
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-5.62		-34.82	-0.03		-0.19	-0.22

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0445	in	S _{top} =	44.97	in ³	y-bar =	6.0148	in	S _{top} =	44.93	in ³
I _x =	271.82	in ⁴	S _{bott.} =	44.97	in ³	I _x =	271.60	in ⁴	S _{bott.} =	45.15	in ³
c _{top} =	6.0445	in	A =	34.8506	in ²	c _{top} =	6.0445	in	A =	29.2341	in ²
c _{bottom} =	6.0445	in	r _x =	2.7927	in	c _{bottom} =	6.0148	in	r _x =	3.0480	in



Made By DWC
 Checked By KMW

Date 2/1/2012
 Date 2/8/2012

Job No. P402110046
 Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.5585	12.1550	152.6485	528.2115	0.0000	0.0000	528.2115
2	Left Flange		11.1461	0.4610	5.1383	0.7896	11.6940	1524.2194	1525.0090
	Right Flange		11.1461	23.8490	265.8223	0.7896	11.6940	1524.2194	1525.0090
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.1550	0.0000	0.0000
	Right Plate		0.0000	24.3100	0.0000	0.0000	12.1550	0.0000	0.0000
Total			34.85		423.61	529.79		3048.44	3578.23
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.2500	22.4660	-5.6165	12.1550	-68.2686	-236.2305	0.0000	0.0000	-236.2305
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-5.62		-68.27	-236.23		0.00	-236.23

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1550	in	S _{right} = 294.38 in ³	x-bar =	12.1550	in	S _{right} = 274.95 in ³
I _y =	3578.23	n ⁴	S _{left} = 294.38 in ³	I _y =	3342.00	n ⁴	S _{left} = 274.95 in ³
C _{right} =	12.1550	in	A = 34.8506 in ²	C _{right} =	12.1550	in	A = 29.2341 in ²
C _{left} =	12.1550	in	r _y = 10.1328 in	C _{left} =	12.1550	in	r _y = 10.6920 in



Made By DWC
Checked By KMW

Date 2/1/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U42-L43

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		0.0000	7.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			37.78		264.47	408.29		0.00	408.29
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	22.4660	0.2500	-5.6165	12.2850	-68.9987	-0.0293	6.2078	-216.4445	-216.4737
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-5.62		-69.00	-0.03		-216.44	-216.47

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	S _{top} =	58.33	in ³	y-bar =	6.0772	in	S _{top} =	27.40	in ³
I _x =	408.29	in ⁴	S _{bott.} =	58.33	in ³	I _x =	191.81	in ⁴	S _{bott.} =	31.56	in ³
c _{top} =	7.0000	in	A =	37.7816	in ²	c _{top} =	7.0000	in	A =	32.1651	in ²
c _{bottom} =	7.0000	in	r _x =	3.2873	in	c _{bottom} =	6.0772	in	r _x =	2.4420	in



Made By DWC
Checked By KMW

Date 2/1/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.1250	155.2681	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	0.4460	5.5696	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	23.8040	297.2644	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.1250	0.0000	0.0000
	Right Plate		0.0000	24.2500	0.0000	0.0000	12.1250	0.0000	0.0000
Total			37.78		458.10	540.26		3406.70	3946.96
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.2500	22.4660	-5.6165	12.1250	-68.1001	-236.2305	0.0000	0.0000	-236.2305
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-5.62		-68.10	-236.23		0.00	-236.23

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.1250	in	S _{right} =	325.52	in ³	x-bar =	12.1250	in	S _{right} =	306.04	in ³
I _y =	3946.96	n ⁴	S _{left} =	325.52	in ³	I _y =	3710.73	n ⁴	S _{left} =	306.04	in ³
C _{right} =	12.1250	in	A =	37.7816	in ²	C _{right} =	12.1250	in	A =	32.1651	in ²
C _{left} =	12.1250	in	r _y =	10.2210	in	C _{left} =	12.1250	in	r _y =	10.7408	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 120

- $A_1 = t_w = 0.5590$ in
- $A_2 = t_f = 0.9220$ in
- $B_1 = d = 24.3100$ in
- $B_2 = b_f = 12.0890$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U43-L44

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.5585	6.0445	75.9098	0.3270	0.0000	0.0000	0.3270
2	Flange Plates		22.2921	6.0445	134.7447	271.4881	0.0000	0.0000	271.4881
3	Cover Plate		0.0000	6.0445	0.0000	0.0000	0.0000	0.0000	0.0000
Total			34.85		210.65	271.82		0.00	271.82
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0445	in	S _{top} =	44.97	in ³	y-bar =	6.0445	in	S _{top} =	44.97	in ³
I _x =	271.82	in ⁴	S _{bott.} =	44.97	in ³	I _x =	271.82	in ⁴	S _{bott.} =	44.97	in ³
c _{top} =	6.0445	in	A =	34.8506	in ²	c _{top} =	6.0445	in	A =	34.8506	in ²
c _{bottom} =	6.0445	in	r _x =	2.7927	in	c _{bottom} =	6.0445	in	r _x =	2.7927	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	12.5585	12.1550	152.6485	528.2115	0.0000	0.0000	528.2115	
2	Left Flange	11.1461	0.4610	5.1383	0.7896	11.6940	1524.2194	1525.0090	
	Right Flange	11.1461	23.8490	265.8223	0.7896	11.6940	1524.2194	1525.0090	
3	Left Plate	0.0000	0.0000	0.0000	0.0000	12.1550	0.0000	0.0000	
	Right Plate	0.0000	24.3100	0.0000	0.0000	12.1550	0.0000	0.0000	
Total		34.85		423.61	529.79		3048.44	3578.23	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1550	in	S _{right} = 294.38 in ³	x-bar =	12.1550	in	S _{right} = 294.38 in ³
I _y =	3578.23	in ⁴	S _{left} = 294.38 in ³	I _y =	3578.23	in ⁴	S _{left} = 294.38 in ³
C _{right} =	12.1550	in	A = 34.8506 in ²	C _{right} =	12.1550	in	A = 34.8506 in ²
C _{left} =	12.1550	in	r _y = 10.1328 in	C _{left} =	12.1550	in	r _y = 10.1328 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 74

- $A_1 = t_w = 0.4120$ in
- $A_2 = t_f = 0.6800$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 9.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U44-L45

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		9.3277	4.5000	41.9746	0.1319	0.0000	0.0000	0.1319
2	Flange Plates		12.2400	4.5000	55.0800	82.6200	0.0000	0.0000	82.6200
3	Cover Plate		0.0000	4.5000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			21.57		97.05	82.75		0.00	82.75
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	4.5000	in	S _{top} =	18.39	in ³	y-bar =	4.5000	in	S _{top} =	18.39	in ³
I _x =	82.75	in ⁴	S _{bott.} =	18.39	in ³	I _x =	82.75	in ⁴	S _{bott.} =	18.39	in ³
c _{top} =	4.5000	in	A =	21.5677	in ²	c _{top} =	4.5000	in	A =	21.5677	in ²
c _{bottom} =	4.5000	in	r _x =	1.9588	in	c _{bottom} =	4.5000	in	r _x =	1.9588	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	9.3277	12.0000	111.9322	398.4238	0.0000	0.0000	398.4238	
2	Left Flange	6.1200	0.3400	2.0808	0.2358	11.6600	832.0483	832.2841	
	Right Flange	6.1200	23.6600	144.7992	0.2358	11.6600	832.0483	832.2841	
3	Left Plate	0.0000	0.0000	0.0000	0.0000	12.0000	0.0000	0.0000	
	Right Plate	0.0000	24.0000	0.0000	0.0000	12.0000	0.0000	0.0000	
Total		21.57		258.81	398.90		1664.10	2062.99	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.0000	in	S _{right} = 171.92 in ³	x-bar =	12.0000	in	S _{right} = 171.92 in ³
I _y =	2062.99	in ⁴	S _{left} = 171.92 in ³	I _y =	2062.99	in ⁴	S _{left} = 171.92 in ³
C _{right} =	12.0000	in	A = 21.5677 in ²	C _{right} =	12.0000	in	A = 21.5677 in ²
C _{left} =	12.0000	in	r _y = 9.7802 in	C _{left} =	12.0000	in	r _y = 9.7802 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 74

- $A_1 = t_w = 0.4120$ in
- $A_2 = t_f = 0.6800$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 9.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U46-L45

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		9.3277	4.5000	41.9746	0.1319	0.0000	0.0000	0.1319
2	Flange Plates		12.2400	4.5000	55.0800	82.6200	0.0000	0.0000	82.6200
3	Cover Plate		0.0000	4.5000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			21.57		97.05	82.75		0.00	82.75
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	4.5000	in	S _{top} =	18.39	in ³	y-bar =	4.5000	in	S _{top} =	18.39	in ³
I _x =	82.75	in ⁴	S _{bott.} =	18.39	in ³	I _x =	82.75	in ⁴	S _{bott.} =	18.39	in ³
c _{top} =	4.5000	in	A =	21.5677	in ²	c _{top} =	4.5000	in	A =	21.5677	in ²
c _{bottom} =	4.5000	in	r _x =	1.9588	in	c _{bottom} =	4.5000	in	r _x =	1.9588	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		9.3277	12.0000	111.9322	398.4238	0.0000	0.0000	398.4238
2	Left Flange		6.1200	0.3400	2.0808	0.2358	11.6600	832.0483	832.2841
	Right Flange		6.1200	23.6600	144.7992	0.2358	11.6600	832.0483	832.2841
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.0000	0.0000	0.0000
	Right Plate		0.0000	24.0000	0.0000	0.0000	12.0000	0.0000	0.0000
Total			21.57		258.81	398.90		1664.10	2062.99
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.0000	in	S _{right} =	171.92	in ³	x-bar =	12.0000	in	S _{right} =	171.92	in ³
I _y =	2062.99	n ⁴	S _{left} =	171.92	in ³	I _y =	2062.99	n ⁴	S _{left} =	171.92	in ³
C _{right} =	12.0000	in	A =	21.5677	in ²	C _{right} =	12.0000	in	A =	21.5677	in ²
C _{left} =	12.0000	in	r _y =	9.7802	in	C _{left} =	12.0000	in	r _y =	9.7802	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 120

- $A_1 = t_w = 0.5590$ in
- $A_2 = t_f = 0.9220$ in
- $B_1 = d = 24.3100$ in
- $B_2 = b_f = 12.0890$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U47-L46

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.5585	6.0445	75.9098	0.3270	0.0000	0.0000	0.3270
2	Flange Plates		22.2921	6.0445	134.7447	271.4881	0.0000	0.0000	271.4881
3	Cover Plate		0.0000	6.0445	0.0000	0.0000	0.0000	0.0000	0.0000
Total			34.85		210.65	271.82		0.00	271.82
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0445	in	S _{top} =	44.97	in ³	y-bar =	6.0445	in	S _{top} =	44.97	in ³
I _x =	271.82	in ⁴	S _{bott.} =	44.97	in ³	I _x =	271.82	in ⁴	S _{bott.} =	44.97	in ³
c _{top} =	6.0445	in	A =	34.8506	in ²	c _{top} =	6.0445	in	A =	34.8506	in ²
c _{bottom} =	6.0445	in	r _x =	2.7927	in	c _{bottom} =	6.0445	in	r _x =	2.7927	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.5585	12.1550	152.6485	528.2115	0.0000	0.0000	528.2115
2	Left Flange		11.1461	0.4610	5.1383	0.7896	11.6940	1524.2194	1525.0090
	Right Flange		11.1461	23.8490	265.8223	0.7896	11.6940	1524.2194	1525.0090
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.1550	0.0000	0.0000
	Right Plate		0.0000	24.3100	0.0000	0.0000	12.1550	0.0000	0.0000
Total			34.85		423.61	529.79		3048.44	3578.23
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1550	in	S _{right} = 294.38 in ³	x-bar =	12.1550	in	S _{right} = 294.38 in ³
I _y =	3578.23	in ⁴	S _{left} = 294.38 in ³	I _y =	3578.23	in ⁴	S _{left} = 294.38 in ³
C _{right} =	12.1550	in	A = 34.8506 in ²	C _{right} =	12.1550	in	A = 34.8506 in ²
C _{left} =	12.1550	in	r _y = 10.1328 in	C _{left} =	12.1550	in	r _y = 10.1328 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U48-L47

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		0.0000	7.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			37.78		264.47	408.29		0.00	408.29
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	S _{top} =	58.33	in ³	y-bar =	7.0000	in	S _{top} =	58.33	in ³
I _x =	408.29	in ⁴	S _{bott.} =	58.33	in ³	I _x =	408.29	in ⁴	S _{bott.} =	58.33	in ³
c _{top} =	7.0000	in	A =	37.7816	in ²	c _{top} =	7.0000	in	A =	37.7816	in ²
c _{bottom} =	7.0000	in	r _x =	3.2873	in	c _{bottom} =	7.0000	in	r _x =	3.2873	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.1250	155.2681	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	0.4460	5.5696	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	23.8040	297.2644	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.1250	0.0000	0.0000
	Right Plate		0.0000	24.2500	0.0000	0.0000	12.1250	0.0000	0.0000
Total			37.78		458.10	540.26		3406.70	3946.96
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.1250	in	S _{right} =	325.52	in ³	x-bar =	12.1250	in	S _{right} =	325.52	in ³
I _y =	3946.96	in ⁴	S _{left} =	325.52	in ³	I _y =	3946.96	in ⁴	S _{left} =	325.52	in ³
C _{right} =	12.1250	in	A =	37.7816	in ²	C _{right} =	12.1250	in	A =	37.7816	in ²
C _{left} =	12.1250	in	r _y =	10.2210	in	C _{left} =	12.1250	in	r _y =	10.2210	in



Made By DWC
Checked By KMW

Date 2/1/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 120

- $A_1 = t_w = 0.5590$ in
- $A_2 = t_f = 0.9220$ in
- $B_1 = d = 24.3100$ in
- $B_2 = b_f = 12.0890$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U49-L48

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.5585	6.0445	75.9098	0.3270	0.0000	0.0000	0.3270
2	Flange Plates		22.2921	6.0445	134.7447	271.4881	0.0000	0.0000	271.4881
3	Cover Plate		0.0000	6.0445	0.0000	0.0000	0.0000	0.0000	0.0000
Total			34.85		210.65	271.82		0.00	271.82
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	22.4660	0.2500	-5.6165	6.1990	-34.8167	-0.0293	0.1842	-0.1905	-0.2198
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-5.62		-34.82	-0.03		-0.19	-0.22

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0445	in	S _{top} =	44.97	in ³	y-bar =	6.0148	in	S _{top} =	44.93	in ³
I _x =	271.82	in ⁴	S _{bott.} =	44.97	in ³	I _x =	271.60	in ⁴	S _{bott.} =	45.15	in ³
c _{top} =	6.0445	in	A =	34.8506	in ²	c _{top} =	6.0445	in	A =	29.2341	in ²
c _{bottom} =	6.0445	in	r _x =	2.7927	in	c _{bottom} =	6.0148	in	r _x =	3.0480	in



Made By DWC
Checked By KMW

Date 2/1/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.5585	12.1550	152.6485	528.2115	0.0000	0.0000	528.2115
2	Left Flange		11.1461	0.4610	5.1383	0.7896	11.6940	1524.2194	1525.0090
	Right Flange		11.1461	23.8490	265.8223	0.7896	11.6940	1524.2194	1525.0090
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.1550	0.0000	0.0000
	Right Plate		0.0000	24.3100	0.0000	0.0000	12.1550	0.0000	0.0000
Total			34.85		423.61	529.79		3048.44	3578.23
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.2500	22.4660	-5.6165	12.1550	-68.2686	-236.2305	0.0000	0.0000	-236.2305
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-5.62		-68.27	-236.23		0.00	-236.23

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1550	in	S _{right} = 294.38 in ³	x-bar =	12.1550	in	S _{right} = 274.95 in ³
I _y =	3578.23	in ⁴	S _{left} = 294.38 in ³	I _y =	3342.00	in ⁴	S _{left} = 274.95 in ³
C _{right} =	12.1550	in	A = 34.8506 in ²	C _{right} =	12.1550	in	A = 29.2341 in ²
C _{left} =	12.1550	in	r _y = 10.1328 in	C _{left} =	12.1550	in	r _y = 10.6920 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U50-L49

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		0.0000	7.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			37.78		264.47	408.29		0.00	408.29
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	$S_{top} =$	58.33	in ³	y-bar =	7.0000	in	$S_{top} =$	58.33	in ³
$I_x =$	408.29	in ⁴	$S_{bott.} =$	58.33	in ³	$I_x =$	408.29	in ⁴	$S_{bott.} =$	58.33	in ³
$c_{top} =$	7.0000	in	A =	37.7816	in ²	$c_{top} =$	7.0000	in	A =	37.7816	in ²
$c_{bottom} =$	7.0000	in	$r_x =$	3.2873	in	$c_{bottom} =$	7.0000	in	$r_x =$	3.2873	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.1250	155.2681	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	0.4460	5.5696	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	23.8040	297.2644	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.1250	0.0000	0.0000
	Right Plate		0.0000	24.2500	0.0000	0.0000	12.1250	0.0000	0.0000
Total			37.78		458.10	540.26		3406.70	3946.96
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.1250	in	S _{right} =	325.52	in ³	x-bar =	12.1250	in	S _{right} =	325.52	in ³
I _y =	3946.96	in ⁴	S _{left} =	325.52	in ³	I _y =	3946.96	in ⁴	S _{left} =	325.52	in ³
C _{right} =	12.1250	in	A =	37.7816	in ²	C _{right} =	12.1250	in	A =	37.7816	in ²
C _{left} =	12.1250	in	r _y =	10.2210	in	C _{left} =	12.1250	in	r _y =	10.2210	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 14.0000$ in
- $B_3 = b = 0.5625$ in



Member U50-L51

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		15.7500	7.0000	110.2500	0.4153	0.0000	0.0000	0.4153
Total			53.53		374.72	408.70		0.00	408.70
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	S _{top} =	58.39	in ³	y-bar =	7.0000	in	S _{top} =	58.39	in ³
I _x =	408.70	in ⁴	S _{bott.} =	58.39	in ³	I _x =	408.70	in ⁴	S _{bott.} =	58.39	in ³
c _{top} =	7.0000	in	A =	53.5316	in ²	c _{top} =	7.0000	in	A =	53.5316	in ²
c _{bottom} =	7.0000	in	r _x =	2.7631	in	c _{bottom} =	7.0000	in	r _x =	2.7631	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	26.1250	334.5468	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	14.4460	180.4016	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	37.8040	472.0964	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		7.8750	7.0000	55.1250	128.6250	19.1250	2880.4043	3009.0293
	Right Plate		7.8750	45.2500	356.3438	128.6250	19.1250	2880.4043	3009.0293
Total			53.53		1398.51	797.51		9167.51	9965.02
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	26.1250	in	S _{right} = 381.44 in ³	x-bar =	26.1250	in	S _{right} = 381.44 in ³
I _y =	9965.02	n ⁴	S _{left} = 381.44 in ³	I _y =	9965.02	n ⁴	S _{left} = 381.44 in ³
C _{right} =	26.1250	in	A = 53.5316 in ²	C _{right} =	26.1250	in	A = 53.5316 in ²
C _{left} =	26.1250	in	r _y = 13.6438 in	C _{left} =	26.1250	in	r _y = 13.6438 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.5625$ in
- $B_3 = b = 14.0000$ in



Member U51-L52

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		15.7500	7.0000	110.2500	257.2500	0.0000	0.0000	257.2500
Total			53.53		374.72	665.54		0.00	665.54
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	S _{top} =	95.08	in ³	y-bar =	7.0000	in	S _{top} =	95.08	in ³
I _x =	665.54	in ⁴	S _{bott.} =	95.08	in ³	I _x =	665.54	in ⁴	S _{bott.} =	95.08	in ³
c _{top} =	7.0000	in	A =	53.5316	in ²	c _{top} =	7.0000	in	A =	53.5316	in ²
c _{bottom} =	7.0000	in	r _x =	3.5260	in	c _{bottom} =	7.0000	in	r _x =	3.5260	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	12.8056	12.6875	162.4713	538.6056	0.0000	0.0000	538.6056	
2	Left Flange	12.4880	1.0085	12.5941	0.8280	11.6790	1703.3512	1704.1792	
	Right Flange	12.4880	24.3665	304.2889	0.8280	11.6790	1703.3512	1704.1792	
3	Left Plate	7.8750	0.2813	2.2148	0.2076	12.4063	1212.0809	1212.2886	
	Right Plate	7.8750	25.0938	197.6133	0.2076	12.4063	1212.0809	1212.2886	
Total		53.53		679.18	540.68		5830.86	6371.54	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.6875	in	S _{right} = 502.19 in ³	x-bar =	12.6875	in	S _{right} = 502.19 in ³
I _y =	6371.54	n ⁴	S _{left} = 502.19 in ³	I _y =	6371.54	n ⁴	S _{left} = 502.19 in ³
C _{right} =	12.6875	in	A = 53.5316 in ²	C _{right} =	12.6875	in	A = 53.5316 in ²
C _{left} =	12.6875	in	r _y = 10.9098 in	C _{left} =	12.6875	in	r _y = 10.9098 in



Made By DWC
Checked By KMW

Date 2/2/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 160

- $A_1 = t_w = 0.6650$ in
- $A_2 = t_f = 1.1240$ in
- $B_1 = d = 24.7140$ in
- $B_2 = b_f = 14.0950$ in

Cover Plate

- $A_3 = t = 0.3125$ in
- $B_3 = b = 14.0000$ in



Member U52-L53

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	7.0475	105.2889	0.5506	0.0000	0.0000	0.5506
2	Flange Plates		31.6856	7.0475	223.3040	524.5783	0.0000	0.0000	524.5783
3	Cover Plate		8.7500	7.0475	61.6656	142.9167	0.0000	0.0000	142.9167
Total			55.38		390.26	668.05		0.00	668.05
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1875	14.0000	-2.6250	7.0475	-18.4997	-42.8750	0.6699	-1.1781	-44.0531
2	22.4660	0.2500	-5.6165	12.6695	-71.1582	-0.0293	6.2919	-222.3474	-222.3767
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-8.24		-89.66	-42.90		-223.53	-266.43

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0475	in	S _{top} =	94.79	in ³	y-bar =	6.3776	in	S _{top} =	56.99	in ³
I _x =	668.05	in ⁴	S _{bott.} =	94.79	in ³	I _x =	401.62	in ⁴	S _{bott.} =	62.97	in ³
c _{top} =	7.0475	in	A =	55.3755	in ²	c _{top} =	7.0475	in	A =	47.1340	in ²
c _{bottom} =	7.0475	in	r _x =	3.4733	in	c _{bottom} =	6.3776	in	r _x =	2.9190	in



Made By DWC
Checked By KMW

Date 2/2/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	12.6695	189.2809	628.3732	0.0000	0.0000	628.3732
2	Left Flange		15.8428	0.8745	13.8545	1.6679	11.7950	2204.0796	2205.7476
	Right Flange		15.8428	24.4645	387.5857	1.6679	11.7950	2204.0796	2205.7476
3	Left Plate		4.3750	0.1563	0.6836	0.0356	12.5133	685.0437	685.0793
	Right Plate		4.3750	25.1828	110.1745	0.0356	12.5133	685.0437	685.0793
Total			55.38		701.58	631.78		5778.25	6410.03
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	14.0000	0.1875	-2.6250	0.0938	-0.2461	-0.0077	13.2761	-462.6705	-462.6782
2	0.2500	22.4660	-5.6165	12.6695	-71.1582	-236.2305	0.7004	-2.7550	-238.9855
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-8.24		-71.40	-236.24		-465.43	-701.66

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.6695	in	S _{right} = 505.94 in ³	x-bar =	13.3699	in	S _{right} = 476.92 in ³
I _y =	6410.03	n ⁴	S _{left} = 505.94 in ³	I _y =	5708.36	n ⁴	S _{left} = 426.96 in ³
C _{right} =	12.6695	in	A = 55.3755 in ²	C _{right} =	11.9691	in	A = 47.1340 in ²
C _{left} =	12.6695	in	r _y = 10.7590 in	C _{left} =	13.3699	in	r _y = 11.0050 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 160

- $A_1 = t_w = 0.6650$ in
- $A_2 = t_f = 1.1240$ in
- $B_1 = d = 24.7140$ in
- $B_2 = b_f = 14.0950$ in

Cover Plate

- $A_3 = t = 0.3125$ in
- $B_3 = b = 14.0000$ in



Member U53-L54

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	7.0475	105.2889	0.5506	0.0000	0.0000	0.5506
2	Flange Plates		31.6856	7.0475	223.3040	524.5783	0.0000	0.0000	524.5783
3	Cover Plate		8.7500	7.0475	61.6656	142.9167	0.0000	0.0000	142.9167
Total			55.38		390.26	668.05		0.00	668.05
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0475	in	S _{top} =	94.79	in ³	y-bar =	7.0475	in	S _{top} =	94.79	in ³
I _x =	668.05	in ⁴	S _{bott.} =	94.79	in ³	I _x =	668.05	in ⁴	S _{bott.} =	94.79	in ³
c _{top} =	7.0475	in	A =	55.3755	in ²	c _{top} =	7.0475	in	A =	55.3755	in ²
c _{bottom} =	7.0475	in	r _x =	3.4733	in	c _{bottom} =	7.0475	in	r _x =	3.4733	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	12.6695	189.2809	628.3732	0.0000	0.0000	628.3732
2	Left Flange		15.8428	0.8745	13.8545	1.6679	11.7950	2204.0796	2205.7476
	Right Flange		15.8428	24.4645	387.5857	1.6679	11.7950	2204.0796	2205.7476
3	Left Plate		4.3750	0.1563	0.6836	0.0356	12.5133	685.0437	685.0793
	Right Plate		4.3750	25.1828	110.1745	0.0356	12.5133	685.0437	685.0793
Total			55.38		701.58	631.78		5778.25	6410.03
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.6695	in	S _{right} = 505.94 in ³	x-bar =	12.6695	in	S _{right} = 505.94 in ³
I _y =	6410.03	n ⁴	S _{left} = 505.94 in ³	I _y =	6410.03	n ⁴	S _{left} = 505.94 in ³
C _{right} =	12.6695	in	A = 55.3755 in ²	C _{right} =	12.6695	in	A = 55.3755 in ²
C _{left} =	12.6695	in	r _y = 10.7590 in	C _{left} =	12.6695	in	r _y = 10.7590 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.6250$ in
- $B_3 = b = 14.0000$ in



Member U54-L55

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		17.5000	7.0000	122.5000	285.8333	0.0000	0.0000	285.8333
Total			55.28		386.97	694.12		0.00	694.12
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	S _{top} =	99.16	in ³	y-bar =	7.0000	in	S _{top} =	99.16	in ³
I _x =	694.12	in ⁴	S _{bott.} =	99.16	in ³	I _x =	694.12	in ⁴	S _{bott.} =	99.16	in ³
c _{top} =	7.0000	in	A =	55.2816	in ²	c _{top} =	7.0000	in	A =	55.2816	in ²
c _{bottom} =	7.0000	in	r _x =	3.5435	in	c _{bottom} =	7.0000	in	r _x =	3.5435	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y, gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	12.8056	12.7500	163.2717	538.6056	0.0000	0.0000	538.6056	
2	Left Flange	12.4880	1.0710	13.3746	0.8280	11.6790	1703.3512	1704.1792	
	Right Flange	12.4880	24.4290	305.0694	0.8280	11.6790	1703.3512	1704.1792	
3	Left Plate	8.7500	0.3125	2.7344	0.2848	12.4375	1353.5498	1353.8346	
	Right Plate	8.7500	25.1875	220.3906	0.2848	12.4375	1353.5498	1353.8346	
Total		55.28		704.84	540.83		6113.80	6654.63	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.7500	in	S _{right} = 521.93 in ³	x-bar =	12.7500	in	S _{right} = 521.93 in ³
I _y =	6654.63	in ⁴	S _{left} = 521.93 in ³	I _y =	6654.63	in ⁴	S _{left} = 521.93 in ³
C _{right} =	12.7500	in	A = 55.2816 in ²	C _{right} =	12.7500	in	A = 55.2816 in ²
C _{left} =	12.7500	in	r _y = 10.9716 in	C _{left} =	12.7500	in	r _y = 10.9716 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 100

- $A_1 = t_w = 0.4700$ in
- $A_2 = t_f = 0.7670$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 12.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U55-L56

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	6.0000	63.3541	0.1944	0.0000	0.0000	0.1944
2	Flange Plates		18.4080	6.0000	110.4480	220.8960	0.0000	0.0000	220.8960
3	Cover Plate		0.0000	6.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			28.97		173.80	221.09		0.00	221.09
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0000	in	$S_{top} =$	36.85	in ³	y-bar =	6.0000	in	$S_{top} =$	36.85	in ³
$I_x =$	221.09	in ⁴	$S_{bott.} =$	36.85	in ³	$I_x =$	221.09	in ⁴	$S_{bott.} =$	36.85	in ³
$c_{top} =$	6.0000	in	A =	28.9670	in ²	$c_{top} =$	6.0000	in	A =	28.9670	in ²
$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in	$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	12.0000	126.7082	444.1134	0.0000	0.0000	444.1134
2	Left Flange		9.2040	0.3835	3.5297	0.4512	11.6165	1242.0160	1242.4673
	Right Flange		9.2040	23.6165	217.3663	0.4512	11.6165	1242.0160	1242.4673
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.0000	0.0000	0.0000
	Right Plate		0.0000	24.0000	0.0000	0.0000	12.0000	0.0000	0.0000
Total			28.97		347.60	445.02		2484.03	2929.05
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.0000	in	S _{right} =	244.09	in ³	x-bar =	12.0000	in	S _{right} =	244.09	in ³
I _y =	2929.05	n ⁴	S _{left} =	244.09	in ³	I _y =	2929.05	n ⁴	S _{left} =	244.09	in ³
C _{right} =	12.0000	in	A =	28.9670	in ²	C _{right} =	12.0000	in	A =	28.9670	in ²
C _{left} =	12.0000	in	r _y =	10.0557	in	C _{left} =	12.0000	in	r _y =	10.0557	in



Made By DWC
Checked By KMW

Date 2/2/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 110

- $A_1 = t_w = 0.5130$ in
- $A_2 = t_f = 0.8470$ in
- $B_1 = d = 24.1600$ in
- $B_2 = b_f = 12.0430$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U57-L56

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		11.5251	6.0215	69.3981	0.2528	0.0000	0.0000	0.2528
2	Flange Plates		20.4008	6.0215	122.8437	246.5677	0.0000	0.0000	246.5677
3	Cover Plate		0.0000	6.0215	0.0000	0.0000	0.0000	0.0000	0.0000
Total			31.93		192.24	246.82		0.00	246.82
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.2500	12.0430	-3.0108	6.0215	-18.1292	-36.3884	0.0000	0.0000	-36.3884
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-3.01		-18.13	-36.39		0.00	-36.39

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0215	in	S _{top} =	40.99	in ³	y-bar =	6.0215	in	S _{top} =	34.95	in ³
I _x =	246.82	in ⁴	S _{bott.} =	40.99	in ³	I _x =	210.43	in ⁴	S _{bott.} =	34.95	in ³
c _{top} =	6.0215	in	A =	31.9259	in ²	c _{top} =	6.0215	in	A =	28.9152	in ²
c _{bottom} =	6.0215	in	r _x =	2.7805	in	c _{bottom} =	6.0215	in	r _x =	2.6977	in



Made By DWC
Checked By KMW

Date 2/2/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		11.5251	12.0800	139.2227	484.7450	0.0000	0.0000	484.7450
2	Left Flange		10.2004	0.4235	4.3199	0.6098	11.6565	1385.9719	1386.5817
	Right Flange		10.2004	23.7365	242.1223	0.6098	11.6565	1385.9719	1386.5817
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.0800	0.0000	0.0000
	Right Plate		0.0000	24.1600	0.0000	0.0000	12.0800	0.0000	0.0000
Total			31.93		385.66	485.96		2771.94	3257.91
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	12.0430	0.2500	-3.0108	0.1250	-0.3763	-0.0157	13.1998	-524.5770	-524.5927
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-3.01		-0.38	-0.02		-524.58	-524.59

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.0800	in	S _{right} = 269.69 in ³	x-bar =	13.3248	in	S _{right} = 252.26 in ³
I _y =	3257.91	n ⁴	S _{left} = 269.69 in ³	I _y =	2733.32	n ⁴	S _{left} = 205.13 in ³
C _{right} =	12.0800	in	A = 31.9259 in ²	C _{right} =	10.8352	in	A = 28.9152 in ²
C _{left} =	12.0800	in	r _y = 10.1018 in	C _{left} =	13.3248	in	r _y = 9.7226 in



Made By DWC
Checked By KMW

Date 2/2/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.5625$ in
- $B_3 = b = 14.0000$ in



Member U58-L57

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		15.7500	7.0000	110.2500	257.2500	0.0000	0.0000	257.2500
Total			53.53		374.72	665.54		0.00	665.54
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1875	14.0000	-2.6250	7.0000	-18.3750	-42.8750	0.0000	0.0000	-42.8750
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.63		-18.38	-42.88		0.00	-42.88

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	S _{top} =	95.08	in ³	y-bar =	7.0000	in	S _{top} =	88.95	in ³
I _x =	665.54	in ⁴	S _{bott.} =	95.08	in ³	I _x =	622.66	in ⁴	S _{bott.} =	88.95	in ³
c _{top} =	7.0000	in	A =	53.5316	in ²	c _{top} =	7.0000	in	A =	50.9066	in ²
c _{bottom} =	7.0000	in	r _x =	3.5260	in	c _{bottom} =	7.0000	in	r _x =	3.4974	in



Made By DWC
Checked By KMW

Date 2/2/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.6875	162.4713	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	1.0085	12.5941	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	24.3665	304.2889	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		7.8750	0.2813	2.2148	0.2076	12.4063	1212.0809	1212.2886
	Right Plate		7.8750	25.0938	197.6133	0.2076	12.4063	1212.0809	1212.2886
Total			53.53		679.18	540.68		5830.86	6371.54
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	14.0000	0.1875	-2.6250	0.0938	-0.2461	-0.0077	13.2431	-460.3750	-460.3826
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.63		-0.25	-0.01		-460.37	-460.38

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.6875	in	S _{right} = 502.19 in ³	x-bar =	13.3369	in	S _{right} = 491.04 in ³
I _y =	6371.54	in ⁴	S _{left} = 502.19 in ³	I _y =	5911.16	in ⁴	S _{left} = 443.22 in ³
C _{right} =	12.6875	in	A = 53.5316 in ²	C _{right} =	12.0381	in	A = 50.9066 in ²
C _{left} =	12.6875	in	r _y = 10.9098 in	C _{left} =	13.3369	in	r _y = 10.7758 in



Made By DWC
Checked By KMW

Date 2/2/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 160

- $A_1 = t_w = 0.6650$ in
- $A_2 = t_f = 1.1240$ in
- $B_1 = d = 24.7140$ in
- $B_2 = b_f = 14.0950$ in

Cover Plate

- $A_3 = t = 0.5625$ in
- $B_3 = b = 14.0000$ in



Member U59-L58

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	7.0475	105.2889	0.5506	0.0000	0.0000	0.5506
2	Flange Plates		31.6856	7.0475	223.3040	524.5783	0.0000	0.0000	524.5783
3	Cover Plate		15.7500	7.0475	110.9981	257.2500	0.0000	0.0000	257.2500
Total			62.38		439.59	782.38		0.00	782.38
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	12.9195	0.3125	-4.0373	7.2238	-29.1648	-0.0329	0.1884	-0.1434	-0.1762
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-4.04		-29.16	-0.03		-0.14	-0.18

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0475	in	$S_{top} =$	111.02	in ³	y-bar =	7.0353	in	$S_{top} =$	110.99	in ³
$I_x =$	782.38	in ⁴	$S_{bott.} =$	111.02	in ³	$I_x =$	782.20	in ⁴	$S_{bott.} =$	111.18	in ³
$C_{top} =$	7.0475	in	A =	62.3755	in ²	$C_{top} =$	7.0475	in	A =	58.3381	in ²
$C_{bottom} =$	7.0475	in	$r_x =$	3.5416	in	$C_{bottom} =$	7.0353	in	$r_x =$	3.6617	in



Made By DWC
Checked By KMW

Date 2/2/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	12.9195	193.0159	628.3732	0.0000	0.0000	628.3732
2	Left Flange		15.8428	1.1245	17.8152	1.6679	11.7950	2204.0796	2205.7476
	Right Flange		15.8428	24.7145	391.5464	1.6679	11.7950	2204.0796	2205.7476
3	Left Plate		7.8750	0.2813	2.2148	0.2076	12.6383	1257.8372	1258.0449
	Right Plate		7.8750	25.5578	201.2673	0.2076	12.6383	1257.8372	1258.0449
Total			62.38		805.86	632.12		6923.83	7555.96
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.3125	12.9195	-4.0373	12.9195	-52.1605	-56.1573	0.0000	0.0000	-56.1573
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-4.04		-52.16	-56.16		0.00	-56.16

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.9195	in	S _{right} = 584.85 in ³	x-bar =	12.9195	in	S _{right} = 580.50 in ³
I _y =	7555.96	n ⁴	S _{left} = 584.85 in ³	I _y =	7499.80	n ⁴	S _{left} = 580.50 in ³
C _{right} =	12.9195	in	A = 62.3755 in ²	C _{right} =	12.9195	in	A = 58.3381 in ²
C _{left} =	12.9195	in	r _y = 11.0062 in	C _{left} =	12.9195	in	r _y = 11.3383 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 160

- $A_1 = t_w = 0.6650$ in
- $A_2 = t_f = 1.1240$ in
- $B_1 = d = 24.7140$ in
- $B_2 = b_f = 14.0950$ in

Cover Plate

- $A_3 = t = 0.5625$ in
- $B_3 = b = 14.0000$ in



Member U60-L59

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	7.0475	105.2889	0.5506	0.0000	0.0000	0.5506
2	Flange Plates		31.6856	7.0475	223.3040	524.5783	0.0000	0.0000	524.5783
3	Cover Plate		15.7500	7.0475	110.9981	257.2500	0.0000	0.0000	257.2500
Total			62.38		439.59	782.38		0.00	782.38
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0475	in	S _{top} =	111.02	in ³	y-bar =	7.0475	in	S _{top} =	111.02	in ³
I _x =	782.38	in ⁴	S _{bott.} =	111.02	in ³	I _x =	782.38	in ⁴	S _{bott.} =	111.02	in ³
c _{top} =	7.0475	in	A =	62.3755	in ²	c _{top} =	7.0475	in	A =	62.3755	in ²
c _{bottom} =	7.0475	in	r _x =	3.5416	in	c _{bottom} =	7.0475	in	r _x =	3.5416	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	12.9195	193.0159	628.3732	0.0000	0.0000	628.3732
2	Left Flange		15.8428	1.1245	17.8152	1.6679	11.7950	2204.0796	2205.7476
	Right Flange		15.8428	24.7145	391.5464	1.6679	11.7950	2204.0796	2205.7476
3	Left Plate		7.8750	0.2813	2.2148	0.2076	12.6383	1257.8372	1258.0449
	Right Plate		7.8750	25.5578	201.2673	0.2076	12.6383	1257.8372	1258.0449
Total			62.38		805.86	632.12		6923.83	7555.96
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.9195	in	S _{right} = 584.85 in ³	x-bar =	12.9195	in	S _{right} = 584.85 in ³
I _y =	7555.96	in ⁴	S _{left} = 584.85 in ³	I _y =	7555.96	in ⁴	S _{left} = 584.85 in ³
C _{right} =	12.9195	in	A = 62.3755 in ²	C _{right} =	12.9195	in	A = 62.3755 in ²
C _{left} =	12.9195	in	r _y = 11.0062 in	C _{left} =	12.9195	in	r _y = 11.0062 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 160

- $A_1 = t_w = 0.6650$ in
- $A_2 = t_f = 1.1240$ in
- $B_1 = d = 24.7140$ in
- $B_2 = b_f = 14.0950$ in

Cover Plate

- $A_3 = t = 0.5000$ in
- $B_3 = b = 14.0000$ in



Member U61-L60

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	7.0475	105.2889	0.5506	0.0000	0.0000	0.5506
2	Flange Plates		31.6856	7.0475	223.3040	524.5783	0.0000	0.0000	524.5783
3	Cover Plate		14.0000	7.0475	98.6650	228.6667	0.0000	0.0000	228.6667
Total			60.63		427.26	753.80		0.00	753.80
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	7.0475	in	S _{top} = 106.96 in ³	y-bar =	7.0475	in	S _{top} = 106.96 in ³
I _x =	753.80	in ⁴	S _{bott.} = 106.96 in ³	I _x =	753.80	in ⁴	S _{bott.} = 106.96 in ³
c _{top} =	7.0475	in	A = 60.6255 in ²	c _{top} =	7.0475	in	A = 60.6255 in ²
c _{bottom} =	7.0475	in	r _x = 3.5261 in	c _{bottom} =	7.0475	in	r _x = 3.5261 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	12.8570	192.0822	628.3732	0.0000	0.0000	628.3732
2	Left Flange		15.8428	1.0620	16.8250	1.6679	11.7950	2204.0796	2205.7476
	Right Flange		15.8428	24.6520	390.5562	1.6679	11.7950	2204.0796	2205.7476
3	Left Plate		7.0000	0.2500	1.7500	0.1458	12.6070	1112.5551	1112.7010
	Right Plate		7.0000	25.4640	178.2480	0.1458	12.6070	1112.5551	1112.7010
Total			60.63		779.46	632.00		6633.27	7265.27
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.8570	in	S _{right} = 565.08 in ³	x-bar =	12.8570	in	S _{right} = 565.08 in ³
I _y =	7265.27	in ⁴	S _{left} = 565.08 in ³	I _y =	7265.27	in ⁴	S _{left} = 565.08 in ³
C _{right} =	12.8570	in	A = 60.6255 in ²	C _{right} =	12.8570	in	A = 60.6255 in ²
C _{left} =	12.8570	in	r _y = 10.9471 in	C _{left} =	12.8570	in	r _y = 10.9471 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.3750$ in
- $B_3 = b = 14.0000$ in



Member U62-L61

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		10.5000	7.0000	73.5000	171.5000	0.0000	0.0000	171.5000
Total			48.28		337.97	579.79		0.00	579.79
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	S _{top} =	82.83	in ³	y-bar =	7.0000	in	S _{top} =	82.83	in ³
I _x =	579.79	in ⁴	S _{bott.} =	82.83	in ³	I _x =	579.79	in ⁴	S _{bott.} =	82.83	in ³
c _{top} =	7.0000	in	A =	48.2816	in ²	c _{top} =	7.0000	in	A =	48.2816	in ²
c _{bottom} =	7.0000	in	r _x =	3.4653	in	c _{bottom} =	7.0000	in	r _x =	3.4653	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.5000	160.0703	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	0.8210	10.2526	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	24.1790	301.9474	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		5.2500	0.1875	0.9844	0.0615	12.3125	795.8877	795.9492
	Right Plate		5.2500	24.8125	130.2656	0.0615	12.3125	795.8877	795.9492
Total			48.28		603.52	540.38		4998.48	5538.86
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.5000	in	S _{right} =	443.11	in ³	x-bar =	12.5000	in	S _{right} =	443.11	in ³
I _y =	5538.86	n ⁴	S _{left} =	443.11	in ³	I _y =	5538.86	n ⁴	S _{left} =	443.11	in ³
C _{right} =	12.5000	in	A =	48.2816	in ²	C _{right} =	12.5000	in	A =	48.2816	in ²
C _{left} =	12.5000	in	r _y =	10.7107	in	C _{left} =	12.5000	in	r _y =	10.7107	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 100

- $A_1 = t_w = 0.4700$ in
- $A_2 = t_f = 0.7670$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 12.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U62-L63

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	6.0000	63.3541	0.1944	0.0000	0.0000	0.1944
2	Flange Plates		18.4080	6.0000	110.4480	220.8960	0.0000	0.0000	220.8960
3	Cover Plate		0.0000	6.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			28.97		173.80	221.09		0.00	221.09
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0000	in	S _{top} =	36.85	in ³	y-bar =	6.0000	in	S _{top} =	36.85	in ³
I _x =	221.09	in ⁴	S _{bott.} =	36.85	in ³	I _x =	221.09	in ⁴	S _{bott.} =	36.85	in ³
c _{top} =	6.0000	in	A =	28.9670	in ²	c _{top} =	6.0000	in	A =	28.9670	in ²
c _{bottom} =	6.0000	in	r _x =	2.7627	in	c _{bottom} =	6.0000	in	r _x =	2.7627	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	12.0000	126.7082	444.1134	0.0000	0.0000	444.1134
2	Left Flange		9.2040	0.3835	3.5297	0.4512	11.6165	1242.0160	1242.4673
	Right Flange		9.2040	23.6165	217.3663	0.4512	11.6165	1242.0160	1242.4673
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.0000	0.0000	0.0000
	Right Plate		0.0000	24.0000	0.0000	0.0000	12.0000	0.0000	0.0000
Total			28.97		347.60	445.02		2484.03	2929.05
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.0000	in	S _{right} =	244.09	in ³	x-bar =	12.0000	in	S _{right} =	244.09	in ³
I _y =	2929.05	n ⁴	S _{left} =	244.09	in ³	I _y =	2929.05	n ⁴	S _{left} =	244.09	in ³
C _{right} =	12.0000	in	A =	28.9670	in ²	C _{right} =	12.0000	in	A =	28.9670	in ²
C _{left} =	12.0000	in	r _y =	10.0557	in	C _{left} =	12.0000	in	r _y =	10.0557	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 110

- $A_1 = t_w = 0.5130$ in
- $A_2 = t_f = 0.8470$ in
- $B_1 = d = 24.1600$ in
- $B_2 = b_f = 12.0430$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U63-L64

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		11.5251	6.0215	69.3981	0.2528	0.0000	0.0000	0.2528
2	Flange Plates		20.4008	6.0215	122.8437	246.5677	0.0000	0.0000	246.5677
3	Cover Plate		0.0000	6.0215	0.0000	0.0000	0.0000	0.0000	0.0000
Total			31.93		192.24	246.82		0.00	246.82
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0215	in	S _{top} =	40.99	in ³	y-bar =	6.0215	in	S _{top} =	40.99	in ³
I _x =	246.82	in ⁴	S _{bott.} =	40.99	in ³	I _x =	246.82	in ⁴	S _{bott.} =	40.99	in ³
c _{top} =	6.0215	in	A =	31.9259	in ²	c _{top} =	6.0215	in	A =	31.9259	in ²
c _{bottom} =	6.0215	in	r _x =	2.7805	in	c _{bottom} =	6.0215	in	r _x =	2.7805	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		11.5251	12.0800	139.2227	484.7450	0.0000	0.0000	484.7450
2	Left Flange		10.2004	0.4235	4.3199	0.6098	11.6565	1385.9719	1386.5817
	Right Flange		10.2004	23.7365	242.1223	0.6098	11.6565	1385.9719	1386.5817
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.0800	0.0000	0.0000
	Right Plate		0.0000	24.1600	0.0000	0.0000	12.0800	0.0000	0.0000
Total			31.93		385.66	485.96		2771.94	3257.91
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.0800	in	S _{right} = 269.69 in ³	x-bar =	12.0800	in	S _{right} = 269.69 in ³
I _y =	3257.91	in ⁴	S _{left} = 269.69 in ³	I _y =	3257.91	in ⁴	S _{left} = 269.69 in ³
C _{right} =	12.0800	in	A = 31.9259 in ²	C _{right} =	12.0800	in	A = 31.9259 in ²
C _{left} =	12.0800	in	r _y = 10.1018 in	C _{left} =	12.0800	in	r _y = 10.1018 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 120

- $A_1 = t_w = 0.5590$ in
- $A_2 = t_f = 0.9220$ in
- $B_1 = d = 24.3100$ in
- $B_2 = b_f = 12.0890$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U64-L65

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.5585	6.0445	75.9098	0.3270	0.0000	0.0000	0.3270
2	Flange Plates		22.2921	6.0445	134.7447	271.4881	0.0000	0.0000	271.4881
3	Cover Plate		0.0000	6.0445	0.0000	0.0000	0.0000	0.0000	0.0000
Total			34.85		210.65	271.82		0.00	271.82
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	22.4660	0.1250	-2.8083	6.2615	-17.5839	-0.0037	0.2360	-0.1564	-0.1601
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.81		-17.58	0.00		-0.16	-0.16

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0445	in	S _{top} =	44.97	in ³	y-bar =	6.0255	in	S _{top} =	44.94	in ³
I _x =	271.82	in ⁴	S _{bott.} =	44.97	in ³	I _x =	271.66	in ⁴	S _{bott.} =	45.08	in ³
c _{top} =	6.0445	in	A =	34.8506	in ²	c _{top} =	6.0445	in	A =	32.0424	in ²
c _{bottom} =	6.0445	in	r _x =	2.7927	in	c _{bottom} =	6.0255	in	r _x =	2.9117	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.5585	12.1550	152.6485	528.2115	0.0000	0.0000	528.2115
2	Left Flange		11.1461	0.4610	5.1383	0.7896	11.6940	1524.2194	1525.0090
	Right Flange		11.1461	23.8490	265.8223	0.7896	11.6940	1524.2194	1525.0090
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.1550	0.0000	0.0000
	Right Plate		0.0000	24.3100	0.0000	0.0000	12.1550	0.0000	0.0000
Total			34.85		423.61	529.79		3048.44	3578.23
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1250	22.4660	-2.8083	12.1550	-34.1343	-118.1153	0.0000	0.0000	-118.1153
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.81		-34.13	-118.12		0.00	-118.12

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1550	in	S _{right} = 294.38 in ³	x-bar =	12.1550	in	S _{right} = 284.67 in ³
I _y =	3578.23	n ⁴	S _{left} = 294.38 in ³	I _y =	3460.11	n ⁴	S _{left} = 284.67 in ³
C _{right} =	12.1550	in	A = 34.8506 in ²	C _{right} =	12.1550	in	A = 32.0424 in ²
C _{left} =	12.1550	in	r _y = 10.1328 in	C _{left} =	12.1550	in	r _y = 10.3916 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U65-L66

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		0.0000	7.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			37.78		264.47	408.29		0.00	408.29
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	S _{top} =	58.33	in ³	y-bar =	7.0000	in	S _{top} =	58.33	in ³
I _x =	408.29	in ⁴	S _{bott.} =	58.33	in ³	I _x =	408.29	in ⁴	S _{bott.} =	58.33	in ³
c _{top} =	7.0000	in	A =	37.7816	in ²	c _{top} =	7.0000	in	A =	37.7816	in ²
c _{bottom} =	7.0000	in	r _x =	3.2873	in	c _{bottom} =	7.0000	in	r _x =	3.2873	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.1250	155.2681	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	0.4460	5.5696	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	23.8040	297.2644	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.1250	0.0000	0.0000
	Right Plate		0.0000	24.2500	0.0000	0.0000	12.1250	0.0000	0.0000
Total			37.78		458.10	540.26		3406.70	3946.96
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.1250	in	S _{right} =	325.52	in ³	x-bar =	12.1250	in	S _{right} =	325.52	in ³
I _y =	3946.96	in ⁴	S _{left} =	325.52	in ³	I _y =	3946.96	in ⁴	S _{left} =	325.52	in ³
C _{right} =	12.1250	in	A =	37.7816	in ²	C _{right} =	12.1250	in	A =	37.7816	in ²
C _{left} =	12.1250	in	r _y =	10.2210	in	C _{left} =	12.1250	in	r _y =	10.2210	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 110

- $A_1 = t_w = 0.5130$ in
- $A_2 = t_f = 0.8470$ in
- $B_1 = d = 24.1600$ in
- $B_2 = b_f = 12.0430$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U66-L67

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		11.5251	6.0215	69.3981	0.2528	0.0000	0.0000	0.2528
2	Flange Plates		20.4008	6.0215	122.8437	246.5677	0.0000	0.0000	246.5677
3	Cover Plate		0.0000	6.0215	0.0000	0.0000	0.0000	0.0000	0.0000
Total			31.93		192.24	246.82		0.00	246.82
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0215	in	S _{top} =	40.99	in ³	y-bar =	6.0215	in	S _{top} =	40.99	in ³
I _x =	246.82	in ⁴	S _{bott.} =	40.99	in ³	I _x =	246.82	in ⁴	S _{bott.} =	40.99	in ³
c _{top} =	6.0215	in	A =	31.9259	in ²	c _{top} =	6.0215	in	A =	31.9259	in ²
c _{bottom} =	6.0215	in	r _x =	2.7805	in	c _{bottom} =	6.0215	in	r _x =	2.7805	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		11.5251	12.0800	139.2227	484.7450	0.0000	0.0000	484.7450
2	Left Flange		10.2004	0.4235	4.3199	0.6098	11.6565	1385.9719	1386.5817
	Right Flange		10.2004	23.7365	242.1223	0.6098	11.6565	1385.9719	1386.5817
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.0800	0.0000	0.0000
	Right Plate		0.0000	24.1600	0.0000	0.0000	12.0800	0.0000	0.0000
Total			31.93		385.66	485.96		2771.94	3257.91
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.0800	in	S _{right} =	269.69	in ³	x-bar =	12.0800	in	S _{right} =	269.69	in ³
I _y =	3257.91	n ⁴	S _{left} =	269.69	in ³	I _y =	3257.91	n ⁴	S _{left} =	269.69	in ³
C _{right} =	12.0800	in	A =	31.9259	in ²	C _{right} =	12.0800	in	A =	31.9259	in ²
C _{left} =	12.0800	in	r _y =	10.1018	in	C _{left} =	12.0800	in	r _y =	10.1018	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam 24WF87

- $A_1 = t_w = 0.4800$ in
- $A_2 = t_f = 0.8070$ in
- $B_1 = d = 24.1600$ in
- $B_2 = b_f = 9.0250$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U67-L68

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.8221	4.5125	48.8346	0.2078	0.0000	0.0000	0.2078
2	Flange Plates		14.5664	4.5125	65.7307	98.8699	0.0000	0.0000	98.8699
3	Cover Plate		0.0000	4.5125	0.0000	0.0000	0.0000	0.0000	0.0000
Total			25.39		114.57	99.08		0.00	99.08
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	4.5125	in	S _{top} =	21.96	in ³	y-bar =	4.5125	in	S _{top} =	21.96	in ³
I _x =	99.08	in ⁴	S _{bottom} =	21.96	in ³	I _x =	99.08	in ⁴	S _{bottom} =	21.96	in ³
c _{top} =	4.5125	in	A =	25.3884	in ²	c _{top} =	4.5125	in	A =	25.3884	in ²
c _{bottom} =	4.5125	in	r _x =	1.9755	in	c _{bottom} =	4.5125	in	r _x =	1.9755	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.8221	12.0800	130.7307	458.4252	0.0000	0.0000	458.4252
2	Left Flange		7.2832	0.4035	2.9388	0.3953	11.6765	992.9928	993.3881
	Right Flange		7.2832	23.7565	173.0227	0.3953	11.6765	992.9928	993.3881
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.0800	0.0000	0.0000
	Right Plate		0.0000	24.1600	0.0000	0.0000	12.0800	0.0000	0.0000
Total			25.39		306.69	459.22		1985.99	2445.20
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.0800	in	S _{right} = 202.42 in ³	x-bar =	12.0800	in	S _{right} = 202.42 in ³
I _y =	2445.20	n ⁴	S _{left} = 202.42 in ³	I _y =	2445.20	n ⁴	S _{left} = 202.42 in ³
C _{right} =	12.0800	in	A = 25.3884 in ²	C _{right} =	12.0800	in	A = 25.3884 in ²
C _{left} =	12.0800	in	r _y = 9.8138 in	C _{left} =	12.0800	in	r _y = 9.8138 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 74

- $A_1 = t_w = 0.4120$ in
- $A_2 = t_f = 0.6800$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 9.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U69-L68

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		9.3277	4.5000	41.9746	0.1319	0.0000	0.0000	0.1319
2	Flange Plates		12.2400	4.5000	55.0800	82.6200	0.0000	0.0000	82.6200
3	Cover Plate		0.0000	4.5000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			21.57		97.05	82.75		0.00	82.75
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	4.5000	in	S _{top} =	18.39	in ³	y-bar =	4.5000	in	S _{top} =	18.39	in ³
I _x =	82.75	in ⁴	S _{bott.} =	18.39	in ³	I _x =	82.75	in ⁴	S _{bott.} =	18.39	in ³
c _{top} =	4.5000	in	A =	21.5677	in ²	c _{top} =	4.5000	in	A =	21.5677	in ²
c _{bottom} =	4.5000	in	r _x =	1.9588	in	c _{bottom} =	4.5000	in	r _x =	1.9588	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		9.3277	12.0000	111.9322	398.4238	0.0000	0.0000	398.4238
2	Left Flange		6.1200	0.3400	2.0808	0.2358	11.6600	832.0483	832.2841
	Right Flange		6.1200	23.6600	144.7992	0.2358	11.6600	832.0483	832.2841
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.0000	0.0000	0.0000
	Right Plate		0.0000	24.0000	0.0000	0.0000	12.0000	0.0000	0.0000
Total			21.57		258.81	398.90		1664.10	2062.99
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.0000	in	S _{right} =	171.92	in ³	x-bar =	12.0000	in	S _{right} =	171.92	in ³
I _y =	2062.99	n ⁴	S _{left} =	171.92	in ³	I _y =	2062.99	n ⁴	S _{left} =	171.92	in ³
C _{right} =	12.0000	in	A =	21.5677	in ²	C _{right} =	12.0000	in	A =	21.5677	in ²
C _{left} =	12.0000	in	r _y =	9.7802	in	C _{left} =	12.0000	in	r _y =	9.7802	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 110

- $A_1 = t_w = 0.5130$ in
- $A_2 = t_f = 0.8470$ in
- $B_1 = d = 24.1600$ in
- $B_2 = b_f = 12.0430$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U70-L69

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		11.5251	6.0215	69.3981	0.2528	0.0000	0.0000	0.2528
2	Flange Plates		20.4008	6.0215	122.8437	246.5677	0.0000	0.0000	246.5677
3	Cover Plate		0.0000	6.0215	0.0000	0.0000	0.0000	0.0000	0.0000
Total			31.93		192.24	246.82		0.00	246.82
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0215	in	S _{top} =	40.99	in ³	y-bar =	6.0215	in	S _{top} =	40.99	in ³
I _x =	246.82	in ⁴	S _{bott.} =	40.99	in ³	I _x =	246.82	in ⁴	S _{bott.} =	40.99	in ³
c _{top} =	6.0215	in	A =	31.9259	in ²	c _{top} =	6.0215	in	A =	31.9259	in ²
c _{bottom} =	6.0215	in	r _x =	2.7805	in	c _{bottom} =	6.0215	in	r _x =	2.7805	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		11.5251	12.0800	139.2227	484.7450	0.0000	0.0000	484.7450
2	Left Flange		10.2004	0.4235	4.3199	0.6098	11.6565	1385.9719	1386.5817
	Right Flange		10.2004	23.7365	242.1223	0.6098	11.6565	1385.9719	1386.5817
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.0800	0.0000	0.0000
	Right Plate		0.0000	24.1600	0.0000	0.0000	12.0800	0.0000	0.0000
Total			31.93		385.66	485.96		2771.94	3257.91
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.0800	in	S _{right} = 269.69 in ³	x-bar =	12.0800	in	S _{right} = 269.69 in ³
I _y =	3257.91	in ⁴	S _{left} = 269.69 in ³	I _y =	3257.91	in ⁴	S _{left} = 269.69 in ³
C _{right} =	12.0800	in	A = 31.9259 in ²	C _{right} =	12.0800	in	A = 31.9259 in ²
C _{left} =	12.0800	in	r _y = 10.1018 in	C _{left} =	12.0800	in	r _y = 10.1018 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U71-L70

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		0.0000	7.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			37.78		264.47	408.29		0.00	408.29
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	S _{top} =	58.33	in ³	y-bar =	7.0000	in	S _{top} =	58.33	in ³
I _x =	408.29	in ⁴	S _{bott.} =	58.33	in ³	I _x =	408.29	in ⁴	S _{bott.} =	58.33	in ³
c _{top} =	7.0000	in	A =	37.7816	in ²	c _{top} =	7.0000	in	A =	37.7816	in ²
c _{bottom} =	7.0000	in	r _x =	3.2873	in	c _{bottom} =	7.0000	in	r _x =	3.2873	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.1250	155.2681	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	0.4460	5.5696	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	23.8040	297.2644	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.1250	0.0000	0.0000
	Right Plate		0.0000	24.2500	0.0000	0.0000	12.1250	0.0000	0.0000
Total			37.78		458.10	540.26		3406.70	3946.96
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.1250	in	S _{right} =	325.52	in ³	x-bar =	12.1250	in	S _{right} =	325.52	in ³
I _y =	3946.96	in ⁴	S _{left} =	325.52	in ³	I _y =	3946.96	in ⁴	S _{left} =	325.52	in ³
C _{right} =	12.1250	in	A =	37.7816	in ²	C _{right} =	12.1250	in	A =	37.7816	in ²
C _{left} =	12.1250	in	r _y =	10.2210	in	C _{left} =	12.1250	in	r _y =	10.2210	in



Made By KMW
Checked By ADK

Date 2/7/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U72-L71

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		0.0000	7.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			37.78		264.47	408.29		0.00	408.29
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	22.4660	0.2500	-5.6165	7.1600	-40.2141	-0.0293	0.3160	-0.5610	-0.5902
2	0.2500	3.6425	-0.9106	9.1063	-8.2924	-1.0068	2.2623	-4.6605	-5.6673
3	0.2500	3.6425	-0.9106	9.1063	-8.2924	-1.0068	2.2623	-4.6605	-5.6673
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-7.44		-56.80	-2.04		-9.88	-11.92

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	S _{top} =	58.33	in ³	y-bar =	6.8440	in	S _{top} =	56.62	in ³
I _x =	408.29	in ⁴	S _{bott.} =	58.33	in ³	I _x =	396.36	in ⁴	S _{bott.} =	57.91	in ³
c _{top} =	7.0000	in	A =	37.7816	in ²	c _{top} =	7.0000	in	A =	30.3439	in ²
c _{bottom} =	7.0000	in	r _x =	3.2873	in	c _{bottom} =	6.8440	in	r _x =	3.6142	in



Made By KMW
Checked By ADK

Date 2/7/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.1250	155.2681	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	0.4460	5.5696	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	23.8040	297.2644	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.1250	0.0000	0.0000
	Right Plate		0.0000	24.2500	0.0000	0.0000	12.1250	0.0000	0.0000
Total			37.78		458.10	540.26		3406.70	3946.96
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.2500	22.4660	-5.6165	12.1250	-68.1001	-236.2305	0.0000	0.0000	-236.2305
2	3.6425	0.2500	-0.9106	0.7670	-0.6984	-0.0047	11.3580	-117.4744	-117.4792
3	3.6425	0.2500	-0.9106	23.4830	-21.3842	-0.0047	11.3580	-117.4744	-117.4792
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-7.44		-90.18	-236.24		-234.95	-471.19

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.1250	in	S _{right} =	325.52	in ³	x-bar =	12.1250	in	S _{right} =	286.66	in ³
I _y =	3946.96	in ⁴	S _{left} =	325.52	in ³	I _y =	3475.78	in ⁴	S _{left} =	286.66	in ³
C _{right} =	12.1250	in	A =	37.7816	in ²	C _{right} =	12.1250	in	A =	30.3439	in ²
C _{left} =	12.1250	in	r _y =	10.2210	in	C _{left} =	12.1250	in	r _y =	10.7026	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 110

- $A_1 = t_w = 0.5130$ in
- $A_2 = t_f = 0.8470$ in
- $B_1 = d = 24.1600$ in
- $B_2 = b_f = 12.0430$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U73-L72

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		11.5251	6.0215	69.3981	0.2528	0.0000	0.0000	0.2528
2	Flange Plates		20.4008	6.0215	122.8437	246.5677	0.0000	0.0000	246.5677
3	Cover Plate		0.0000	6.0215	0.0000	0.0000	0.0000	0.0000	0.0000
Total			31.93		192.24	246.82		0.00	246.82
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0215	in	S _{top} =	40.99	in ³	y-bar =	6.0215	in	S _{top} =	40.99	in ³
I _x =	246.82	in ⁴	S _{bott.} =	40.99	in ³	I _x =	246.82	in ⁴	S _{bott.} =	40.99	in ³
c _{top} =	6.0215	in	A =	31.9259	in ²	c _{top} =	6.0215	in	A =	31.9259	in ²
c _{bottom} =	6.0215	in	r _x =	2.7805	in	c _{bottom} =	6.0215	in	r _x =	2.7805	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		11.5251	12.0800	139.2227	484.7450	0.0000	0.0000	484.7450
2	Left Flange		10.2004	0.4235	4.3199	0.6098	11.6565	1385.9719	1386.5817
	Right Flange		10.2004	23.7365	242.1223	0.6098	11.6565	1385.9719	1386.5817
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.0800	0.0000	0.0000
	Right Plate		0.0000	24.1600	0.0000	0.0000	12.0800	0.0000	0.0000
Total			31.93		385.66	485.96		2771.94	3257.91
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.0800	in	S _{right} = 269.69 in ³	x-bar =	12.0800	in	S _{right} = 269.69 in ³
I _y =	3257.91	in ⁴	S _{left} = 269.69 in ³	I _y =	3257.91	in ⁴	S _{left} = 269.69 in ³
C _{right} =	12.0800	in	A = 31.9259 in ²	C _{right} =	12.0800	in	A = 31.9259 in ²
C _{left} =	12.0800	in	r _y = 10.1018 in	C _{left} =	12.0800	in	r _y = 10.1018 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_t = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_t = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

$A_4 = h = 20.0000$ in
 $B_4 = t = 0.3750$ in

Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 0.3750$ in

Cover Plate:

$A_6 = t = 0.3750$ in
 $B_6 = l = 23.5000$ in



Member U74-L73

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	16.1875	44.0098	0.0319	5.7821	90.8952	90.9270
	Vertical Leg	3.0000	18.0000	54.0000	4.0000	7.5946	173.0340	177.0340
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	6.5929	118.1740	118.2059
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	8.4054	211.9521	215.9521
3	Perforated Plate	6.0000	4.2500	25.5000	0.1250	6.1554	227.3335	227.4585
4	Plate	7.5000	10.0000	75.0000	250.0000	0.4054	1.2326	251.2326
5	Plate	7.5000	10.0000	75.0000	250.0000	0.4054	1.2326	251.2326
6	Cover Plate	8.8125	15.8125	139.3477	0.1033	5.4071	257.6489	257.7522
Total		41.25		429.22	508.29		1081.50	1589.79
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	10.4054 in	S _{top} =	165.70 in ³	y-bar =	10.4054 in	S _{top} =	165.70 in ³
I _x =	1589.79 in ⁴	S _{bott.} =	152.79 in ³	I _x =	1589.79 in ⁴	S _{bott.} =	152.79 in ³
C _{top} =	9.5946 in	A =	41.2500 in ²	C _{top} =	9.5946 in	A =	41.2500 in ²
C _{bottom} =	10.4054 in	r _x =	6.2081 in	C _{bottom} =	10.4054 in	r _x =	6.2081 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	2.5625	3.4834	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.5625	0.8438	0.0176	11.5625	200.5371	200.5547	
1 (Right)	Horizontal Leg	1.3594	21.6875	29.4814	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.6875	35.5313	0.0176	11.5625	200.5371	200.5547	
2 (Left)	Horizontal Leg	1.3594	2.5625	3.4834	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.5625	0.8438	0.0176	11.5625	200.5371	200.5547	
2 (Right)	Horizontal Leg	1.3594	21.6875	29.4814	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.6875	35.5313	0.0176	11.5625	200.5371	200.5547	
3 (Left)	Perforated Plate	3.0000	3.3750	10.1250	9.0000	8.7500	229.6875	238.6875	
3 (Right)	Perforated Plate	3.0000	20.8750	62.6250	9.0000	8.7500	229.6875	238.6875	
4	Plate	7.5000	0.1875	1.4063	0.0879	11.9375	1068.7793	1068.8672	
5	Plate	7.5000	24.0625	180.4688	0.0879	11.9375	1068.7793	1068.8672	
6	Cover Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
Total		41.25		500.16	429.76		3896.29	4326.05	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	356.79 in ³	x-bar =	12.1250 in	S _{right} =	356.79 in ³
I _y =	4326.05 in ⁴	S _{left} =	356.79 in ³	I _y =	4326.05 in ⁴	S _{left} =	356.79 in ³
C _{right} =	12.1250 in	A =	41.2500 in ²	C _{right} =	12.1250 in	A =	41.2500 in ²
C _{left} =	12.1250 in	r _y =	10.2408 in	C _{left} =	12.1250 in	r _y =	10.2408 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

$A_4 = h = 20.0000$ in
 $B_4 = t = 0.6875$ in

Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 0.6875$ in

Cover Plate:

$A_6 = t = 0.3750$ in
 $B_6 = l = 23.5000$ in



Member U74-L75

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	16.1875	44.0098	0.0319	5.8764	93.8835	93.9153
	Vertical Leg	3.0000	18.0000	54.0000	4.0000	7.6889	177.3567	181.3567
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	6.4986	114.8184	114.8502
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	8.3111	207.2241	211.2241
3	Perforated Plate	6.0000	4.2500	25.5000	0.1250	6.0611	220.4230	220.5480
4	Plate	13.7500	10.0000	137.5000	458.3333	0.3111	1.3309	459.6643
5	Plate	13.7500	10.0000	137.5000	458.3333	0.3111	1.3309	459.6643
6	Cover Plate	8.8125	15.8125	139.3477	0.1033	5.5014	266.7120	266.8153
Total		53.75		554.22	924.96		1083.08	2008.04
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	10.3111 in	S _{top} =	207.25 in ³	y-bar =	10.3111 in	S _{top} =	207.25 in ³
I _x =	2008.04 in ⁴	S _{bott.} =	194.74 in ³	I _x =	2008.04 in ⁴	S _{bott.} =	194.74 in ³
C _{top} =	9.6889 in	A =	53.7500 in ²	C _{top} =	9.6889 in	A =	53.7500 in ²
C _{bottom} =	10.3111 in	r _x =	6.1122 in	C _{bottom} =	10.3111 in	r _x =	6.1122 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	2.8750	3.9082	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.8750	1.3125	0.0176	11.5625	200.5371	200.5547	
1 (Right)	Horizontal Leg	1.3594	22.0000	29.9063	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	24.0000	36.0000	0.0176	11.5625	200.5371	200.5547	
2 (Left)	Horizontal Leg	1.3594	2.8750	3.9082	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.8750	1.3125	0.0176	11.5625	200.5371	200.5547	
2 (Right)	Horizontal Leg	1.3594	22.0000	29.9063	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	24.0000	36.0000	0.0176	11.5625	200.5371	200.5547	
3 (Left)	Perforated Plate	3.0000	3.6875	11.0625	9.0000	8.7500	229.6875	238.6875	
3 (Right)	Perforated Plate	3.0000	21.1875	63.5625	9.0000	8.7500	229.6875	238.6875	
4	Plate	13.7500	0.3438	4.7266	0.5416	12.0938	2011.0583	2011.5999	
5	Plate	13.7500	24.5313	337.3047	0.5416	12.0938	2011.0583	2011.5999	
6	Cover Plate	8.8125	12.4375	109.6055	405.5586	0.0000	0.0000	405.5586	
Total		53.75		668.52	430.67		5780.85	6211.52	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.4375 in	S _{right} =	499.42 in ³	x-bar =	12.4375 in	S _{right} =	499.42 in ³
I _y =	6211.52 in ⁴	S _{left} =	499.42 in ³	I _y =	6211.52 in ⁴	S _{left} =	499.42 in ³
C _{right} =	12.4375 in	A =	53.7500 in ²	C _{right} =	12.4375 in	A =	53.7500 in ²
C _{left} =	12.4375 in	r _y =	10.7500 in	C _{left} =	12.4375 in	r _y =	10.7500 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.5625$ in
- $B_3 = b = 18.0000$ in



Member U75-L76

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	9.0000	115.2506	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	9.0000	224.7840	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		20.2500	9.0000	182.2500	546.7500	0.0000	0.0000	546.7500
Total			58.03		522.28	955.04		0.00	955.04
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	9.0000	in	S _{top} = 106.12 in ³	y-bar =	9.0000	in	S _{top} = 106.12 in ³
I _x =	955.04	in ⁴	S _{bott.} = 106.12 in ³	I _x =	955.04	in ⁴	S _{bott.} = 106.12 in ³
c _{top} =	9.0000	in	A = 58.0316 in ²	c _{top} =	9.0000	in	A = 58.0316 in ²
c _{bottom} =	9.0000	in	r _x = 4.0567 in	c _{bottom} =	9.0000	in	r _x = 4.0567 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.6875	162.4713	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	1.0085	12.5941	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	24.3665	304.2889	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		10.1250	0.2813	2.8477	0.2670	12.4063	1558.3898	1558.6567
	Right Plate		10.1250	25.0938	254.0742	0.2670	12.4063	1558.3898	1558.6567
Total			58.03		736.28	540.80		6523.48	7064.28
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.6875	in	S _{right} = 556.79 in ³	x-bar =	12.6875	in	S _{right} = 556.79 in ³
I _y =	7064.28	in ⁴	S _{left} = 556.79 in ³	I _y =	7064.28	in ⁴	S _{left} = 556.79 in ³
C _{right} =	12.6875	in	A = 58.0316 in ²	C _{right} =	12.6875	in	A = 58.0316 in ²
C _{left} =	12.6875	in	r _y = 11.0332 in	C _{left} =	12.6875	in	r _y = 11.0332 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 160

- $A_1 = t_w = 0.6650$ in
- $A_2 = t_f = 1.1240$ in
- $B_1 = d = 24.7140$ in
- $B_2 = b_f = 14.0950$ in

Cover Plate

- $A_3 = t = 0.6875$ in
- $B_3 = b = 14.0000$ in



Member U76-L77

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	7.0475	105.2889	0.5506	0.0000	0.0000	0.5506
2	Flange Plates		31.6856	7.0475	223.3040	524.5783	0.0000	0.0000	524.5783
3	Cover Plate		19.2500	7.0475	135.6644	314.4167	0.0000	0.0000	314.4167
Total			65.88		464.26	839.55		0.00	839.55
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0475	in	S _{top} =	119.13	in ³	y-bar =	7.0475	in	S _{top} =	119.13	in ³
I _x =	839.55	in ⁴	S _{bott.} =	119.13	in ³	I _x =	839.55	in ⁴	S _{bott.} =	119.13	in ³
c _{top} =	7.0475	in	A =	65.8755	in ²	c _{top} =	7.0475	in	A =	65.8755	in ²
c _{bottom} =	7.0475	in	r _x =	3.5699	in	c _{bottom} =	7.0475	in	r _x =	3.5699	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	13.0445	194.8834	628.3732	0.0000	0.0000	628.3732
2	Left Flange		15.8428	1.2495	19.7956	1.6679	11.7950	2204.0796	2205.7476
	Right Flange		15.8428	24.8395	393.5267	1.6679	11.7950	2204.0796	2205.7476
3	Left Plate		9.6250	0.3438	3.3086	0.3791	12.7008	1552.5996	1552.9787
	Right Plate		9.6250	25.7453	247.7980	0.3791	12.7008	1552.5996	1552.9787
Total			65.88		859.31	632.47		7513.36	8145.83
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	13.0445	in	S _{right} = 624.46 in ³	x-bar =	13.0445	in	S _{right} = 624.46 in ³
I _y =	8145.83	n ⁴	S _{left} = 624.46 in ³	I _y =	8145.83	n ⁴	S _{left} = 624.46 in ³
C _{right} =	13.0445	in	A = 65.8755 in ²	C _{right} =	13.0445	in	A = 65.8755 in ²
C _{left} =	13.0445	in	r _y = 11.1200 in	C _{left} =	13.0445	in	r _y = 11.1200 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 160

- $A_1 = t_w = 0.6650$ in
- $A_2 = t_f = 1.1240$ in
- $B_1 = d = 24.7140$ in
- $B_2 = b_f = 14.0950$ in

Cover Plate

- $A_3 = t = 0.7500$ in
- $B_3 = b = 14.0000$ in



Member U77-L78

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	7.0475	105.2889	0.5506	0.0000	0.0000	0.5506
2	Flange Plates		31.6856	7.0475	223.3040	524.5783	0.0000	0.0000	524.5783
3	Cover Plate		21.0000	7.0475	147.9975	343.0000	0.0000	0.0000	343.0000
Total			67.63		476.59	868.13		0.00	868.13
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	7.0475	in	S _{top} = 123.18 in ³	y-bar =	7.0475	in	S _{top} = 123.18 in ³
I _x =	868.13	in ⁴	S _{bott.} = 123.18 in ³	I _x =	868.13	in ⁴	S _{bott.} = 123.18 in ³
c _{top} =	7.0475	in	A = 67.6255 in ²	c _{top} =	7.0475	in	A = 67.6255 in ²
c _{bottom} =	7.0475	in	r _x = 3.5829 in	c _{bottom} =	7.0475	in	r _x = 3.5829 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	13.1070	195.8171	628.3732	0.0000	0.0000	628.3732
2	Left Flange		15.8428	1.3120	20.7857	1.6679	11.7950	2204.0796	2205.7476
	Right Flange		15.8428	24.9020	394.5169	1.6679	11.7950	2204.0796	2205.7476
3	Left Plate		10.5000	0.3750	3.9375	0.4922	12.7320	1702.0902	1702.5823
	Right Plate		10.5000	25.8390	271.3095	0.4922	12.7320	1702.0902	1702.5823
Total			67.63		886.37	632.69		7812.34	8445.03
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	13.1070	in	S _{right} =	644.31	in ³	x-bar =	13.1070	in	S _{right} =	644.31	in ³
I _y =	8445.03	n ⁴	S _{left} =	644.31	in ³	I _y =	8445.03	n ⁴	S _{left} =	644.31	in ³
C _{right} =	13.1070	in	A =	67.6255	in ²	C _{right} =	13.1070	in	A =	67.6255	in ²
C _{left} =	13.1070	in	r _y =	11.1750	in	C _{left} =	13.1070	in	r _y =	11.1750	in



Made By KMW
Checked By ADK

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.9375$ in
- $B_3 = b = 14.0000$ in



Member U78-L79

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		26.2500	7.0000	183.7500	428.7500	0.0000	0.0000	428.7500
Total			64.03		448.22	837.04		0.00	837.04
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0625	6.7150	-0.4197	10.6425	-4.4665	-1.5770	3.7889	-6.0249	-7.6019
2	22.4660	0.1875	-4.2124	7.1913	-30.2922	-0.0123	0.3376	-0.4802	-0.4925
3	0.2500	6.7150	-1.6788	10.6425	-17.8661	-6.3081	3.7889	-24.0995	-30.4076
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-6.31		-52.62	-7.90		-30.60	-38.50

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	7.0000	in	S _{top} = 119.58 in ³	y-bar =	6.8536	in	S _{top} = 114.08 in ³
I _x =	837.04	in ⁴	S _{bott.} = 119.58 in ³	I _x =	798.54	in ⁴	S _{bott.} = 116.51 in ³
c _{top} =	7.0000	in	A = 64.0316 in ²	c _{top} =	7.0000	in	A = 57.7208 in ²
c _{bottom} =	7.0000	in	r _x = 3.6156 in	c _{bottom} =	6.8536	in	r _x = 3.7195 in



Made By KMW
Checked By ADK

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	13.0625	167.2734	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	1.3835	17.2771	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	24.7415	308.9719	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		13.1250	0.4688	6.1523	0.9613	12.5938	2081.6583	2082.6196
	Right Plate		13.1250	25.6563	336.7383	0.9613	12.5938	2081.6583	2082.6196
Total			64.03		836.41	542.18		7570.02	8112.20
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	6.7150	0.0625	-0.4197	0.8608	-0.3612	-0.0001	12.0558	-60.9985	-60.9987
2	0.1875	22.4660	-4.2124	12.1250	-51.0750	-177.1729	0.7916	-2.6394	-179.8123
3	6.7150	0.2500	-1.6788	23.4830	-39.4221	-0.0087	10.5664	-187.4316	-187.4404
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-6.31		-90.86	-177.18		-251.07	-428.25

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	13.0625	in	S _{right} =	621.03	in ³	x-bar =	12.9166	in	S _{right} =	581.75	in ³
I _y =	8112.20	n ⁴	S _{left} =	621.03	in ³	I _y =	7683.95	n ⁴	S _{left} =	594.89	in ³
C _{right} =	13.0625	in	A =	64.0316	in ²	C _{right} =	13.2084	in	A =	57.7208	in ²
C _{left} =	13.0625	in	r _y =	11.2557	in	C _{left} =	12.9166	in	r _y =	11.5379	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 150

- $A_1 = t_w = 0.6330$ in
- $A_2 = t_f = 1.0480$ in
- $B_1 = d = 24.5620$ in
- $B_2 = b_f = 14.0630$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U79-L80

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.2210	7.0315	99.9948	0.4748	0.0000	0.0000	0.4748
2	Flange Plates		29.4760	7.0315	207.2608	485.7848	0.0000	0.0000	485.7848
3	Cover Plate		0.0000	7.0315	0.0000	0.0000	0.0000	0.0000	0.0000
Total			43.70		307.26	486.26		0.00	486.26
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1250	2.0000	-0.2500	8.3480	-2.0870	-0.0833	1.3626	-0.4642	-0.5475
2	22.4660	0.2500	-5.6165	7.2230	-40.5680	-0.0293	0.2376	-0.3172	-0.3464
3	0.1250	2.0000	-0.2500	8.3480	-2.0870	-0.0833	1.3626	-0.4642	-0.5475
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-6.12		-44.74	-0.20		-1.25	-1.44

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0315	in	$S_{top} =$	69.15	in ³	y-bar =	6.9854	in	$S_{top} =$	68.95	in ³
$I_x =$	486.26	in ⁴	$S_{bott.} =$	69.15	in ³	$I_x =$	484.82	in ⁴	$S_{bott.} =$	69.40	in ³
$c_{top} =$	7.0315	in	A =	43.6970	in ²	$c_{top} =$	7.0315	in	A =	37.5805	in ²
$c_{bottom} =$	7.0315	in	$r_x =$	3.3359	in	$c_{bottom} =$	6.9854	in	$r_x =$	3.5918	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.2210	12.2810	174.6478	598.1357	0.0000	0.0000	598.1357
2	Left Flange		14.7380	0.5240	7.7227	1.3489	11.7570	2037.1936	2038.5425
	Right Flange		14.7380	24.0380	354.2726	1.3489	11.7570	2037.1936	2038.5425
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.2810	0.0000	0.0000
	Right Plate		0.0000	24.5620	0.0000	0.0000	12.2810	0.0000	0.0000
Total			43.70		536.64	600.83		4074.39	4675.22
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	2.0000	0.1250	-0.2500	0.9855	-0.2464	-0.0003	11.2955	-31.8971	-31.8974
2	0.2500	22.4660	-5.6165	12.2810	-68.9762	-236.2305	0.0000	0.0000	-236.2305
3	2.0000	0.1250	-0.2500	23.5765	-5.8941	-0.0003	11.2955	-31.8971	-31.8974
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-6.12		-75.12	-236.23		-63.79	-300.03

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2810	in	S _{right} = 380.69 in ³	x-bar =	12.2810	in	S _{right} = 356.26 in ³
I _y =	4675.22	n ⁴	S _{left} = 380.69 in ³	I _y =	4375.20	n ⁴	S _{left} = 356.26 in ³
C _{right} =	12.2810	in	A = 43.6970 in ²	C _{right} =	12.2810	in	A = 37.5805 in ²
C _{left} =	12.2810	in	r _y = 10.3437 in	C _{left} =	12.2810	in	r _y = 10.7899 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 120

- $A_1 = t_w = 0.5590$ in
- $A_2 = t_f = 0.9220$ in
- $B_1 = d = 24.3100$ in
- $B_2 = b_f = 12.0890$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U80-L81

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.5585	6.0445	75.9098	0.3270	0.0000	0.0000	0.3270
2	Flange Plates		22.2921	6.0445	134.7447	271.4881	0.0000	0.0000	271.4881
3	Cover Plate		0.0000	6.0445	0.0000	0.0000	0.0000	0.0000	0.0000
Total			34.85		210.65	271.82		0.00	271.82
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0445	in	S _{top} =	44.97	in ³	y-bar =	6.0445	in	S _{top} =	44.97	in ³
I _x =	271.82	in ⁴	S _{bott.} =	44.97	in ³	I _x =	271.82	in ⁴	S _{bott.} =	44.97	in ³
c _{top} =	6.0445	in	A =	34.8506	in ²	c _{top} =	6.0445	in	A =	34.8506	in ²
c _{bottom} =	6.0445	in	r _x =	2.7927	in	c _{bottom} =	6.0445	in	r _x =	2.7927	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.5585	12.1550	152.6485	528.2115	0.0000	0.0000	528.2115
2	Left Flange		11.1461	0.4610	5.1383	0.7896	11.6940	1524.2194	1525.0090
	Right Flange		11.1461	23.8490	265.8223	0.7896	11.6940	1524.2194	1525.0090
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.1550	0.0000	0.0000
	Right Plate		0.0000	24.3100	0.0000	0.0000	12.1550	0.0000	0.0000
Total			34.85		423.61	529.79		3048.44	3578.23
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.1550	in	S _{right} =	294.38	in ³	x-bar =	12.1550	in	S _{right} =	294.38	in ³
I _y =	3578.23	n ⁴	S _{left} =	294.38	in ³	I _y =	3578.23	n ⁴	S _{left} =	294.38	in ³
C _{right} =	12.1550	in	A =	34.8506	in ²	C _{right} =	12.1550	in	A =	34.8506	in ²
C _{left} =	12.1550	in	r _y =	10.1328	in	C _{left} =	12.1550	in	r _y =	10.1328	in



Made By KMW
Checked By ADK

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 150

- $A_1 = t_w = 0.6330$ in
- $A_2 = t_f = 1.0480$ in
- $B_1 = d = 24.5620$ in
- $B_2 = b_f = 14.0630$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U81-L82

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.2210	7.0315	99.9948	0.4748	0.0000	0.0000	0.4748
2	Flange Plates		29.4760	7.0315	207.2608	485.7848	0.0000	0.0000	485.7848
3	Cover Plate		0.0000	7.0315	0.0000	0.0000	0.0000	0.0000	0.0000
Total			43.70		307.26	486.26		0.00	486.26
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	6.0000	0.1250	-0.7500	7.2855	-5.4641	-0.0010	0.2584	-0.0501	-0.0511
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.75		-5.46	0.00		-0.05	-0.05

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0315	in	S _{top} =	69.15	in ³	y-bar =	7.0271	in	S _{top} =	69.15	in ³
I _x =	486.26	in ⁴	S _{bott.} =	69.15	in ³	I _x =	486.21	in ⁴	S _{bott.} =	69.19	in ³
c _{top} =	7.0315	in	A =	43.6970	in ²	c _{top} =	7.0315	in	A =	42.9470	in ²
c _{bottom} =	7.0315	in	r _x =	3.3359	in	c _{bottom} =	7.0271	in	r _x =	3.3647	in



Made By KMW
Checked By ADK

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	14.2210	12.2810	174.6478	598.1357	0.0000	0.0000	598.1357	
2	Left Flange	14.7380	0.5240	7.7227	1.3489	11.7570	2037.1936	2038.5425	
	Right Flange	14.7380	24.0380	354.2726	1.3489	11.7570	2037.1936	2038.5425	
3	Left Plate	0.0000	0.0000	0.0000	0.0000	12.2810	0.0000	0.0000	
	Right Plate	0.0000	24.5620	0.0000	0.0000	12.2810	0.0000	0.0000	
Total		43.70		536.64	600.83		4074.39	4675.22	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1250	6.0000	-0.7500	20.5140	-15.3855	-2.2500	8.3768	-52.6278	-54.8778
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.75		-15.39	-2.25		-52.63	-54.88

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2810	in	S _{right} = 380.69 in ³	x-bar =	12.1372	in	S _{right} = 371.87 in ³
I _y =	4675.22	n ⁴	S _{left} = 380.69 in ³	I _y =	4620.34	n ⁴	S _{left} = 380.68 in ³
C _{right} =	12.2810	in	A = 43.6970 in ²	C _{right} =	12.4248	in	A = 42.9470 in ²
C _{left} =	12.2810	in	r _y = 10.3437 in	C _{left} =	12.1372	in	r _y = 10.3722 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 160

- $A_1 = t_w = 0.6650$ in
- $A_2 = t_f = 1.1240$ in
- $B_1 = d = 24.7140$ in
- $B_2 = b_f = 14.0950$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U83-L82

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	7.0475	105.2889	0.5506	0.0000	0.0000	0.5506
2	Flange Plates		31.6856	7.0475	223.3040	524.5783	0.0000	0.0000	524.5783
3	Cover Plate		0.0000	7.0475	0.0000	0.0000	0.0000	0.0000	0.0000
Total			46.63		328.59	525.13		0.00	525.13
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0475	in	S _{top} =	74.51	in ³	y-bar =	7.0475	in	S _{top} =	74.51	in ³
I _x =	525.13	in ⁴	S _{bott.} =	74.51	in ³	I _x =	525.13	in ⁴	S _{bott.} =	74.51	in ³
c _{top} =	7.0475	in	A =	46.6255	in ²	c _{top} =	7.0475	in	A =	46.6255	in ²
c _{bottom} =	7.0475	in	r _x =	3.3560	in	c _{bottom} =	7.0475	in	r _x =	3.3560	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	12.3570	184.6122	628.3732	0.0000	0.0000	628.3732
2	Left Flange		15.8428	0.5620	8.9036	1.6679	11.7950	2204.0796	2205.7476
	Right Flange		15.8428	24.1520	382.6348	1.6679	11.7950	2204.0796	2205.7476
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.3570	0.0000	0.0000
	Right Plate		0.0000	24.7140	0.0000	0.0000	12.3570	0.0000	0.0000
Total			46.63		576.15	631.71		4408.16	5039.87
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3570	in	S _{right} = 407.86 in ³	x-bar =	12.3570	in	S _{right} = 407.86 in ³
I _y =	5039.87	in ⁴	S _{left} = 407.86 in ³	I _y =	5039.87	in ⁴	S _{left} = 407.86 in ³
C _{right} =	12.3570	in	A = 46.6255 in ²	C _{right} =	12.3570	in	A = 46.6255 in ²
C _{left} =	12.3570	in	r _y = 10.3968 in	C _{left} =	12.3570	in	r _y = 10.3968 in



Made By KMW
Checked By ADK

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 160

- $A_1 = t_w = 0.6650$ in
- $A_2 = t_f = 1.1240$ in
- $B_1 = d = 24.7140$ in
- $B_2 = b_f = 14.0950$ in

Cover Plate

- $A_3 = t = 0.8750$ in
- $B_3 = b = 14.0000$ in



Member U84-L83

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	7.0475	105.2889	0.5506	0.0000	0.0000	0.5506
2	Flange Plates		31.6856	7.0475	223.3040	524.5783	0.0000	0.0000	524.5783
3	Cover Plate		24.5000	7.0475	172.6638	400.1667	0.0000	0.0000	400.1667
Total			71.13		501.26	925.30		0.00	925.30
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	7.4887	0.1250	-0.9361	7.3175	-6.8498	-0.0012	0.2759	-0.0712	-0.0725
2	3.0000	0.2500	-0.7500	7.2550	-5.4413	-0.0039	0.2134	-0.0341	-0.0381
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.69		-12.29	-0.01		-0.11	-0.11

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0475	in	S _{top} =	131.29	in ³	y-bar =	7.0416	in	S _{top} =	131.28	in ³
I _x =	925.30	in ⁴	S _{bott.} =	131.29	in ³	I _x =	925.18	in ⁴	S _{bott.} =	131.39	in ³
c _{top} =	7.0475	in	A =	71.1255	in ²	c _{top} =	7.0475	in	A =	69.4394	in ²
c _{bottom} =	7.0475	in	r _x =	3.6068	in	c _{bottom} =	7.0416	in	r _x =	3.6502	in



Made By KMW
Checked By ADK

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	13.2320	197.6846	628.3732	0.0000	0.0000	628.3732
2	Left Flange		15.8428	1.4370	22.7661	1.6679	11.7950	2204.0796	2205.7476
	Right Flange		15.8428	25.0270	396.4973	1.6679	11.7950	2204.0796	2205.7476
3	Left Plate		12.2500	0.4375	5.3594	0.7816	12.7945	2005.3156	2006.0971
	Right Plate		12.2500	26.0265	318.8246	0.7816	12.7945	2005.3156	2006.0971
Total			71.13		941.13	633.27		8418.79	9052.06
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1250	7.4887	-0.9361	4.8683	-4.5572	-4.3746	8.3807	-65.7475	-70.1221
2	0.2500	3.0000	-0.7500	22.0900	-16.5675	-0.5625	8.8409	-58.6215	-59.1840
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.69		-21.12	-4.94		-124.37	-129.31

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	13.2320	in	S _{right} = 684.10 in ³	x-bar =	13.2491	in	S _{right} = 675.20 in ³
I _y =	9052.06	in ⁴	S _{left} = 684.10 in ³	I _y =	8922.76	in ⁴	S _{left} = 673.46 in ³
C _{right} =	13.2320	in	A = 71.1255 in ²	C _{right} =	13.2149	in	A = 69.4394 in ²
C _{left} =	13.2320	in	r _y = 11.2814 in	C _{left} =	13.2491	in	r _y = 11.3357 in



Made By KMW
Checked By ADK

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 160

- $A_1 = t_w = 0.6650$ in
- $A_2 = t_f = 1.1240$ in
- $B_1 = d = 24.7140$ in
- $B_2 = b_f = 14.0950$ in

Cover Plate

- $A_3 = t = 0.7500$ in
- $B_3 = b = 14.0000$ in



Member U85-L84

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	7.0475	105.2889	0.5506	0.0000	0.0000	0.5506
2	Flange Plates		31.6856	7.0475	223.3040	524.5783	0.0000	0.0000	524.5783
3	Cover Plate		21.0000	7.0475	147.9975	343.0000	0.0000	0.0000	343.0000
Total			67.63		476.59	868.13		0.00	868.13
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	22.4660	0.0625	-1.4041	7.3488	-10.3186	-0.0005	0.3076	-0.1329	-0.1333
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.40		-10.32	0.00		-0.13	-0.13

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	7.0475	in	S _{top} = 123.18 in ³	y-bar =	7.0411	in	S _{top} = 123.16 in ³
I _x =	868.13	in ⁴	S _{bott.} = 123.18 in ³	I _x =	868.00	in ⁴	S _{bott.} = 123.28 in ³
c _{top} =	7.0475	in	A = 67.6255 in ²	c _{top} =	7.0475	in	A = 66.2213 in ²
c _{bottom} =	7.0475	in	r _x = 3.5829 in	c _{bottom} =	7.0411	in	r _x = 3.6204 in



Made By KMW
Checked By ADK

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	13.1070	195.8171	628.3732	0.0000	0.0000	628.3732
2	Left Flange		15.8428	1.3120	20.7857	1.6679	11.7950	2204.0796	2205.7476
	Right Flange		15.8428	24.9020	394.5169	1.6679	11.7950	2204.0796	2205.7476
3	Left Plate		10.5000	0.3750	3.9375	0.4922	12.7320	1702.0902	1702.5823
	Right Plate		10.5000	25.8390	271.3095	0.4922	12.7320	1702.0902	1702.5823
Total			67.63		886.37	632.69		7812.34	8445.03
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0625	22.4660	-1.4041	12.3570	-17.3508	-59.0576	0.7659	-0.8237	-59.8813
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.40		-17.35	-59.06		-0.82	-59.88

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	13.1070	in	S _{right} = 644.31 in ³	x-bar =	13.1229	in	S _{right} = 640.52 in ³
I _y =	8445.03	n ⁴	S _{left} = 644.31 in ³	I _y =	8385.15	n ⁴	S _{left} = 638.97 in ³
C _{right} =	13.1070	in	A = 67.6255 in ²	C _{right} =	13.0911	in	A = 66.2213 in ²
C _{left} =	13.1070	in	r _y = 11.1750 in	C _{left} =	13.1229	in	r _y = 11.2527 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 160

- $A_1 = t_w = 0.6650$ in
- $A_2 = t_f = 1.1240$ in
- $B_1 = d = 24.7140$ in
- $B_2 = b_f = 14.0950$ in

Cover Plate

- $A_3 = t = 0.8750$ in
- $B_3 = b = 16.0000$ in



Member U86-L85

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	8.0000	119.5191	0.5506	0.0000	0.0000	0.5506
2	Flange Plates		31.6856	8.0000	253.4845	524.5783	0.0000	0.0000	524.5783
3	Cover Plate		28.0000	8.0000	224.0000	597.3333	0.0000	0.0000	597.3333
Total			74.63		597.00	1122.46		0.00	1122.46
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	8.0000	in	$S_{top} = 140.31$	in ³	y-bar =	8.0000	in	$S_{top} = 140.31$	in ³		
$I_x =$	1122.46	in ⁴	$S_{bott.} = 140.31$	in ³	$I_x =$	1122.46	in ⁴	$S_{bott.} = 140.31$	in ³		
$c_{top} =$	8.0000	in	A =	74.6255	in ²	$c_{top} =$	8.0000	in	A =	74.6255	in ²
$c_{bottom} =$	8.0000	in	$r_x =$	3.8783	in	$c_{bottom} =$	8.0000	in	$r_x =$	3.8783	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	13.2320	197.6846	628.3732	0.0000	0.0000	628.3732
2	Left Flange		15.8428	1.4370	22.7661	1.6679	11.7950	2204.0796	2205.7476
	Right Flange		15.8428	25.0270	396.4973	1.6679	11.7950	2204.0796	2205.7476
3	Left Plate		14.0000	0.4375	6.1250	0.8932	12.7945	2291.7892	2292.6825
	Right Plate		14.0000	26.0265	364.3710	0.8932	12.7945	2291.7892	2292.6825
Total			74.63		987.44	633.50		8991.74	9625.23
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	13.2320	in	S _{right} = 727.42 in ³	x-bar =	13.2320	in	S _{right} = 727.42 in ³
I _y =	9625.23	n ⁴	S _{left} = 727.42 in ³	I _y =	9625.23	n ⁴	S _{left} = 727.42 in ³
C _{right} =	13.2320	in	A = 74.6255 in ²	C _{right} =	13.2320	in	A = 74.6255 in ²
C _{left} =	13.2320	in	r _y = 11.3570 in	C _{left} =	13.2320	in	r _y = 11.3570 in



Made By KMW
Checked By DWC

Date 2/6/2012
Date 2/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 160

- $A_1 = t_w = 0.6650$ in
- $A_2 = t_f = 1.1240$ in
- $B_1 = d = 24.7140$ in
- $B_2 = b_f = 14.0950$ in

Cover Plate

- $A_3 = t = 0.8750$ in
- $B_3 = b = 14.0000$ in



Member U87-L86

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	7.0475	105.2889	0.5506	0.0000	0.0000	0.5506
2	Flange Plates		31.6856	7.0475	223.3040	524.5783	0.0000	0.0000	524.5783
3	Cover Plate		24.5000	7.0475	172.6638	400.1667	0.0000	0.0000	400.1667
Total			71.13		501.26	925.30		0.00	925.30
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1250	14.0000	-1.7500	7.0000	-12.2500	-28.5833	0.0460	-0.0037	-28.5870
2	2.0000	0.0625	-0.1250	7.3488	-0.9186	0.0000	0.3028	-0.0115	-0.0115
3	8.0000	0.0625	-0.5000	7.3488	-3.6744	-0.0002	0.3028	-0.0458	-0.0460
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.38		-16.84	-28.58		-0.06	-28.64

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	7.0475	in	$S_{top} = 131.29$	in ³	y-bar =	7.0460	in	$S_{top} = 127.23$	in ³		
$I_x =$	925.30	in ⁴	$S_{bott.} = 131.29$	in ³	$I_x =$	896.65	in ⁴	$S_{bott.} = 127.26$	in ³		
$c_{top} =$	7.0475	in	A =	71.1255	in ²	$c_{top} =$	7.0475	in	A =	68.7505	in ²
$c_{bottom} =$	7.0475	in	$r_x =$	3.6068	in	$c_{bottom} =$	7.0460	in	$r_x =$	3.6114	in



Made By KMW
 Checked By DWC

Date 2/6/2012
 Date 2/25/2012

Job No. P402110046
 Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	13.2320	197.6846	628.3732	0.0000	0.0000	628.3732
2	Left Flange		15.8428	1.4370	22.7661	1.6679	11.7950	2204.0796	2205.7476
	Right Flange		15.8428	25.0270	396.4973	1.6679	11.7950	2204.0796	2205.7476
3	Left Plate		12.2500	0.4375	5.3594	0.7816	12.7945	2005.3156	2006.0971
	Right Plate		12.2500	26.0265	318.8246	0.7816	12.7945	2005.3156	2006.0971
Total			71.13		941.13	633.27		8418.79	9052.06
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	14.0000	0.1250	-1.7500	0.0625	-0.1094	-0.0023	13.4707	-317.5557	-317.5580
2	0.0625	2.0000	-0.1250	2.9990	-0.3749	-0.0417	10.5342	-13.8712	-13.9129
3	0.0625	8.0000	-0.5000	20.4650	-10.2325	-2.6667	6.9318	-24.0248	-26.6914
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.38		-10.72	-2.71		-355.45	-358.16

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	13.2320	in	S _{right} = 684.10 in ³	x-bar =	13.5332	in	S _{right} = 672.34 in ³
I _y =	9052.06	in ⁴	S _{left} = 684.10 in ³	I _y =	8693.90	in ⁴	S _{left} = 642.41 in ³
C _{right} =	13.2320	in	A = 71.1255 in ²	C _{right} =	12.9308	in	A = 68.7505 in ²
C _{left} =	13.2320	in	r _y = 11.2814 in	C _{left} =	13.5332	in	r _y = 11.2453 in



Made By KMW
Checked By DWC

Date 2/6/2012
Date 2/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.5625$ in
- $B_3 = b = 17.0000$ in



Member U88-L87

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	8.5000	108.8478	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	8.5000	212.2960	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		19.1250	8.5000	162.5625	460.5938	0.0000	0.0000	460.5938
Total			56.91		483.71	868.88		0.00	868.88
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	2.0000	0.1250	-0.2500	8.7225	-2.1806	-0.0003	0.2329	-0.0136	-0.0139
2	3.0000	0.2500	-0.7500	8.6600	-6.4950	-0.0039	0.1704	-0.0218	-0.0257
3	14.0000	0.1250	-1.7500	8.7225	-15.2644	-0.0023	0.2329	-0.0950	-0.0972
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.75		-23.94	-0.01		-0.13	-0.14

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	8.5000	in	$S_{top} = 102.22$	in^3	y-bar =	8.4896	in	$S_{top} = 102.08$	in^3		
$I_x =$	868.88	in^4	$S_{bott.} = 102.22$	in^3	$I_x =$	868.74	in^4	$S_{bott.} = 102.33$	in^3		
$c_{top} =$	8.5000	in	A =	56.9066	in^2	$c_{top} =$	8.5104	in	A =	54.1566	in^2
$c_{bottom} =$	8.5000	in	$r_x =$	3.9075	in	$c_{bottom} =$	8.4896	in	$r_x =$	4.0052	in



Made By KMW
 Checked By DWC

Date 2/6/2012
 Date 2/25/2012

Job No. P402110046
 Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.6875	162.4713	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	1.0085	12.5941	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	24.3665	304.2889	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		9.5625	0.2813	2.6895	0.2521	12.4063	1471.8126	1472.0647
	Right Plate		9.5625	25.0938	239.9590	0.2521	12.4063	1471.8126	1472.0647
Total			56.91		722.00	540.77		6350.33	6891.09
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1250	2.0000	-0.2500	2.4545	-0.6136	-0.0833	10.2090	-26.0559	-26.1393
2	0.2500	3.0000	-0.7500	7.9545	-5.9659	-0.5625	4.7090	-16.6310	-17.1935
3	0.1250	14.0000	-1.7500	16.9205	-29.6109	-28.5833	4.2570	-31.7136	-60.2969
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.75		-36.19	-29.23		-74.40	-103.63

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.6875	in	S _{right} = 543.14 in ³	x-bar =	12.6635	in	S _{right} = 533.96 in ³
I _y =	6891.09	in ⁴	S _{left} = 543.14 in ³	I _y =	6787.46	in ⁴	S _{left} = 535.99 in ³
C _{right} =	12.6875	in	A = 56.9066 in ²	C _{right} =	12.7115	in	A = 54.1566 in ²
C _{left} =	12.6875	in	r _y = 11.0043 in	C _{left} =	12.6635	in	r _y = 11.1951 in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

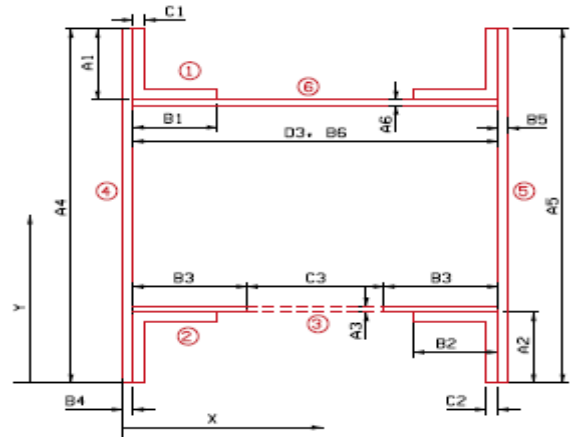
$A_4 = h = 20.0000$ in
 $B_4 = t = 0.6250$ in

Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 0.6250$ in

Cover Plate:

$A_6 = t = 0.3750$ in
 $B_6 = l = 23.5000$ in



Member U89-L88

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	16.1875	44.0098	0.0319	5.8612	93.3992	93.4310
	Vertical Leg	3.0000	18.0000	54.0000	4.0000	7.6737	176.6572	180.6572
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	6.5138	115.3553	115.3872
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	8.3263	207.9816	211.9816
3	Perforated Plate	6.0000	4.2500	25.5000	0.1250	6.0763	221.5282	221.6532
4	Plate	12.5000	10.0000	125.0000	416.6667	0.3263	1.3309	417.9975
5	Plate	12.5000	10.0000	125.0000	416.6667	0.3263	1.3309	417.9975
6	Cover Plate	8.8125	15.8125	139.3477	0.1033	5.4862	265.2425	265.3457
Total		51.25		529.22	841.63		1082.83	1924.45
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	10.3263 in	S _{top} =	198.94 in ³	y-bar =	10.3263 in	S _{top} =	198.94 in ³
I _x =	1924.45 in ⁴	S _{bott.} =	186.36 in ³	I _x =	1924.45 in ⁴	S _{bott.} =	186.36 in ³
C _{top} =	9.6737 in	A =	51.2500 in ²	C _{top} =	9.6737 in	A =	51.2500 in ²
C _{bottom} =	10.3263 in	r _x =	6.1278 in	C _{bottom} =	10.3263 in	r _x =	6.1278 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	2.8125	3.8232	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.8125	1.2188	0.0176	11.5625	200.5371	200.5547	
1 (Right)	Horizontal Leg	1.3594	21.9375	29.8213	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.9375	35.9063	0.0176	11.5625	200.5371	200.5547	
2 (Left)	Horizontal Leg	1.3594	2.8125	3.8232	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.8125	1.2188	0.0176	11.5625	200.5371	200.5547	
2 (Right)	Horizontal Leg	1.3594	21.9375	29.8213	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.9375	35.9063	0.0176	11.5625	200.5371	200.5547	
3 (Left)	Perforated Plate	3.0000	3.6250	10.8750	9.0000	8.7500	229.6875	238.6875	
3 (Right)	Perforated Plate	3.0000	21.1250	63.3750	9.0000	8.7500	229.6875	238.6875	
4	Plate	12.5000	0.3125	3.9063	0.4069	12.0625	1818.7988	1819.2057	
5	Plate	12.5000	24.4375	305.4688	0.4069	12.0625	1818.7988	1819.2057	
6	Cover Plate	8.8125	12.3750	109.0547	405.5586	0.0000	0.0000	405.5586	
Total		51.25		634.22	430.40		5396.33	5826.73	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3750 in	S _{right} =	470.85 in ³	x-bar =	12.3750 in	S _{right} =	470.85 in ³
I _y =	5826.73 in ⁴	S _{left} =	470.85 in ³	I _y =	5826.73 in ⁴	S _{left} =	470.85 in ³
C _{right} =	12.3750 in	A =	51.2500 in ²	C _{right} =	12.3750 in	A =	51.2500 in ²
C _{left} =	12.3750 in	r _y =	10.6627 in	C _{left} =	12.3750 in	r _y =	10.6627 in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.5000$ in

Perforated Plate:

$A_3 = t = 0.6250$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

$A_4 = h = 22.0000$ in
 $B_4 = t = 0.6250$ in

Right Web Plate:

$A_5 = h = 22.0000$ in
 $B_5 = t = 0.6250$ in

Cover Plate:

$A_6 = t = 0.5000$ in
 $B_6 = l = 23.5000$ in



Member U90-L89

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.5000	18.2500	63.8750	0.0729	6.7778	160.7866	160.8595
	Vertical Leg	4.0000	20.0000	80.0000	5.3333	8.5278	290.8958	296.2291
2	Horizontal Leg	3.5000	3.7500	13.1250	0.0729	7.7222	208.7115	208.7844
	Vertical Leg	4.0000	2.0000	8.0000	5.3333	9.4722	358.8877	364.2210
3	Perforated Plate	7.5000	4.3125	32.3438	0.2441	7.1597	384.4561	384.7003
4	Plate	13.7500	11.0000	151.2500	554.5833	0.4722	3.0654	557.6488
5	Plate	13.7500	11.0000	151.2500	554.5833	0.4722	3.0654	557.6488
6	Cover Plate	11.7500	17.7500	208.5625	0.2448	6.2778	463.0816	463.3264
Total		61.75		708.41	1120.47		1872.95	2993.42
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	11.4722 in	S _{top} =	284.33 in ³	y-bar =	11.4722 in	S _{top} =	284.33 in ³
I _x =	2993.42 in ⁴	S _{bott.} =	260.93 in ³	I _x =	2993.42 in ⁴	S _{bott.} =	260.93 in ³
C _{top} =	10.5278 in	A =	61.7500 in ²	C _{top} =	10.5278 in	A =	61.7500 in ²
C _{bottom} =	11.4722 in	r _x =	6.9625 in	C _{bottom} =	11.4722 in	r _x =	6.9625 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.7500	2.8750	5.0313	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	0.8750	1.7500	0.0417	11.5000	264.5000	264.5417	
1 (Right)	Horizontal Leg	1.7500	21.8750	38.2813	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	23.8750	47.7500	0.0417	11.5000	264.5000	264.5417	
2 (Left)	Horizontal Leg	1.7500	2.8750	5.0313	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	0.8750	1.7500	0.0417	11.5000	264.5000	264.5417	
2 (Right)	Horizontal Leg	1.7500	21.8750	38.2813	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	23.8750	47.7500	0.0417	11.5000	264.5000	264.5417	
3 (Left)	Perforated Plate	3.7500	3.6250	13.5938	11.2500	8.7500	287.1094	298.3594	
3 (Right)	Perforated Plate	3.7500	21.1250	79.2188	11.2500	8.7500	287.1094	298.3594	
4	Plate	13.7500	0.3125	4.2969	0.4476	12.0625	2000.6787	2001.1263	
5	Plate	13.7500	24.4375	336.0156	0.4476	12.0625	2000.6787	2001.1263	
6	Cover Plate	11.7500	12.3750	145.4063	540.7448	0.0000	0.0000	540.7448	
Total		61.75		764.16	571.45		6265.33	6836.78	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3750 in	S _{right} =	552.47 in ³	x-bar =	12.3750 in	S _{right} =	552.47 in ³
I _y =	6836.78 in ⁴	S _{left} =	552.47 in ³	I _y =	6836.78 in ⁴	S _{left} =	552.47 in ³
C _{right} =	12.3750 in	A =	61.7500 in ²	C _{right} =	12.3750 in	A =	61.7500 in ²
C _{left} =	12.3750 in	r _y =	10.5222 in	C _{left} =	12.3750 in	r _y =	10.5222 in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

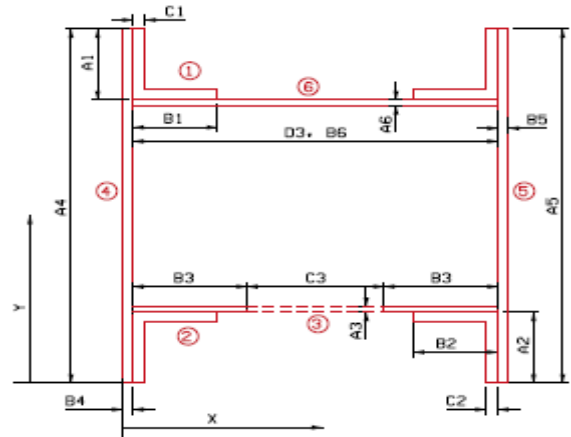
$A_4 = h = 22.0000$ in
 $B_4 = t = 0.6250$ in

Right Web Plate:

$A_5 = h = 22.0000$ in
 $B_5 = t = 0.6250$ in

Cover Plate:

$A_6 = t = 0.3750$ in
 $B_6 = l = 23.5000$ in



Member U90-L91

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	18.1875	49.4473	0.0319	6.8241	126.6060	126.6379
	Vertical Leg	3.0000	20.0000	60.0000	4.0000	8.6366	223.7703	227.7703
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	7.5509	155.0143	155.0462
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	9.3634	263.0223	267.0223
3	Perforated Plate	6.0000	4.2500	25.5000	0.1250	7.1134	303.6066	303.7316
4	Plate	13.7500	11.0000	151.2500	554.5833	0.3634	1.8163	556.3996
5	Plate	13.7500	11.0000	151.2500	554.5833	0.3634	1.8163	556.3996
6	Cover Plate	8.8125	17.8125	156.9727	0.1033	6.4491	366.5146	366.6179
Total		53.75		610.79	1117.46		1442.17	2559.63
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	11.3634 in	S _{top} =	240.64 in ³	y-bar =	11.3634 in	S _{top} =	240.64 in ³
I _x =	2559.63 in ⁴	S _{bott.} =	225.25 in ³	I _x =	2559.63 in ⁴	S _{bott.} =	225.25 in ³
C _{top} =	10.6366 in	A =	53.7500 in ²	C _{top} =	10.6366 in	A =	53.7500 in ²
C _{bottom} =	11.3634 in	r _x =	6.9008 in	C _{bottom} =	11.3634 in	r _x =	6.9008 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	2.8125	3.8232	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.8125	1.2188	0.0176	11.5625	200.5371	200.5547	
1 (Right)	Horizontal Leg	1.3594	21.9375	29.8213	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.9375	35.9063	0.0176	11.5625	200.5371	200.5547	
2 (Left)	Horizontal Leg	1.3594	2.8125	3.8232	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.8125	1.2188	0.0176	11.5625	200.5371	200.5547	
2 (Right)	Horizontal Leg	1.3594	21.9375	29.8213	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.9375	35.9063	0.0176	11.5625	200.5371	200.5547	
3 (Left)	Perforated Plate	3.0000	3.6250	10.8750	9.0000	8.7500	229.6875	238.6875	
3 (Right)	Perforated Plate	3.0000	21.1250	63.3750	9.0000	8.7500	229.6875	238.6875	
4	Plate	13.7500	0.3125	4.2969	0.4476	12.0625	2000.6787	2001.1263	
5	Plate	13.7500	24.4375	336.0156	0.4476	12.0625	2000.6787	2001.1263	
6	Cover Plate	8.8125	12.3750	109.0547	405.5586	0.0000	0.0000	405.5586	
Total		53.75		665.16	430.48		5760.09	6190.57	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3750 in	S _{right} =	500.25 in ³	x-bar =	12.3750 in	S _{right} =	500.25 in ³
I _y =	6190.57 in ⁴	S _{left} =	500.25 in ³	I _y =	6190.57 in ⁴	S _{left} =	500.25 in ³
C _{right} =	12.3750 in	A =	53.7500 in ²	C _{right} =	12.3750 in	A =	53.7500 in ²
C _{left} =	12.3750 in	r _y =	10.7319 in	C _{left} =	12.3750 in	r _y =	10.7319 in



Made By KMW
Checked By ADK

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_t = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_t = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

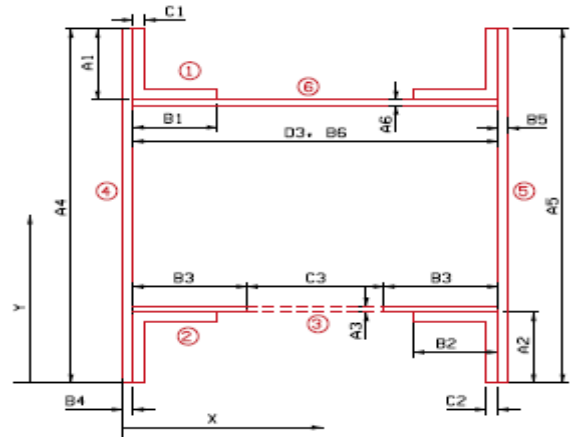
$A_4 = h = 20.0000$ in
 $B_4 = t = 0.3750$ in

Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 0.3750$ in

Cover Plate:

$A_6 = t = 0.3750$ in
 $B_6 = l = 23.5000$ in



Member U91-L92

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	16.1875	44.0098	0.0319	5.7821	90.8952	90.9270
	Vertical Leg	3.0000	18.0000	54.0000	4.0000	7.5946	173.0340	177.0340
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	6.5929	118.1740	118.2059
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	8.4054	211.9521	215.9521
3	Perforated Plate	6.0000	4.2500	25.5000	0.1250	6.1554	227.3335	227.4585
4	Plate	7.5000	10.0000	75.0000	250.0000	0.4054	1.2326	251.2326
5	Plate	7.5000	10.0000	75.0000	250.0000	0.4054	1.2326	251.2326
6	Cover Plate	8.8125	15.8125	139.3477	0.1033	5.4071	257.6489	257.7522
Total		41.25		429.22	508.29		1081.50	1589.79
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	8.0000	0.1250	-1.0000	15.9375	-15.9375	-0.0013	5.7728	-33.3256
2	3.6250	0.1875	-0.6797	16.2813	-11.0662	-0.0020	6.1166	-25.4289
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.68	-27.00	0.00		-58.75	-58.76



Made By KMW
Checked By ADK

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	10.4054	in	S _{top} =	165.70	in ³	y-bar =	10.1647	in	S _{top} =	155.67	in ³
I _x =	1589.79	in ⁴	S _{bott.} =	152.79	in ³	I _x =	1531.04	in ⁴	S _{bott.} =	150.62	in ³
C _{top} =	9.5946	in	A =	41.2500	in ²	C _{top} =	9.8353	in	A =	39.5703	in ²
C _{bottom} =	10.4054	in	r _x =	6.2081	in	C _{bottom} =	10.1647	in	r _x =	6.2203	in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	2.5625	3.4834	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.5625	0.8438	0.0176	11.5625	200.5371	200.5547	
1 (Right)	Horizontal Leg	1.3594	21.6875	29.4814	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.6875	35.5313	0.0176	11.5625	200.5371	200.5547	
2 (Left)	Horizontal Leg	1.3594	2.5625	3.4834	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.5625	0.8438	0.0176	11.5625	200.5371	200.5547	
2 (Right)	Horizontal Leg	1.3594	21.6875	29.4814	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.6875	35.5313	0.0176	11.5625	200.5371	200.5547	
3 (Left)	Perforated Plate	3.0000	3.3750	10.1250	9.0000	8.7500	229.6875	238.6875	
3 (Right)	Perforated Plate	3.0000	20.8750	62.6250	9.0000	8.7500	229.6875	238.6875	
4	Plate	7.5000	0.1875	1.4063	0.0879	11.9375	1068.7793	1068.8672	
5	Plate	7.5000	24.0625	180.4688	0.0879	11.9375	1068.7793	1068.8672	
6	Cover Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
Total		41.25		500.16	429.76		3896.29	4326.05	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1250	8.0000	-1.0000	15.8750	-15.8750	-5.3333	4.0090	-16.0722	-21.4056
2	0.1875	3.6250	-0.6797	21.6875	-14.7407	-0.7443	9.8215	-65.5642	-66.3085
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.68		-30.62	-6.08		-81.64	-87.71

As-Built Section Properties				As-Inspected Section Properties							
x-bar =	12.1250	in	S _{right} =	356.79	in ³	x-bar =	11.8660	in	S _{right} =	342.24	in ³
I _y =	4326.05	in ⁴	S _{left} =	356.79	in ³	I _y =	4238.34	in ⁴	S _{left} =	357.18	in ³
C _{right} =	12.1250	in	A =	41.2500	in ²	C _{right} =	12.3840	in	A =	39.5703	in ²
C _{left} =	12.1250	in	r _y =	10.2408	in	C _{left} =	11.8660	in	r _y =	10.3494	in



Made By KMW
Checked By ADK

Date 2/6/2012
Date 2/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U92-L93

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		0.0000	7.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			37.78		264.47	408.29		0.00	408.29
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	6.0000	0.1250	-0.7500	7.2225	-5.4169	-0.0010	0.2270	-0.0386	-0.0396
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.75		-5.42	0.00		-0.04	-0.04

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	$S_{top} =$	58.33	in ³	y-bar =	6.9955	in	$S_{top} =$	58.32	in ³
$I_x =$	408.29	in ⁴	$S_{bott.} =$	58.33	in ³	$I_x =$	408.25	in ⁴	$S_{bott.} =$	58.36	in ³
$c_{top} =$	7.0000	in	A =	37.7816	in ²	$c_{top} =$	7.0000	in	A =	37.0316	in ²
$c_{bottom} =$	7.0000	in	$r_x =$	3.2873	in	$c_{bottom} =$	6.9955	in	$r_x =$	3.3203	in



Made By KMW
Checked By ADK

Date 2/6/2012
Date 2/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.1250	155.2681	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	0.4460	5.5696	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	23.8040	297.2644	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.1250	0.0000	0.0000
	Right Plate		0.0000	24.2500	0.0000	0.0000	12.1250	0.0000	0.0000
Total			37.78		458.10	540.26		3406.70	3946.96
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1250	6.0000	-0.7500	12.1250	-9.0938	-2.2500	0.0000	0.0000	-2.2500
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.75		-9.09	-2.25		0.00	-2.25

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.1250	in	S _{right} =	325.52	in ³	x-bar =	12.1250	in	S _{right} =	325.34	in ³
I _y =	3946.96	in ⁴	S _{left} =	325.52	in ³	I _y =	3944.71	in ⁴	S _{left} =	325.34	in ³
C _{right} =	12.1250	in	A =	37.7816	in ²	C _{right} =	12.1250	in	A =	37.0316	in ²
C _{left} =	12.1250	in	r _y =	10.2210	in	C _{left} =	12.1250	in	r _y =	10.3210	in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 140

- $A_1 = t_w = 0.6010$ in
- $A_2 = t_f = 0.9700$ in
- $B_1 = d = 24.4060$ in
- $B_2 = b_f = 14.0310$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U93-L94

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x, gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		13.5021	7.0155	94.7237	0.4064	0.0000	0.0000	0.4064
2	Flange Plates		27.2201	7.0155	190.9629	446.5667	0.0000	0.0000	446.5667
3	Cover Plate		0.0000	7.0155	0.0000	0.0000	0.0000	0.0000	0.0000
Total			40.72		285.69	446.97		0.00	446.97
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties					
y-bar =	7.0155	in	$S_{top} = 63.71$	in^3	y-bar =	7.0155	in	$S_{top} = 63.71$	in^3
$I_x =$	446.97	in^4	$S_{bott.} = 63.71$	in^3	$I_x =$	446.97	in^4	$S_{bott.} = 63.71$	in^3
$C_{top} =$	7.0155	in	$A = 40.7222$	in^2	$C_{top} =$	7.0155	in	$A = 40.7222$	in^2
$C_{bottom} =$	7.0155	in	$r_x = 3.3130$	in	$C_{bottom} =$	7.0155	in	$r_x = 3.3130$	in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		13.5021	12.2030	164.7657	567.8982	0.0000	0.0000	567.8982
2	Left Flange		13.6101	0.4850	6.6009	1.0671	11.7180	1868.8195	1869.8866
	Right Flange		13.6101	23.9210	325.5665	1.0671	11.7180	1868.8195	1869.8866
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.2030	0.0000	0.0000
	Right Plate		0.0000	24.4060	0.0000	0.0000	12.2030	0.0000	0.0000
Total			40.72		496.93	570.03		3737.64	4307.67
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.2030	in	S _{right} =	353.00	in ³	x-bar =	12.2030	in	S _{right} =	353.00	in ³
I _y =	4307.67	n ⁴	S _{left} =	353.00	in ³	I _y =	4307.67	n ⁴	S _{left} =	353.00	in ³
C _{right} =	12.2030	in	A =	40.7222	in ²	C _{right} =	12.2030	in	A =	40.7222	in ²
C _{left} =	12.2030	in	r _y =	10.2850	in	C _{left} =	12.2030	in	r _y =	10.2850	in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 160

- $A_1 = t_w = 0.6650$ in
- $A_2 = t_f = 1.1240$ in
- $B_1 = d = 24.7140$ in
- $B_2 = b_f = 14.0950$ in

Cover Plate

- $A_3 = t = 0.5000$ in
- $B_3 = b = 14.0000$ in



Member U94-L95

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	7.0475	105.2889	0.5506	0.0000	0.0000	0.5506
2	Flange Plates		31.6856	7.0475	223.3040	524.5783	0.0000	0.0000	524.5783
3	Cover Plate		14.0000	7.0475	98.6650	228.6667	0.0000	0.0000	228.6667
Total			60.63		427.26	753.80		0.00	753.80
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	7.0475	in	S _{top} = 106.96 in ³	y-bar =	7.0475	in	S _{top} = 106.96 in ³
I _x =	753.80	in ⁴	S _{bott.} = 106.96 in ³	I _x =	753.80	in ⁴	S _{bott.} = 106.96 in ³
c _{top} =	7.0475	in	A = 60.6255 in ²	c _{top} =	7.0475	in	A = 60.6255 in ²
c _{bottom} =	7.0475	in	r _x = 3.5261 in	c _{bottom} =	7.0475	in	r _x = 3.5261 in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	14.9399	12.8570	192.0822	628.3732	0.0000	0.0000	628.3732	
2	Left Flange	15.8428	1.0620	16.8250	1.6679	11.7950	2204.0796	2205.7476	
	Right Flange	15.8428	24.6520	390.5562	1.6679	11.7950	2204.0796	2205.7476	
3	Left Plate	7.0000	0.2500	1.7500	0.1458	12.6070	1112.5551	1112.7010	
	Right Plate	7.0000	25.4640	178.2480	0.1458	12.6070	1112.5551	1112.7010	
Total		60.63		779.46	632.00		6633.27	7265.27	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.8570	in	S _{right} = 565.08 in ³	x-bar =	12.8570	in	S _{right} = 565.08 in ³
I _y =	7265.27	in ⁴	S _{left} = 565.08 in ³	I _y =	7265.27	in ⁴	S _{left} = 565.08 in ³
C _{right} =	12.8570	in	A = 60.6255 in ²	C _{right} =	12.8570	in	A = 60.6255 in ²
C _{left} =	12.8570	in	r _y = 10.9471 in	C _{left} =	12.8570	in	r _y = 10.9471 in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 160

- $A_1 = t_w = 0.6650$ in
- $A_2 = t_f = 1.1240$ in
- $B_1 = d = 24.7140$ in
- $B_2 = b_f = 14.0950$ in

Cover Plate

- $A_3 = t = 0.8750$ in
- $B_3 = b = 14.0000$ in



Member U95-L96

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	7.0475	105.2889	0.5506	0.0000	0.0000	0.5506
2	Flange Plates		31.6856	7.0475	223.3040	524.5783	0.0000	0.0000	524.5783
3	Cover Plate		24.5000	7.0475	172.6638	400.1667	0.0000	0.0000	400.1667
Total			71.13		501.26	925.30		0.00	925.30
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0475	in	S _{top} =	131.29	in ³	y-bar =	7.0475	in	S _{top} =	131.29	in ³
I _x =	925.30	in ⁴	S _{bott.} =	131.29	in ³	I _x =	925.30	in ⁴	S _{bott.} =	131.29	in ³
C _{top} =	7.0475	in	A =	71.1255	in ²	C _{top} =	7.0475	in	A =	71.1255	in ²
C _{bottom} =	7.0475	in	r _x =	3.6068	in	C _{bottom} =	7.0475	in	r _x =	3.6068	in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	14.9399	13.2320	197.6846	628.3732	0.0000	0.0000	628.3732	
2	Left Flange	15.8428	1.4370	22.7661	1.6679	11.7950	2204.0796	2205.7476	
	Right Flange	15.8428	25.0270	396.4973	1.6679	11.7950	2204.0796	2205.7476	
3	Left Plate	12.2500	0.4375	5.3594	0.7816	12.7945	2005.3156	2006.0971	
	Right Plate	12.2500	26.0265	318.8246	0.7816	12.7945	2005.3156	2006.0971	
Total		71.13		941.13	633.27		8418.79	9052.06	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	13.2320	in	S _{right} = 684.10 in ³	x-bar =	13.2320	in	S _{right} = 684.10 in ³
I _y =	9052.06	in ⁴	S _{left} = 684.10 in ³	I _y =	9052.06	in ⁴	S _{left} = 684.10 in ³
C _{right} =	13.2320	in	A = 71.1255 in ²	C _{right} =	13.2320	in	A = 71.1255 in ²
C _{left} =	13.2320	in	r _y = 11.2814 in	C _{left} =	13.2320	in	r _y = 11.2814 in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.9375$ in
- $B_3 = b = 14.0000$ in



Member U96-L97

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		26.2500	7.0000	183.7500	428.7500	0.0000	0.0000	428.7500
Total			64.03		448.22	837.04		0.00	837.04
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	S _{top} =	119.58	in ³	y-bar =	7.0000	in	S _{top} =	119.58	in ³
I _x =	837.04	in ⁴	S _{bott.} =	119.58	in ³	I _x =	837.04	in ⁴	S _{bott.} =	119.58	in ³
c _{top} =	7.0000	in	A =	64.0316	in ²	c _{top} =	7.0000	in	A =	64.0316	in ²
c _{bottom} =	7.0000	in	r _x =	3.6156	in	c _{bottom} =	7.0000	in	r _x =	3.6156	in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	12.8056	13.0625	167.2734	538.6056	0.0000	0.0000	538.6056	
2	Left Flange	12.4880	1.3835	17.2771	0.8280	11.6790	1703.3512	1704.1792	
	Right Flange	12.4880	24.7415	308.9719	0.8280	11.6790	1703.3512	1704.1792	
3	Left Plate	13.1250	0.4688	6.1523	0.9613	12.5938	2081.6583	2082.6196	
	Right Plate	13.1250	25.6563	336.7383	0.9613	12.5938	2081.6583	2082.6196	
Total		64.03		836.41	542.18		7570.02	8112.20	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	13.0625	in	S _{right} = 621.03 in ³	x-bar =	13.0625	in	S _{right} = 621.03 in ³
I _y =	8112.20	n ⁴	S _{left} = 621.03 in ³	I _y =	8112.20	n ⁴	S _{left} = 621.03 in ³
C _{right} =	13.0625	in	A = 64.0316 in ²	C _{right} =	13.0625	in	A = 64.0316 in ²
C _{left} =	13.0625	in	r _y = 11.2557 in	C _{left} =	13.0625	in	r _y = 11.2557 in



Made By KMW
Checked By ADK

Date 2/6/2012
Date 2/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.3750$ in
- $B_3 = b = 14.0000$ in



Member U97-L98

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		10.5000	7.0000	73.5000	171.5000	0.0000	0.0000	171.5000
Total			48.28		337.97	579.79		0.00	579.79
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0625	14.0000	-0.8750	7.0000	-6.1250	-14.2917	0.0000	0.0000	-14.2917
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.88		-6.13	-14.29		0.00	-14.29

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	S _{top} =	82.83	in ³	y-bar =	7.0000	in	S _{top} =	80.79	in ³
I _x =	579.79	in ⁴	S _{bott.} =	82.83	in ³	I _x =	565.50	in ⁴	S _{bott.} =	80.79	in ³
c _{top} =	7.0000	in	A =	48.2816	in ²	c _{top} =	7.0000	in	A =	47.4066	in ²
c _{bottom} =	7.0000	in	r _x =	3.4653	in	c _{bottom} =	7.0000	in	r _x =	3.4538	in



Made By KMW
Checked By ADK

Date 2/6/2012
Date 2/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.5000	160.0703	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	0.8210	10.2526	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	24.1790	301.9474	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		5.2500	0.1875	0.9844	0.0615	12.3125	795.8877	795.9492
	Right Plate		5.2500	24.8125	130.2656	0.0615	12.3125	795.8877	795.9492
Total			48.28		603.52	540.38		4998.48	5538.86
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	14.0000	0.0625	-0.8750	0.0313	-0.0273	-0.0003	12.6989	-141.1041	-141.1044
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.88		-0.03	0.00		-141.10	-141.10

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.5000	in	S _{right} =	443.11	in ³	x-bar =	12.7301	in	S _{right} =	439.92	in ³
I _y =	5538.86	in ⁴	S _{left} =	443.11	in ³	I _y =	5397.76	in ⁴	S _{left} =	424.01	in ³
C _{right} =	12.5000	in	A =	48.2816	in ²	C _{right} =	12.2699	in	A =	47.4066	in ²
C _{left} =	12.5000	in	r _y =	10.7107	in	C _{left} =	12.7301	in	r _y =	10.6706	in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 120

- $A_1 = t_w = 0.5590$ in
- $A_2 = t_f = 0.9220$ in
- $B_1 = d = 24.3100$ in
- $B_2 = b_f = 12.0890$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U98-L99

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.5585	6.0445	75.9098	0.3270	0.0000	0.0000	0.3270
2	Flange Plates		22.2921	6.0445	134.7447	271.4881	0.0000	0.0000	271.4881
3	Cover Plate		0.0000	6.0445	0.0000	0.0000	0.0000	0.0000	0.0000
Total			34.85		210.65	271.82		0.00	271.82
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0445	in	$S_{top} =$	44.97	in ³	y-bar =	6.0445	in	$S_{top} =$	44.97	in ³
$I_x =$	271.82	in ⁴	$S_{bott.} =$	44.97	in ³	$I_x =$	271.82	in ⁴	$S_{bott.} =$	44.97	in ³
$c_{top} =$	6.0445	in	A =	34.8506	in ²	$c_{top} =$	6.0445	in	A =	34.8506	in ²
$c_{bottom} =$	6.0445	in	$r_x =$	2.7927	in	$c_{bottom} =$	6.0445	in	$r_x =$	2.7927	in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.5585	12.1550	152.6485	528.2115	0.0000	0.0000	528.2115
2	Left Flange		11.1461	0.4610	5.1383	0.7896	11.6940	1524.2194	1525.0090
	Right Flange		11.1461	23.8490	265.8223	0.7896	11.6940	1524.2194	1525.0090
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.1550	0.0000	0.0000
	Right Plate		0.0000	24.3100	0.0000	0.0000	12.1550	0.0000	0.0000
Total			34.85		423.61	529.79		3048.44	3578.23
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1550	in	S _{right} = 294.38 in ³	x-bar =	12.1550	in	S _{right} = 294.38 in ³
I _y =	3578.23	in ⁴	S _{left} = 294.38 in ³	I _y =	3578.23	in ⁴	S _{left} = 294.38 in ³
C _{right} =	12.1550	in	A = 34.8506 in ²	C _{right} =	12.1550	in	A = 34.8506 in ²
C _{left} =	12.1550	in	r _y = 10.1328 in	C _{left} =	12.1550	in	r _y = 10.1328 in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 100

- $A_1 = t_w = 0.4700$ in
- $A_2 = t_f = 0.7670$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 12.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U99-L100

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	6.0000	63.3541	0.1944	0.0000	0.0000	0.1944
2	Flange Plates		18.4080	6.0000	110.4480	220.8960	0.0000	0.0000	220.8960
3	Cover Plate		0.0000	6.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			28.97		173.80	221.09		0.00	221.09
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0000	in	$S_{top} =$	36.85	in ³	y-bar =	6.0000	in	$S_{top} =$	36.85	in ³
$I_x =$	221.09	in ⁴	$S_{bott.} =$	36.85	in ³	$I_x =$	221.09	in ⁴	$S_{bott.} =$	36.85	in ³
$c_{top} =$	6.0000	in	A =	28.9670	in ²	$c_{top} =$	6.0000	in	A =	28.9670	in ²
$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in	$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	12.0000	126.7082	444.1134	0.0000	0.0000	444.1134
2	Left Flange		9.2040	0.3835	3.5297	0.4512	11.6165	1242.0160	1242.4673
	Right Flange		9.2040	23.6165	217.3663	0.4512	11.6165	1242.0160	1242.4673
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.0000	0.0000	0.0000
	Right Plate		0.0000	24.0000	0.0000	0.0000	12.0000	0.0000	0.0000
Total			28.97		347.60	445.02		2484.03	2929.05
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.0000	in	S _{right} =	244.09	in ³	x-bar =	12.0000	in	S _{right} =	244.09	in ³
I _y =	2929.05	n ⁴	S _{left} =	244.09	in ³	I _y =	2929.05	n ⁴	S _{left} =	244.09	in ³
C _{right} =	12.0000	in	A =	28.9670	in ²	C _{right} =	12.0000	in	A =	28.9670	in ²
C _{left} =	12.0000	in	r _y =	10.0557	in	C _{left} =	12.0000	in	r _y =	10.0557	in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam **CB24x 100**

- $A_1 = t_w = 0.4700$ in
- $A_2 = t_f = 0.7670$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 12.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U101-L100

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	6.0000	63.3541	0.1944	0.0000	0.0000	0.1944
2	Flange Plates		18.4080	6.0000	110.4480	220.8960	0.0000	0.0000	220.8960
3	Cover Plate		0.0000	6.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			28.97		173.80	221.09		0.00	221.09
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0000	in	S _{top} =	36.85	in ³	y-bar =	6.0000	in	S _{top} =	36.85	in ³
I _x =	221.09	in ⁴	S _{bott.} =	36.85	in ³	I _x =	221.09	in ⁴	S _{bott.} =	36.85	in ³
c _{top} =	6.0000	in	A =	28.9670	in ²	c _{top} =	6.0000	in	A =	28.9670	in ²
c _{bottom} =	6.0000	in	r _x =	2.7627	in	c _{bottom} =	6.0000	in	r _x =	2.7627	in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	10.5590	12.0000	126.7082	444.1134	0.0000	0.0000	444.1134	
2	Left Flange	9.2040	0.3835	3.5297	0.4512	11.6165	1242.0160	1242.4673	
	Right Flange	9.2040	23.6165	217.3663	0.4512	11.6165	1242.0160	1242.4673	
3	Left Plate	0.0000	0.0000	0.0000	0.0000	12.0000	0.0000	0.0000	
	Right Plate	0.0000	24.0000	0.0000	0.0000	12.0000	0.0000	0.0000	
Total		28.97		347.60	445.02		2484.03	2929.05	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.0000 in	S _{right} =	244.09 in ³	x-bar =	12.0000 in	S _{right} =	244.09 in ³
I _y =	2929.05 in ⁴	S _{left} =	244.09 in ³	I _y =	2929.05 in ⁴	S _{left} =	244.09 in ³
C _{right} =	12.0000 in	A =	28.9670 in ²	C _{right} =	12.0000 in	A =	28.9670 in ²
C _{left} =	12.0000 in	r _y =	10.0557 in	C _{left} =	12.0000 in	r _y =	10.0557 in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 110

- $A_1 = t_w = 0.5130$ in
- $A_2 = t_f = 0.8470$ in
- $B_1 = d = 24.1600$ in
- $B_2 = b_f = 12.0430$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U102-L101

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x, gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		11.5251	6.0215	69.3981	0.2528	0.0000	0.0000	0.2528
2	Flange Plates		20.4008	6.0215	122.8437	246.5677	0.0000	0.0000	246.5677
3	Cover Plate		0.0000	6.0215	0.0000	0.0000	0.0000	0.0000	0.0000
Total			31.93		192.24	246.82		0.00	246.82
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0215	in	$S_{top} =$	40.99	in ³	y-bar =	6.0215	in	$S_{top} =$	40.99	in ³
$I_x =$	246.82	in ⁴	$S_{bott.} =$	40.99	in ³	$I_x =$	246.82	in ⁴	$S_{bott.} =$	40.99	in ³
$c_{top} =$	6.0215	in	A =	31.9259	in ²	$c_{top} =$	6.0215	in	A =	31.9259	in ²
$c_{bottom} =$	6.0215	in	$r_x =$	2.7805	in	$c_{bottom} =$	6.0215	in	$r_x =$	2.7805	in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		11.5251	12.0800	139.2227	484.7450	0.0000	0.0000	484.7450
2	Left Flange		10.2004	0.4235	4.3199	0.6098	11.6565	1385.9719	1386.5817
	Right Flange		10.2004	23.7365	242.1223	0.6098	11.6565	1385.9719	1386.5817
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.0800	0.0000	0.0000
	Right Plate		0.0000	24.1600	0.0000	0.0000	12.0800	0.0000	0.0000
Total			31.93		385.66	485.96		2771.94	3257.91
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.0800	in	S _{right} = 269.69 in ³	x-bar =	12.0800	in	S _{right} = 269.69 in ³
I _y =	3257.91	in ⁴	S _{left} = 269.69 in ³	I _y =	3257.91	in ⁴	S _{left} = 269.69 in ³
C _{right} =	12.0800	in	A = 31.9259 in ²	C _{right} =	12.0800	in	A = 31.9259 in ²
C _{left} =	12.0800	in	r _y = 10.1018 in	C _{left} =	12.0800	in	r _y = 10.1018 in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.3750$ in
- $B_3 = b = 14.0000$ in



Member U103-L102

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		10.5000	7.0000	73.5000	171.5000	0.0000	0.0000	171.5000
Total			48.28		337.97	579.79		0.00	579.79
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	S _{top} =	82.83	in ³	y-bar =	7.0000	in	S _{top} =	82.83	in ³
I _x =	579.79	in ⁴	S _{bott.} =	82.83	in ³	I _x =	579.79	in ⁴	S _{bott.} =	82.83	in ³
c _{top} =	7.0000	in	A =	48.2816	in ²	c _{top} =	7.0000	in	A =	48.2816	in ²
c _{bottom} =	7.0000	in	r _x =	3.4653	in	c _{bottom} =	7.0000	in	r _x =	3.4653	in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	12.8056	12.5000	160.0703	538.6056	0.0000	0.0000	538.6056	
2	Left Flange	12.4880	0.8210	10.2526	0.8280	11.6790	1703.3512	1704.1792	
	Right Flange	12.4880	24.1790	301.9474	0.8280	11.6790	1703.3512	1704.1792	
3	Left Plate	5.2500	0.1875	0.9844	0.0615	12.3125	795.8877	795.9492	
	Right Plate	5.2500	24.8125	130.2656	0.0615	12.3125	795.8877	795.9492	
Total		48.28		603.52	540.38		4998.48	5538.86	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.5000	in	S _{right} = 443.11 in ³	x-bar =	12.5000	in	S _{right} = 443.11 in ³
I _y =	5538.86	in ⁴	S _{left} = 443.11 in ³	I _y =	5538.86	in ⁴	S _{left} = 443.11 in ³
C _{right} =	12.5000	in	A = 48.2816 in ²	C _{right} =	12.5000	in	A = 48.2816 in ²
C _{left} =	12.5000	in	r _y = 10.7107 in	C _{left} =	12.5000	in	r _y = 10.7107 in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.9375$ in
- $B_3 = b = 14.0000$ in



Member U104-L103

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		26.2500	7.0000	183.7500	428.7500	0.0000	0.0000	428.7500
Total			64.03		448.22	837.04		0.00	837.04
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	S _{top} =	119.58	in ³	y-bar =	7.0000	in	S _{top} =	119.58	in ³
I _x =	837.04	in ⁴	S _{bott.} =	119.58	in ³	I _x =	837.04	in ⁴	S _{bott.} =	119.58	in ³
c _{top} =	7.0000	in	A =	64.0316	in ²	c _{top} =	7.0000	in	A =	64.0316	in ²
c _{bottom} =	7.0000	in	r _x =	3.6156	in	c _{bottom} =	7.0000	in	r _x =	3.6156	in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	13.0625	167.2734	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	1.3835	17.2771	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	24.7415	308.9719	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		13.1250	0.4688	6.1523	0.9613	12.5938	2081.6583	2082.6196
	Right Plate		13.1250	25.6563	336.7383	0.9613	12.5938	2081.6583	2082.6196
Total			64.03		836.41	542.18		7570.02	8112.20
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	13.0625	in	S _{right} = 621.03 in ³	x-bar =	13.0625	in	S _{right} = 621.03 in ³
I _y =	8112.20	n ⁴	S _{left} = 621.03 in ³	I _y =	8112.20	n ⁴	S _{left} = 621.03 in ³
C _{right} =	13.0625	in	A = 64.0316 in ²	C _{right} =	13.0625	in	A = 64.0316 in ²
C _{left} =	13.0625	in	r _y = 11.2557 in	C _{left} =	13.0625	in	r _y = 11.2557 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 150

- $A_1 = t_w = 0.6330$ in
- $A_2 = t_f = 1.0480$ in
- $B_1 = d = 24.5620$ in
- $B_2 = b_f = 14.0630$ in

Cover Plate

- $A_3 = t = 1.0000$ in
- $B_3 = b = 14.0000$ in



Member U105-L104

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.2210	7.0315	99.9948	0.4748	0.0000	0.0000	0.4748
2	Flange Plates		29.4760	7.0315	207.2608	485.7848	0.0000	0.0000	485.7848
3	Cover Plate		28.0000	7.0315	196.8820	457.3333	0.0000	0.0000	457.3333
Total			71.70		504.14	943.59		0.00	943.59
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0315	in	$S_{top} =$	134.20	in ³	y-bar =	7.0315	in	$S_{top} =$	134.20	in ³
$I_x =$	943.59	in ⁴	$S_{bott.} =$	134.20	in ³	$I_x =$	943.59	in ⁴	$S_{bott.} =$	134.20	in ³
$c_{top} =$	7.0315	in	A =	71.6970	in ²	$c_{top} =$	7.0315	in	A =	71.6970	in ²
$c_{bottom} =$	7.0315	in	$r_x =$	3.6278	in	$c_{bottom} =$	7.0315	in	$r_x =$	3.6278	in



Made By DMP
 Checked By NRF

Date 1/20/2012
 Date 1/24/2012

Job No. P402110046
 Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.2210	13.2810	188.8688	598.1357	0.0000	0.0000	598.1357
2	Left Flange		14.7380	1.5240	22.4607	1.3489	11.7570	2037.1936	2038.5425
	Right Flange		14.7380	25.0380	369.0106	1.3489	11.7570	2037.1936	2038.5425
3	Left Plate		14.0000	0.5000	7.0000	1.1667	12.7810	2286.9555	2288.1221
	Right Plate		14.0000	26.0620	364.8680	1.1667	12.7810	2286.9555	2288.1221
Total			71.70		952.21	603.17		8648.30	9251.46
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	13.2810	in	S _{right} = 696.59 in ³	x-bar =	13.2810	in	S _{right} = 696.59 in ³
I _y =	9251.46	n ⁴	S _{left} = 696.59 in ³	I _y =	9251.46	n ⁴	S _{left} = 696.59 in ³
C _{right} =	13.2810	in	A = 71.6970 in ²	C _{right} =	13.2810	in	A = 71.6970 in ²
C _{left} =	13.2810	in	r _y = 11.3594 in	C _{left} =	13.2810	in	r _y = 11.3594 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 160

- $A_1 = t_w = 0.6650$ in
- $A_2 = t_f = 1.1240$ in
- $B_1 = d = 24.7140$ in
- $B_2 = b_f = 14.0950$ in

Cover Plate

- $A_3 = t = 0.5000$ in
- $B_3 = b = 14.0000$ in



Member U106-L105

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x, gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	7.0475	105.2889	0.5506	0.0000	0.0000	0.5506
2	Flange Plates		31.6856	7.0475	223.3040	524.5783	0.0000	0.0000	524.5783
3	Cover Plate		14.0000	7.0475	98.6650	228.6667	0.0000	0.0000	228.6667
Total			60.63		427.26	753.80		0.00	753.80
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	7.0475	in	$S_{top} = 106.96$ in ³	y-bar =	7.0475	in	$S_{top} = 106.96$ in ³
$I_x =$	753.80	in ⁴	$S_{bott.} = 106.96$ in ³	$I_x =$	753.80	in ⁴	$S_{bott.} = 106.96$ in ³
$c_{top} =$	7.0475	in	$A = 60.6255$ in ²	$c_{top} =$	7.0475	in	$A = 60.6255$ in ²
$c_{bottom} =$	7.0475	in	$r_x = 3.5261$ in	$c_{bottom} =$	7.0475	in	$r_x = 3.5261$ in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	12.8570	192.0822	628.3732	0.0000	0.0000	628.3732
2	Left Flange		15.8428	1.0620	16.8250	1.6679	11.7950	2204.0796	2205.7476
	Right Flange		15.8428	24.6520	390.5562	1.6679	11.7950	2204.0796	2205.7476
3	Left Plate		7.0000	0.2500	1.7500	0.1458	12.6070	1112.5551	1112.7010
	Right Plate		7.0000	25.4640	178.2480	0.1458	12.6070	1112.5551	1112.7010
Total			60.63		779.46	632.00		6633.27	7265.27
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.8570	in	S _{right} = 565.08 in ³	x-bar =	12.8570	in	S _{right} = 565.08 in ³
I _y =	7265.27	n ⁴	S _{left} = 565.08 in ³	I _y =	7265.27	n ⁴	S _{left} = 565.08 in ³
C _{right} =	12.8570	in	A = 60.6255 in ²	C _{right} =	12.8570	in	A = 60.6255 in ²
C _{left} =	12.8570	in	r _y = 10.9471 in	C _{left} =	12.8570	in	r _y = 10.9471 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 150

- $A_1 = t_w = 0.6330$ in
- $A_2 = t_f = 1.0480$ in
- $B_1 = d = 24.5620$ in
- $B_2 = b_f = 14.0630$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U107-L106

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.2210	7.0315	99.9948	0.4748	0.0000	0.0000	0.4748
2	Flange Plates		29.4760	7.0315	207.2608	485.7848	0.0000	0.0000	485.7848
3	Cover Plate		0.0000	7.0315	0.0000	0.0000	0.0000	0.0000	0.0000
Total			43.70		307.26	486.26		0.00	486.26
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0315	in	S _{top} =	69.15	in ³	y-bar =	7.0315	in	S _{top} =	69.15	in ³
I _x =	486.26	in ⁴	S _{bott.} =	69.15	in ³	I _x =	486.26	in ⁴	S _{bott.} =	69.15	in ³
c _{top} =	7.0315	in	A =	43.6970	in ²	c _{top} =	7.0315	in	A =	43.6970	in ²
c _{bottom} =	7.0315	in	r _x =	3.3359	in	c _{bottom} =	7.0315	in	r _x =	3.3359	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.2210	12.2810	174.6478	598.1357	0.0000	0.0000	598.1357
2	Left Flange		14.7380	0.5240	7.7227	1.3489	11.7570	2037.1936	2038.5425
	Right Flange		14.7380	24.0380	354.2726	1.3489	11.7570	2037.1936	2038.5425
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.2810	0.0000	0.0000
	Right Plate		0.0000	24.5620	0.0000	0.0000	12.2810	0.0000	0.0000
Total			43.70		536.64	600.83		4074.39	4675.22
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2810	in	S _{right} = 380.69 in ³	x-bar =	12.2810	in	S _{right} = 380.69 in ³
I _y =	4675.22	in ⁴	S _{left} = 380.69 in ³	I _y =	4675.22	in ⁴	S _{left} = 380.69 in ³
C _{right} =	12.2810	in	A = 43.6970 in ²	C _{right} =	12.2810	in	A = 43.6970 in ²
C _{left} =	12.2810	in	r _y = 10.3437 in	C _{left} =	12.2810	in	r _y = 10.3437 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 100

- $A_1 = t_w = 0.4700$ in
- $A_2 = t_f = 0.7670$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 12.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U108-L107

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	6.0000	63.3541	0.1944	0.0000	0.0000	0.1944
2	Flange Plates		18.4080	6.0000	110.4480	220.8960	0.0000	0.0000	220.8960
3	Cover Plate		0.0000	6.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			28.97		173.80	221.09		0.00	221.09
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0000	in	S _{top} =	36.85	in ³	y-bar =	6.0000	in	S _{top} =	36.85	in ³
I _x =	221.09	in ⁴	S _{bott.} =	36.85	in ³	I _x =	221.09	in ⁴	S _{bott.} =	36.85	in ³
c _{top} =	6.0000	in	A =	28.9670	in ²	c _{top} =	6.0000	in	A =	28.9670	in ²
c _{bottom} =	6.0000	in	r _x =	2.7627	in	c _{bottom} =	6.0000	in	r _x =	2.7627	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	10.5590	12.0000	126.7082	444.1134	0.0000	0.0000	444.1134	
2	Left Flange	9.2040	0.3835	3.5297	0.4512	11.6165	1242.0160	1242.4673	
	Right Flange	9.2040	23.6165	217.3663	0.4512	11.6165	1242.0160	1242.4673	
3	Left Plate	0.0000	0.0000	0.0000	0.0000	12.0000	0.0000	0.0000	
	Right Plate	0.0000	24.0000	0.0000	0.0000	12.0000	0.0000	0.0000	
Total		28.97		347.60	445.02		2484.03	2929.05	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.0000	in	S _{right} = 244.09 in ³	x-bar =	12.0000	in	S _{right} = 244.09 in ³
I _y =	2929.05	in ⁴	S _{left} = 244.09 in ³	I _y =	2929.05	in ⁴	S _{left} = 244.09 in ³
C _{right} =	12.0000	in	A = 28.9670 in ²	C _{right} =	12.0000	in	A = 28.9670 in ²
C _{left} =	12.0000	in	r _y = 10.0557 in	C _{left} =	12.0000	in	r _y = 10.0557 in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

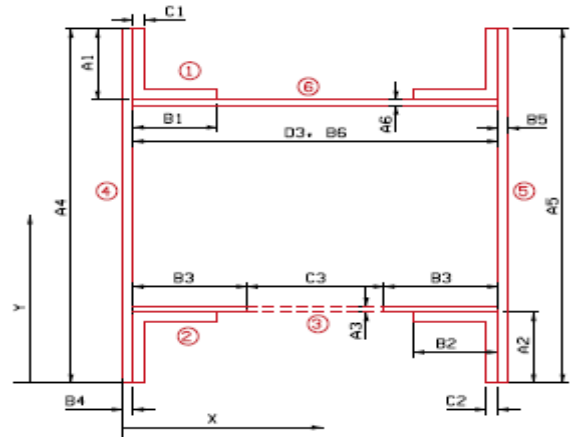
$A_4 = h = 20.0000$ in
 $B_4 = t = 0.3750$ in

Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 0.3750$ in

Cover Plate:

$A_6 = t = 0.3750$ in
 $B_6 = l = 23.5000$ in



Member U109-L108

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	16.1875	44.0098	0.0319	5.7821	90.8952	90.9270
	Vertical Leg	3.0000	18.0000	54.0000	4.0000	7.5946	173.0340	177.0340
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	6.5929	118.1740	118.2059
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	8.4054	211.9521	215.9521
3	Perforated Plate	6.0000	4.2500	25.5000	0.1250	6.1554	227.3335	227.4585
4	Plate	7.5000	10.0000	75.0000	250.0000	0.4054	1.2326	251.2326
5	Plate	7.5000	10.0000	75.0000	250.0000	0.4054	1.2326	251.2326
6	Cover Plate	8.8125	15.8125	139.3477	0.1033	5.4071	257.6489	257.7522
Total		41.25		429.22	508.29		1081.50	1589.79
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	10.4054	in	S _{top} =	165.70	in ³	y-bar =	10.4054	in	S _{top} =	165.70	in ³
I _x =	1589.79	in ⁴	S _{bott.} =	152.79	in ³	I _x =	1589.79	in ⁴	S _{bott.} =	152.79	in ³
C _{top} =	9.5946	in	A =	41.2500	in ²	C _{top} =	9.5946	in	A =	41.2500	in ²
C _{bottom} =	10.4054	in	r _x =	6.2081	in	C _{bottom} =	10.4054	in	r _x =	6.2081	in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	2.5625	3.4834	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.5625	0.8438	0.0176	11.5625	200.5371	200.5547	
1 (Right)	Horizontal Leg	1.3594	21.6875	29.4814	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.6875	35.5313	0.0176	11.5625	200.5371	200.5547	
2 (Left)	Horizontal Leg	1.3594	2.5625	3.4834	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.5625	0.8438	0.0176	11.5625	200.5371	200.5547	
2 (Right)	Horizontal Leg	1.3594	21.6875	29.4814	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.6875	35.5313	0.0176	11.5625	200.5371	200.5547	
3 (Left)	Perforated Plate	3.0000	3.3750	10.1250	9.0000	8.7500	229.6875	238.6875	
3 (Right)	Perforated Plate	3.0000	20.8750	62.6250	9.0000	8.7500	229.6875	238.6875	
4	Plate	7.5000	0.1875	1.4063	0.0879	11.9375	1068.7793	1068.8672	
5	Plate	7.5000	24.0625	180.4688	0.0879	11.9375	1068.7793	1068.8672	
6	Cover Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
Total		41.25		500.16	429.76		3896.29	4326.05	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
x-bar =	12.1250	in	S _{right} =	356.79	in ³	x-bar =	12.1250	in	S _{right} =	356.79	in ³
I _y =	4326.05	in ⁴	S _{left} =	356.79	in ³	I _y =	4326.05	in ⁴	S _{left} =	356.79	in ³
C _{right} =	12.1250	in	A =	41.2500	in ²	C _{right} =	12.1250	in	A =	41.2500	in ²
C _{left} =	12.1250	in	r _y =	10.2408	in	C _{left} =	12.1250	in	r _y =	10.2408	in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

$A_4 = h = 24.0000$ in
 $B_4 = t = 0.5625$ in

Right Web Plate:

$A_5 = h = 24.0000$ in
 $B_5 = t = 0.5625$ in

Cover Plate:

$A_6 = t = 0.3750$ in
 $B_6 = l = 23.5000$ in



Member U110-L109

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	20.1875	54.8848	0.0319	7.7678	164.0470	164.0788
	Vertical Leg	3.0000	22.0000	66.0000	4.0000	9.5803	275.3479	279.3479
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	8.6072	201.4144	201.4462
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	10.4197	325.7088	329.7088
3	Perforated Plate	6.0000	4.2500	25.5000	0.1250	8.1697	400.4615	400.5865
4	Plate	13.5000	12.0000	162.0000	648.0000	0.4197	2.3777	650.3777
5	Plate	13.5000	12.0000	162.0000	648.0000	0.4197	2.3777	650.3777
6	Cover Plate	8.8125	19.8125	174.5977	0.1033	7.3928	481.6372	481.7405
Total		53.25		661.35	1304.29		1853.37	3157.66
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	12.4197 in	S _{top} =	272.67 in ³	y-bar =	12.4197 in	S _{top} =	272.67 in ³
I _x =	3157.66 in ⁴	S _{bott.} =	254.25 in ³	I _x =	3157.66 in ⁴	S _{bott.} =	254.25 in ³
C _{top} =	11.5803 in	A =	53.2500 in ²	C _{top} =	11.5803 in	A =	53.2500 in ²
C _{bottom} =	12.4197 in	r _x =	7.7006 in	C _{bottom} =	12.4197 in	r _x =	7.7006 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	2.7500	3.7383	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.7500	1.1250	0.0176	11.5625	200.5371	200.5547	
1 (Right)	Horizontal Leg	1.3594	21.8750	29.7363	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.8750	35.8125	0.0176	11.5625	200.5371	200.5547	
2 (Left)	Horizontal Leg	1.3594	2.7500	3.7383	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.7500	1.1250	0.0176	11.5625	200.5371	200.5547	
2 (Right)	Horizontal Leg	1.3594	21.8750	29.7363	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.8750	35.8125	0.0176	11.5625	200.5371	200.5547	
3 (Left)	Perforated Plate	3.0000	3.5625	10.6875	9.0000	8.7500	229.6875	238.6875	
3 (Right)	Perforated Plate	3.0000	21.0625	63.1875	9.0000	8.7500	229.6875	238.6875	
4	Plate	13.5000	0.2813	3.7969	0.3560	12.0313	1954.1382	1954.4941	
5	Plate	13.5000	24.3438	328.6406	0.3560	12.0313	1954.1382	1954.4941	
6	Cover Plate	8.8125	12.3125	108.5039	405.5586	0.0000	0.0000	405.5586	
Total		53.25		655.64	430.30		5667.01	6097.31	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3125 in	S _{right} =	495.21 in ³	x-bar =	12.3125 in	S _{right} =	495.21 in ³
I _y =	6097.31 in ⁴	S _{left} =	495.21 in ³	I _y =	6097.31 in ⁴	S _{left} =	495.21 in ³
C _{right} =	12.3125 in	A =	53.2500 in ²	C _{right} =	12.3125 in	A =	53.2500 in ²
C _{left} =	12.3125 in	r _y =	10.7006 in	C _{left} =	12.3125 in	r _y =	10.7006 in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.6250$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

$A_4 = h = 24.0000$ in
 $B_4 = t = 0.5000$ in

Right Web Plate:

$A_5 = h = 24.0000$ in
 $B_5 = t = 0.5000$ in

Cover Plate:

$A_6 = t = 0.5000$ in
 $B_6 = l = 23.5000$ in



Member U110-L111

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	20.1875	54.8848	0.0319	7.5766	156.0712	156.1031
	Vertical Leg	3.0000	22.0000	66.0000	4.0000	9.3891	264.4680	268.4680
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	8.7984	210.4614	210.4933
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	10.6109	337.7709	341.7709
3	Perforated Plate	7.5000	4.3125	32.3438	0.2441	8.2984	516.4705	516.7146
4	Plate	12.0000	12.0000	144.0000	576.0000	0.6109	4.4778	580.4778
5	Plate	12.0000	12.0000	144.0000	576.0000	0.6109	4.4778	580.4778
6	Cover Plate	11.7500	19.7500	232.0625	0.2448	7.1391	598.8665	599.1113
Total		54.69		689.66	1160.55		2093.06	3253.62
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	12.6109	in	S _{top} =	285.68	in ³	y-bar =	12.6109	in	S _{top} =	285.68	in ³
I _x =	3253.62	in ⁴	S _{bott.} =	258.00	in ³	I _x =	3253.62	in ⁴	S _{bott.} =	258.00	in ³
C _{top} =	11.3891	in	A =	54.6875	in ²	C _{top} =	11.3891	in	A =	54.6875	in ²
C _{bottom} =	12.6109	in	r _x =	7.7133	in	C _{bottom} =	12.6109	in	r _x =	7.7133	in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	2.6875	3.6533	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.6875	1.0313	0.0176	11.5625	200.5371	200.5547	
1 (Right)	Horizontal Leg	1.3594	21.8125	29.6514	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.8125	35.7188	0.0176	11.5625	200.5371	200.5547	
2 (Left)	Horizontal Leg	1.3594	2.6875	3.6533	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.6875	1.0313	0.0176	11.5625	200.5371	200.5547	
2 (Right)	Horizontal Leg	1.3594	21.8125	29.6514	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.8125	35.7188	0.0176	11.5625	200.5371	200.5547	
3 (Left)	Perforated Plate	3.7500	3.5000	13.1250	11.2500	8.7500	287.1094	298.3594	
3 (Right)	Perforated Plate	3.7500	21.0000	78.7500	11.2500	8.7500	287.1094	298.3594	
4	Plate	12.0000	0.2500	3.0000	0.2500	12.0000	1728.0000	1728.2500	
5	Plate	12.0000	24.2500	291.0000	0.2500	12.0000	1728.0000	1728.2500	
6	Cover Plate	11.7500	12.2500	143.9375	540.7448	0.0000	0.0000	540.7448	
Total		54.69		669.92	569.77		5329.58	5899.35	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
x-bar =	12.2500	in	S _{right} =	481.58	in ³	x-bar =	12.2500	in	S _{right} =	481.58	in ³
I _y =	5899.35	in ⁴	S _{left} =	481.58	in ³	I _y =	5899.35	in ⁴	S _{left} =	481.58	in ³
C _{right} =	12.2500	in	A =	54.6875	in ²	C _{right} =	12.2500	in	A =	54.6875	in ²
C _{left} =	12.2500	in	r _y =	10.3862	in	C _{left} =	12.2500	in	r _y =	10.3862	in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

$A_4 = h = 20.0000$ in
 $B_4 = t = 0.5625$ in

Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 0.5625$ in

Cover Plate:

$A_6 = t = 0.3750$ in
 $B_6 = l = 23.5000$ in



Member U111-L112

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	16.1875	44.0098	0.0319	5.8445	92.8666	92.8985
	Vertical Leg	3.0000	18.0000	54.0000	4.0000	7.6570	175.8876	179.8876
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	6.5305	115.9487	115.9806
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	8.3430	208.8184	212.8184
3	Perforated Plate	6.0000	4.2500	25.5000	0.1250	6.0930	222.7500	222.8750
4	Plate	11.2500	10.0000	112.5000	375.0000	0.3430	1.3238	376.3238
5	Plate	11.2500	10.0000	112.5000	375.0000	0.3430	1.3238	376.3238
6	Cover Plate	8.8125	15.8125	139.3477	0.1033	5.4695	263.6269	263.7302
Total		48.75		504.22	758.29		1082.55	1840.84
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	10.3430 in	S _{top} =	190.62 in ³	y-bar =	10.3430 in	S _{top} =	190.62 in ³
I _x =	1840.84 in ⁴	S _{bott.} =	177.98 in ³	I _x =	1840.84 in ⁴	S _{bott.} =	177.98 in ³
C _{top} =	9.6570 in	A =	48.7500 in ²	C _{top} =	9.6570 in	A =	48.7500 in ²
C _{bottom} =	10.3430 in	r _x =	6.1450 in	C _{bottom} =	10.3430 in	r _x =	6.1450 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	2.7500	3.7383	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.7500	1.1250	0.0176	11.5625	200.5371	200.5547	
1 (Right)	Horizontal Leg	1.3594	21.8750	29.7363	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.8750	35.8125	0.0176	11.5625	200.5371	200.5547	
2 (Left)	Horizontal Leg	1.3594	2.7500	3.7383	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.7500	1.1250	0.0176	11.5625	200.5371	200.5547	
2 (Right)	Horizontal Leg	1.3594	21.8750	29.7363	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.8750	35.8125	0.0176	11.5625	200.5371	200.5547	
3 (Left)	Perforated Plate	3.0000	3.5625	10.6875	9.0000	8.7500	229.6875	238.6875	
3 (Right)	Perforated Plate	3.0000	21.0625	63.1875	9.0000	8.7500	229.6875	238.6875	
4	Plate	11.2500	0.2813	3.1641	0.2966	12.0313	1628.4485	1628.7451	
5	Plate	11.2500	24.3438	273.8672	0.2966	12.0313	1628.4485	1628.7451	
6	Cover Plate	8.8125	12.3125	108.5039	405.5586	0.0000	0.0000	405.5586	
Total		48.75		600.23	430.18		5015.63	5445.81	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3125 in	S _{right} =	442.30 in ³	x-bar =	12.3125 in	S _{right} =	442.30 in ³
I _y =	5445.81 in ⁴	S _{left} =	442.30 in ³	I _y =	5445.81 in ⁴	S _{left} =	442.30 in ³
C _{right} =	12.3125 in	A =	48.7500 in ²	C _{right} =	12.3125 in	A =	48.7500 in ²
C _{left} =	12.3125 in	r _y =	10.5692 in	C _{left} =	12.3125 in	r _y =	10.5692 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.3750$ in
- $B_3 = b = 14.0000$ in



Member U112-L113

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		10.5000	7.0000	73.5000	171.5000	0.0000	0.0000	171.5000
Total			48.28		337.97	579.79		0.00	579.79
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	$S_{top} =$	82.83	in ³	y-bar =	7.0000	in	$S_{top} =$	82.83	in ³
$I_x =$	579.79	in ⁴	$S_{bott.} =$	82.83	in ³	$I_x =$	579.79	in ⁴	$S_{bott.} =$	82.83	in ³
$c_{top} =$	7.0000	in	A =	48.2816	in ²	$c_{top} =$	7.0000	in	A =	48.2816	in ²
$c_{bottom} =$	7.0000	in	$r_x =$	3.4653	in	$c_{bottom} =$	7.0000	in	$r_x =$	3.4653	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.5000	160.0703	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	0.8210	10.2526	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	24.1790	301.9474	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		5.2500	0.1875	0.9844	0.0615	12.3125	795.8877	795.9492
	Right Plate		5.2500	24.8125	130.2656	0.0615	12.3125	795.8877	795.9492
Total			48.28		603.52	540.38		4998.48	5538.86
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.5000	in	S _{right} =	443.11	in ³	x-bar =	12.5000	in	S _{right} =	443.11	in ³
I _y =	5538.86	in ⁴	S _{left} =	443.11	in ³	I _y =	5538.86	in ⁴	S _{left} =	443.11	in ³
C _{right} =	12.5000	in	A =	48.2816	in ²	C _{right} =	12.5000	in	A =	48.2816	in ²
C _{left} =	12.5000	in	r _y =	10.7107	in	C _{left} =	12.5000	in	r _y =	10.7107	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 160

- $A_1 = t_w = 0.6650$ in
- $A_2 = t_f = 1.1240$ in
- $B_1 = d = 24.7140$ in
- $B_2 = b_f = 14.0950$ in

Cover Plate

- $A_3 = t = 0.4375$ in
- $B_3 = b = 14.0000$ in



Member U113-L114

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	7.0475	105.2889	0.5506	0.0000	0.0000	0.5506
2	Flange Plates		31.6856	7.0475	223.3040	524.5783	0.0000	0.0000	524.5783
3	Cover Plate		12.2500	7.0475	86.3319	200.0833	0.0000	0.0000	200.0833
Total			58.88		414.92	725.21		0.00	725.21
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	7.0475	in	$S_{top} = 102.90$ in ³	y-bar =	7.0475	in	$S_{top} = 102.90$ in ³
$I_x =$	725.21	in ⁴	$S_{bott.} = 102.90$ in ³	$I_x =$	725.21	in ⁴	$S_{bott.} = 102.90$ in ³
$c_{top} =$	7.0475	in	$A = 58.8755$ in ²	$c_{top} =$	7.0475	in	$A = 58.8755$ in ²
$c_{bottom} =$	7.0475	in	$r_x = 3.5097$ in	$c_{bottom} =$	7.0475	in	$r_x = 3.5097$ in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	14.9399	12.7945	191.1484	628.3732	0.0000	0.0000	628.3732	
2	Left Flange	15.8428	0.9995	15.8349	1.6679	11.7950	2204.0796	2205.7476	
	Right Flange	15.8428	24.5895	389.5660	1.6679	11.7950	2204.0796	2205.7476	
3	Left Plate	6.1250	0.2188	1.3398	0.0977	12.5758	968.6656	968.7633	
	Right Plate	6.1250	25.3703	155.3928	0.0977	12.5758	968.6656	968.7633	
Total		58.88		753.28	631.90		6345.49	6977.40	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.7945	in	S _{right} = 545.34 in ³	x-bar =	12.7945	in	S _{right} = 545.34 in ³
I _y =	6977.40	n ⁴	S _{left} = 545.34 in ³	I _y =	6977.40	n ⁴	S _{left} = 545.34 in ³
C _{right} =	12.7945	in	A = 58.8755 in ²	C _{right} =	12.7945	in	A = 58.8755 in ²
C _{left} =	12.7945	in	r _y = 10.8863 in	C _{left} =	12.7945	in	r _y = 10.8863 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 160

- $A_1 = t_w = 0.6650$ in
- $A_2 = t_f = 1.1240$ in
- $B_1 = d = 24.7140$ in
- $B_2 = b_f = 14.0950$ in

Cover Plate

- $A_3 = t = 0.6875$ in
- $B_3 = b = 14.0000$ in



Member U114-L115

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	7.0475	105.2889	0.5506	0.0000	0.0000	0.5506
2	Flange Plates		31.6856	7.0475	223.3040	524.5783	0.0000	0.0000	524.5783
3	Cover Plate		19.2500	7.0475	135.6644	314.4167	0.0000	0.0000	314.4167
Total			65.88		464.26	839.55		0.00	839.55
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	7.0475	in	S _{top} = 119.13 in ³	y-bar =	7.0475	in	S _{top} = 119.13 in ³
I _x =	839.55	in ⁴	S _{bott.} = 119.13 in ³	I _x =	839.55	in ⁴	S _{bott.} = 119.13 in ³
c _{top} =	7.0475	in	A = 65.8755 in ²	c _{top} =	7.0475	in	A = 65.8755 in ²
c _{bottom} =	7.0475	in	r _x = 3.5699 in	c _{bottom} =	7.0475	in	r _x = 3.5699 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	13.0445	194.8834	628.3732	0.0000	0.0000	628.3732
2	Left Flange		15.8428	1.2495	19.7956	1.6679	11.7950	2204.0796	2205.7476
	Right Flange		15.8428	24.8395	393.5267	1.6679	11.7950	2204.0796	2205.7476
3	Left Plate		9.6250	0.3438	3.3086	0.3791	12.7008	1552.5996	1552.9787
	Right Plate		9.6250	25.7453	247.7980	0.3791	12.7008	1552.5996	1552.9787
Total			65.88		859.31	632.47		7513.36	8145.83
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	13.0445	in	S _{right} = 624.46 in ³	x-bar =	13.0445	in	S _{right} = 624.46 in ³
I _y =	8145.83	n ⁴	S _{left} = 624.46 in ³	I _y =	8145.83	n ⁴	S _{left} = 624.46 in ³
C _{right} =	13.0445	in	A = 65.8755 in ²	C _{right} =	13.0445	in	A = 65.8755 in ²
C _{left} =	13.0445	in	r _y = 11.1200 in	C _{left} =	13.0445	in	r _y = 11.1200 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 160

- $A_1 = t_w = 0.6650$ in
- $A_2 = t_f = 1.1240$ in
- $B_1 = d = 24.7140$ in
- $B_2 = b_f = 14.0950$ in

Cover Plate

- $A_3 = t = 0.4375$ in
- $B_3 = b = 14.0000$ in



Member U115-L116

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	7.0475	105.2889	0.5506	0.0000	0.0000	0.5506
2	Flange Plates		31.6856	7.0475	223.3040	524.5783	0.0000	0.0000	524.5783
3	Cover Plate		12.2500	7.0475	86.3319	200.0833	0.0000	0.0000	200.0833
Total			58.88		414.92	725.21		0.00	725.21
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	7.0475	in	$S_{top} = 102.90$ in ³	y-bar =	7.0475	in	$S_{top} = 102.90$ in ³
$I_x =$	725.21	in ⁴	$S_{bott.} = 102.90$ in ³	$I_x =$	725.21	in ⁴	$S_{bott.} = 102.90$ in ³
$c_{top} =$	7.0475	in	$A = 58.8755$ in ²	$c_{top} =$	7.0475	in	$A = 58.8755$ in ²
$c_{bottom} =$	7.0475	in	$r_x = 3.5097$ in	$c_{bottom} =$	7.0475	in	$r_x = 3.5097$ in



Made By DMP
 Checked By NRF

Date 1/20/2012
 Date 1/24/2012

Job No. P402110046
 Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	12.7945	191.1484	628.3732	0.0000	0.0000	628.3732
2	Left Flange		15.8428	0.9995	15.8349	1.6679	11.7950	2204.0796	2205.7476
	Right Flange		15.8428	24.5895	389.5660	1.6679	11.7950	2204.0796	2205.7476
3	Left Plate		6.1250	0.2188	1.3398	0.0977	12.5758	968.6656	968.7633
	Right Plate		6.1250	25.3703	155.3928	0.0977	12.5758	968.6656	968.7633
Total			58.88		753.28	631.90		6345.49	6977.40
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.7945	in	S _{right} = 545.34 in ³	x-bar =	12.7945	in	S _{right} = 545.34 in ³
I _y =	6977.40	n ⁴	S _{left} = 545.34 in ³	I _y =	6977.40	n ⁴	S _{left} = 545.34 in ³
C _{right} =	12.7945	in	A = 58.8755 in ²	C _{right} =	12.7945	in	A = 58.8755 in ²
C _{left} =	12.7945	in	r _y = 10.8863 in	C _{left} =	12.7945	in	r _y = 10.8863 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 160

- $A_1 = t_w = 0.6650$ in
- $A_2 = t_f = 1.1240$ in
- $B_1 = d = 24.7140$ in
- $B_2 = b_f = 14.0950$ in

Cover Plate

- $A_3 = t = 0.5000$ in
- $B_3 = b = 14.0000$ in



Member U116-L117

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	7.0475	105.2889	0.5506	0.0000	0.0000	0.5506
2	Flange Plates		31.6856	7.0475	223.3040	524.5783	0.0000	0.0000	524.5783
3	Cover Plate		14.0000	7.0475	98.6650	228.6667	0.0000	0.0000	228.6667
Total			60.63		427.26	753.80		0.00	753.80
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	7.0475	in	S _{top} = 106.96 in ³	y-bar =	7.0475	in	S _{top} = 106.96 in ³
I _x =	753.80	in ⁴	S _{bott.} = 106.96 in ³	I _x =	753.80	in ⁴	S _{bott.} = 106.96 in ³
c _{top} =	7.0475	in	A = 60.6255 in ²	c _{top} =	7.0475	in	A = 60.6255 in ²
c _{bottom} =	7.0475	in	r _x = 3.5261 in	c _{bottom} =	7.0475	in	r _x = 3.5261 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	12.8570	192.0822	628.3732	0.0000	0.0000	628.3732
2	Left Flange		15.8428	1.0620	16.8250	1.6679	11.7950	2204.0796	2205.7476
	Right Flange		15.8428	24.6520	390.5562	1.6679	11.7950	2204.0796	2205.7476
3	Left Plate		7.0000	0.2500	1.7500	0.1458	12.6070	1112.5551	1112.7010
	Right Plate		7.0000	25.4640	178.2480	0.1458	12.6070	1112.5551	1112.7010
Total			60.63		779.46	632.00		6633.27	7265.27
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.8570	in	S _{right} = 565.08 in ³	x-bar =	12.8570	in	S _{right} = 565.08 in ³
I _y =	7265.27	in ⁴	S _{left} = 565.08 in ³	I _y =	7265.27	in ⁴	S _{left} = 565.08 in ³
C _{right} =	12.8570	in	A = 60.6255 in ²	C _{right} =	12.8570	in	A = 60.6255 in ²
C _{left} =	12.8570	in	r _y = 10.9471 in	C _{left} =	12.8570	in	r _y = 10.9471 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.4375$ in
- $B_3 = b = 14.0000$ in



Member U117-L118

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		12.2500	7.0000	85.7500	200.0833	0.0000	0.0000	200.0833
Total			50.03		350.22	608.37		0.00	608.37
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	$S_{top} =$	86.91	in ³	y-bar =	7.0000	in	$S_{top} =$	86.91	in ³
$I_x =$	608.37	in ⁴	$S_{bott.} =$	86.91	in ³	$I_x =$	608.37	in ⁴	$S_{bott.} =$	86.91	in ³
$c_{top} =$	7.0000	in	A =	50.0316	in ²	$c_{top} =$	7.0000	in	A =	50.0316	in ²
$c_{bottom} =$	7.0000	in	$r_x =$	3.4871	in	$c_{bottom} =$	7.0000	in	$r_x =$	3.4871	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.5625	160.8706	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	0.8835	11.0331	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	24.2415	302.7279	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		6.1250	0.2188	1.3398	0.0977	12.3438	933.2550	933.3527
	Right Plate		6.1250	24.9063	152.5508	0.0977	12.3438	933.2550	933.3527
Total			50.03		628.52	540.46		5273.21	5813.67
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.5625	in	S _{right} = 462.78 in ³	x-bar =	12.5625	in	S _{right} = 462.78 in ³
I _y =	5813.67	n ⁴	S _{left} = 462.78 in ³	I _y =	5813.67	n ⁴	S _{left} = 462.78 in ³
C _{right} =	12.5625	in	A = 50.0316 in ²	C _{right} =	12.5625	in	A = 50.0316 in ²
C _{left} =	12.5625	in	r _y = 10.7796 in	C _{left} =	12.5625	in	r _y = 10.7796 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.5625$ in
- $B_3 = b = 14.0000$ in



Member U119-L118

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x, gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		15.7500	7.0000	110.2500	257.2500	0.0000	0.0000	257.2500
Total			53.53		374.72	665.54		0.00	665.54
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	$S_{top} =$	95.08	in ³	y-bar =	7.0000	in	$S_{top} =$	95.08	in ³
$I_x =$	665.54	in ⁴	$S_{bott.} =$	95.08	in ³	$I_x =$	665.54	in ⁴	$S_{bott.} =$	95.08	in ³
$c_{top} =$	7.0000	in	A =	53.5316	in ²	$c_{top} =$	7.0000	in	A =	53.5316	in ²
$c_{bottom} =$	7.0000	in	$r_x =$	3.5260	in	$c_{bottom} =$	7.0000	in	$r_x =$	3.5260	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.6875	162.4713	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	1.0085	12.5941	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	24.3665	304.2889	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		7.8750	0.2813	2.2148	0.2076	12.4063	1212.0809	1212.2886
	Right Plate		7.8750	25.0938	197.6133	0.2076	12.4063	1212.0809	1212.2886
Total			53.53		679.18	540.68		5830.86	6371.54
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.6875	in	S _{right} =	502.19	in ³	x-bar =	12.6875	in	S _{right} =	502.19	in ³
I _y =	6371.54	n ⁴	S _{left} =	502.19	in ³	I _y =	6371.54	n ⁴	S _{left} =	502.19	in ³
C _{right} =	12.6875	in	A =	53.5316	in ²	C _{right} =	12.6875	in	A =	53.5316	in ²
C _{left} =	12.6875	in	r _y =	10.9098	in	C _{left} =	12.6875	in	r _y =	10.9098	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 140

- $A_1 = t_w = 0.6010$ in
- $A_2 = t_f = 0.9700$ in
- $B_1 = d = 24.4060$ in
- $B_2 = b_f = 14.0310$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U120-L119

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		13.5021	7.0155	94.7237	0.4064	0.0000	0.0000	0.4064
2	Flange Plates		27.2201	7.0155	190.9629	446.5667	0.0000	0.0000	446.5667
3	Cover Plate		0.0000	7.0155	0.0000	0.0000	0.0000	0.0000	0.0000
Total			40.72		285.69	446.97		0.00	446.97
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0155	in	$S_{top} =$	63.71	in ³	y-bar =	7.0155	in	$S_{top} =$	63.71	in ³
$I_x =$	446.97	in ⁴	$S_{bott.} =$	63.71	in ³	$I_x =$	446.97	in ⁴	$S_{bott.} =$	63.71	in ³
$C_{top} =$	7.0155	in	A =	40.7222	in ²	$C_{top} =$	7.0155	in	A =	40.7222	in ²
$C_{bottom} =$	7.0155	in	$r_x =$	3.3130	in	$C_{bottom} =$	7.0155	in	$r_x =$	3.3130	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		13.5021	12.2030	164.7657	567.8982	0.0000	0.0000	567.8982
2	Left Flange		13.6101	0.4850	6.6009	1.0671	11.7180	1868.8195	1869.8866
	Right Flange		13.6101	23.9210	325.5665	1.0671	11.7180	1868.8195	1869.8866
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.2030	0.0000	0.0000
	Right Plate		0.0000	24.4060	0.0000	0.0000	12.2030	0.0000	0.0000
Total			40.72		496.93	570.03		3737.64	4307.67
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.2030	in	S _{right} =	353.00	in ³	x-bar =	12.2030	in	S _{right} =	353.00	in ³
I _y =	4307.67	in ⁴	S _{left} =	353.00	in ³	I _y =	4307.67	in ⁴	S _{left} =	353.00	in ³
C _{right} =	12.2030	in	A =	40.7222	in ²	C _{right} =	12.2030	in	A =	40.7222	in ²
C _{left} =	12.2030	in	r _y =	10.2850	in	C _{left} =	12.2030	in	r _y =	10.2850	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 100

- $A_1 = t_w = 0.4700$ in
- $A_2 = t_f = 0.7670$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 12.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U121-L120

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	6.0000	63.3541	0.1944	0.0000	0.0000	0.1944
2	Flange Plates		18.4080	6.0000	110.4480	220.8960	0.0000	0.0000	220.8960
3	Cover Plate		0.0000	6.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			28.97		173.80	221.09		0.00	221.09
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0000	in	S _{top} =	36.85	in ³	y-bar =	6.0000	in	S _{top} =	36.85	in ³
I _x =	221.09	in ⁴	S _{bott.} =	36.85	in ³	I _x =	221.09	in ⁴	S _{bott.} =	36.85	in ³
c _{top} =	6.0000	in	A =	28.9670	in ²	c _{top} =	6.0000	in	A =	28.9670	in ²
c _{bottom} =	6.0000	in	r _x =	2.7627	in	c _{bottom} =	6.0000	in	r _x =	2.7627	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	10.5590	12.0000	126.7082	444.1134	0.0000	0.0000	444.1134	
2	Left Flange	9.2040	0.3835	3.5297	0.4512	11.6165	1242.0160	1242.4673	
	Right Flange	9.2040	23.6165	217.3663	0.4512	11.6165	1242.0160	1242.4673	
3	Left Plate	0.0000	0.0000	0.0000	0.0000	12.0000	0.0000	0.0000	
	Right Plate	0.0000	24.0000	0.0000	0.0000	12.0000	0.0000	0.0000	
Total		28.97		347.60	445.02		2484.03	2929.05	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.0000	in	S _{right} = 244.09 in ³	x-bar =	12.0000	in	S _{right} = 244.09 in ³
I _y =	2929.05	n ⁴	S _{left} = 244.09 in ³	I _y =	2929.05	n ⁴	S _{left} = 244.09 in ³
C _{right} =	12.0000	in	A = 28.9670 in ²	C _{right} =	12.0000	in	A = 28.9670 in ²
C _{left} =	12.0000	in	r _y = 10.0557 in	C _{left} =	12.0000	in	r _y = 10.0557 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 150

- $A_1 = t_w = 0.6330$ in
- $A_2 = t_f = 1.0480$ in
- $B_1 = d = 24.5620$ in
- $B_2 = b_f = 14.0630$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U122-L121

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.2210	7.0315	99.9948	0.4748	0.0000	0.0000	0.4748
2	Flange Plates		29.4760	7.0315	207.2608	485.7848	0.0000	0.0000	485.7848
3	Cover Plate		0.0000	7.0315	0.0000	0.0000	0.0000	0.0000	0.0000
Total			43.70		307.26	486.26		0.00	486.26
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0315	in	S _{top} =	69.15	in ³	y-bar =	7.0315	in	S _{top} =	69.15	in ³
I _x =	486.26	in ⁴	S _{bott.} =	69.15	in ³	I _x =	486.26	in ⁴	S _{bott.} =	69.15	in ³
c _{top} =	7.0315	in	A =	43.6970	in ²	c _{top} =	7.0315	in	A =	43.6970	in ²
c _{bottom} =	7.0315	in	r _x =	3.3359	in	c _{bottom} =	7.0315	in	r _x =	3.3359	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.2210	12.2810	174.6478	598.1357	0.0000	0.0000	598.1357
2	Left Flange		14.7380	0.5240	7.7227	1.3489	11.7570	2037.1936	2038.5425
	Right Flange		14.7380	24.0380	354.2726	1.3489	11.7570	2037.1936	2038.5425
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.2810	0.0000	0.0000
	Right Plate		0.0000	24.5620	0.0000	0.0000	12.2810	0.0000	0.0000
Total			43.70		536.64	600.83		4074.39	4675.22
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2810	in	S _{right} = 380.69 in ³	x-bar =	12.2810	in	S _{right} = 380.69 in ³
I _y =	4675.22	in ⁴	S _{left} = 380.69 in ³	I _y =	4675.22	in ⁴	S _{left} = 380.69 in ³
C _{right} =	12.2810	in	A = 43.6970 in ²	C _{right} =	12.2810	in	A = 43.6970 in ²
C _{left} =	12.2810	in	r _y = 10.3437 in	C _{left} =	12.2810	in	r _y = 10.3437 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.5625$ in
- $B_3 = b = 16.0000$ in



Member U123-L122

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	8.0000	102.4450	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	8.0000	199.8080	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		18.0000	8.0000	144.0000	384.0000	0.0000	0.0000	384.0000
Total			55.78		446.25	792.29		0.00	792.29
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	8.0000	in	S _{top} =	99.04	in ³	y-bar =	8.0000	in	S _{top} =	99.04	in ³
I _x =	792.29	in ⁴	S _{bott.} =	99.04	in ³	I _x =	792.29	in ⁴	S _{bott.} =	99.04	in ³
c _{top} =	8.0000	in	A =	55.7816	in ²	c _{top} =	8.0000	in	A =	55.7816	in ²
c _{bottom} =	8.0000	in	r _x =	3.7687	in	c _{bottom} =	8.0000	in	r _x =	3.7687	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.6875	162.4713	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	1.0085	12.5941	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	24.3665	304.2889	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		9.0000	0.2813	2.5313	0.2373	12.4063	1385.2354	1385.4727
	Right Plate		9.0000	25.0938	225.8438	0.2373	12.4063	1385.2354	1385.4727
Total			55.78		707.73	540.74		6177.17	6717.91
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.6875	in	S _{right} = 529.49 in ³	x-bar =	12.6875	in	S _{right} = 529.49 in ³
I _y =	6717.91	n ⁴	S _{left} = 529.49 in ³	I _y =	6717.91	n ⁴	S _{left} = 529.49 in ³
C _{right} =	12.6875	in	A = 55.7816 in ²	C _{right} =	12.6875	in	A = 55.7816 in ²
C _{left} =	12.6875	in	r _y = 10.9742 in	C _{left} =	12.6875	in	r _y = 10.9742 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.9375$ in
- $B_3 = b = 16.0000$ in



Member U124-L123

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x, gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	8.0000	102.4450	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	8.0000	199.8080	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		30.0000	8.0000	240.0000	640.0000	0.0000	0.0000	640.0000
Total			67.78		542.25	1048.29		0.00	1048.29
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	8.0000	in	$S_{top} = 131.04$	in ³	y-bar =	8.0000	in	$S_{top} = 131.04$	in ³		
$I_x =$	1048.29	in ⁴	$S_{bott.} = 131.04$	in ³	$I_x =$	1048.29	in ⁴	$S_{bott.} = 131.04$	in ³		
$c_{top} =$	8.0000	in	A =	67.7816	in ²	$c_{top} =$	8.0000	in	A =	67.7816	in ²
$c_{bottom} =$	8.0000	in	$r_x =$	3.9326	in	$c_{bottom} =$	8.0000	in	$r_x =$	3.9326	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	12.8056	13.0625	167.2734	538.6056	0.0000	0.0000	538.6056	
2	Left Flange	12.4880	1.3835	17.2771	0.8280	11.6790	1703.3512	1704.1792	
	Right Flange	12.4880	24.7415	308.9719	0.8280	11.6790	1703.3512	1704.1792	
3	Left Plate	15.0000	0.4688	7.0313	1.0986	12.5938	2379.0381	2380.1367	
	Right Plate	15.0000	25.6563	384.8438	1.0986	12.5938	2379.0381	2380.1367	
Total		67.78		885.40	542.46		8164.78	8707.24	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	13.0625	in	S _{right} = 666.58 in ³	x-bar =	13.0625	in	S _{right} = 666.58 in ³
I _y =	8707.24	n ⁴	S _{left} = 666.58 in ³	I _y =	8707.24	n ⁴	S _{left} = 666.58 in ³
C _{right} =	13.0625	in	A = 67.7816 in ²	C _{right} =	13.0625	in	A = 67.7816 in ²
C _{left} =	13.0625	in	r _y = 11.3340 in	C _{left} =	13.0625	in	r _y = 11.3340 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 160

- $A_1 = t_w = 0.6650$ in
- $A_2 = t_f = 1.1240$ in
- $B_1 = d = 24.7140$ in
- $B_2 = b_f = 14.0950$ in

Cover Plate

- $A_3 = t = 0.5625$ in
- $B_3 = b = 16.0000$ in



Member U125-L124

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x, gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	8.0000	119.5191	0.5506	0.0000	0.0000	0.5506
2	Flange Plates		31.6856	8.0000	253.4845	524.5783	0.0000	0.0000	524.5783
3	Cover Plate		18.0000	8.0000	144.0000	384.0000	0.0000	0.0000	384.0000
Total			64.63		517.00	909.13		0.00	909.13
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	8.0000	in	$S_{top} = 113.64$	in ³	y-bar =	8.0000	in	$S_{top} = 113.64$	in ³		
$I_x =$	909.13	in ⁴	$S_{bott.} = 113.64$	in ³	$I_x =$	909.13	in ⁴	$S_{bott.} = 113.64$	in ³		
$c_{top} =$	8.0000	in	A =	64.6255	in ²	$c_{top} =$	8.0000	in	A =	64.6255	in ²
$c_{bottom} =$	8.0000	in	$r_x =$	3.7507	in	$c_{bottom} =$	8.0000	in	$r_x =$	3.7507	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	12.9195	193.0159	628.3732	0.0000	0.0000	628.3732
2	Left Flange		15.8428	1.1245	17.8152	1.6679	11.7950	2204.0796	2205.7476
	Right Flange		15.8428	24.7145	391.5464	1.6679	11.7950	2204.0796	2205.7476
3	Left Plate		9.0000	0.2813	2.5313	0.2373	12.6383	1437.5283	1437.7656
	Right Plate		9.0000	25.5578	230.0198	0.2373	12.6383	1437.5283	1437.7656
Total			64.63		834.93	632.18		7283.22	7915.40
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.9195	in	S _{right} =	612.67	in ³	x-bar =	12.9195	in	S _{right} =	612.67	in ³
I _y =	7915.40	n ⁴	S _{left} =	612.67	in ³	I _y =	7915.40	n ⁴	S _{left} =	612.67	in ³
C _{right} =	12.9195	in	A =	64.6255	in ²	C _{right} =	12.9195	in	A =	64.6255	in ²
C _{left} =	12.9195	in	r _y =	11.0671	in	C _{left} =	12.9195	in	r _y =	11.0671	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 160

- $A_1 = t_w = 0.6650$ in
- $A_2 = t_f = 1.1240$ in
- $B_1 = d = 24.7140$ in
- $B_2 = b_f = 14.0950$ in

Cover Plate

- $A_3 = t = 0.5625$ in
- $B_3 = b = 16.0000$ in



Member U126-L125

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	8.0000	119.5191	0.5506	0.0000	0.0000	0.5506
2	Flange Plates		31.6856	8.0000	253.4845	524.5783	0.0000	0.0000	524.5783
3	Cover Plate		18.0000	8.0000	144.0000	384.0000	0.0000	0.0000	384.0000
Total			64.63		517.00	909.13		0.00	909.13
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	8.0000	in	S _{top} = 113.64 in ³	y-bar =	8.0000	in	S _{top} = 113.64 in ³
I _x =	909.13	in ⁴	S _{bott.} = 113.64 in ³	I _x =	909.13	in ⁴	S _{bott.} = 113.64 in ³
c _{top} =	8.0000	in	A = 64.6255 in ²	c _{top} =	8.0000	in	A = 64.6255 in ²
c _{bottom} =	8.0000	in	r _x = 3.7507 in	c _{bottom} =	8.0000	in	r _x = 3.7507 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	12.9195	193.0159	628.3732	0.0000	0.0000	628.3732
2	Left Flange		15.8428	1.1245	17.8152	1.6679	11.7950	2204.0796	2205.7476
	Right Flange		15.8428	24.7145	391.5464	1.6679	11.7950	2204.0796	2205.7476
3	Left Plate		9.0000	0.2813	2.5313	0.2373	12.6383	1437.5283	1437.7656
	Right Plate		9.0000	25.5578	230.0198	0.2373	12.6383	1437.5283	1437.7656
Total			64.63		834.93	632.18		7283.22	7915.40
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.9195	in	S _{right} =	612.67	in ³	x-bar =	12.9195	in	S _{right} =	612.67	in ³
I _y =	7915.40	n ⁴	S _{left} =	612.67	in ³	I _y =	7915.40	n ⁴	S _{left} =	612.67	in ³
C _{right} =	12.9195	in	A =	64.6255	in ²	C _{right} =	12.9195	in	A =	64.6255	in ²
C _{left} =	12.9195	in	r _y =	11.0671	in	C _{left} =	12.9195	in	r _y =	11.0671	in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam 14WF158

- $A_1 = t_w = 0.7300$ in
- $A_2 = t_f = 1.1880$ in
- $B_1 = d = 15.0000$ in
- $B_2 = b_f = 15.5500$ in



Member U127-L128

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		9.2155	7.7750	71.6507	0.4092	0.0000	0.0000	0.4092
2	Flange Plates		36.9468	7.7750	287.2614	744.4857	0.0000	0.0000	744.4857
Total			46.16		358.91	744.89		0.00	744.89
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	7.7750	in	$S_{top} = 95.81$	in^3	y-bar =	7.7750	in	$S_{top} = 95.81$	in^3		
$I_x =$	744.89	in^4	$S_{bott.} = 95.81$	in^3	$I_x =$	744.89	in^4	$S_{bott.} = 95.81$	in^3		
$c_{top} =$	7.7750	in	A =	46.1623	in^2	$c_{top} =$	7.7750	in	A =	46.1623	in^2
$c_{bottom} =$	7.7750	in	$r_x =$	4.0170	in	$c_{bottom} =$	7.7750	in	$r_x =$	4.0170	in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		9.2155	7.5000	69.1164	122.3862	0.0000	0.0000	122.3862
2	Left Flange		18.4734	0.5940	10.9732	2.1727	6.9060	881.0488	883.2215
	Right Flange		18.4734	14.4060	266.1278	2.1727	6.9060	881.0488	883.2215
Total			46.16		346.22	126.73		1762.10	1888.83
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	7.5000	in	S _{right} = 251.84 in ³	x-bar =	7.5000	in	S _{right} = 251.84 in ³
I _y =	1888.83	in ⁴	S _{left} = 251.84 in ³	I _y =	1888.83	in ⁴	S _{left} = 251.84 in ³
C _{right} =	7.5000	in	A = 46.1623 in ²	C _{right} =	7.5000	in	A = 46.1623 in ²
C _{left} =	7.5000	in	r _y = 6.3966 in	C _{left} =	7.5000	in	r _y = 6.3966 in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam 14WF119

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.9380$ in
- $B_1 = d = 14.5000$ in
- $B_2 = b_f = 14.6500$ in



Member U128-L129

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		7.1957	7.3250	52.7084	0.1948	0.0000	0.0000	0.1948
2	Flange Plates		27.4834	7.3250	201.3159	491.5463	0.0000	0.0000	491.5463
Total			34.68		254.02	491.74		0.00	491.74
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	7.3250	in	$S_{top} = 67.13$ in ³	y-bar =	7.3250	in	$S_{top} = 67.13$ in ³
$I_x =$	491.74	in ⁴	$S_{bott.} = 67.13$ in ³	$I_x =$	491.74	in ⁴	$S_{bott.} = 67.13$ in ³
$c_{top} =$	7.3250	in	$A = 34.6791$ in ²	$c_{top} =$	7.3250	in	$A = 34.6791$ in ²
$c_{bottom} =$	7.3250	in	$r_x = 3.7656$ in	$c_{bottom} =$	7.3250	in	$r_x = 3.7656$ in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		7.1957	7.2500	52.1687	95.5619	0.0000	0.0000	95.5619
2	Left Flange		13.7417	0.4690	6.4449	1.0075	6.7810	631.8703	632.8779
	Right Flange		13.7417	14.0310	192.8098	1.0075	6.7810	631.8703	632.8779
Total			34.68		251.42	97.58		1263.74	1361.32
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	7.2500	in	S _{right} =	187.77	in ³	x-bar =	7.2500	in	S _{right} =	187.77	in ³
I _y =	1361.32	in ⁴	S _{left} =	187.77	in ³	I _y =	1361.32	in ⁴	S _{left} =	187.77	in ³
C _{right} =	7.2500	in	A =	34.6791	in ²	C _{right} =	7.2500	in	A =	34.6791	in ²
C _{left} =	7.2500	in	r _y =	6.2654	in	C _{left} =	7.2500	in	r _y =	6.2654	in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam 14WF87

- $A_1 = t_w = 0.4200$ in
- $A_2 = t_f = 0.6880$ in
- $B_1 = d = 14.0000$ in
- $B_2 = b_f = 14.5000$ in



Member U129-L130

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		5.3021	7.2500	38.4401	0.0779	0.0000	0.0000	0.0779
2	Flange Plates		19.9520	7.2500	144.6520	349.5757	0.0000	0.0000	349.5757
Total			25.25		183.09	349.65		0.00	349.65
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.2500	in	$S_{top} =$	48.23	in ³	y-bar =	7.2500	in	$S_{top} =$	48.23	in ³
$I_x =$	349.65	in ⁴	$S_{bott.} =$	48.23	in ³	$I_x =$	349.65	in ⁴	$S_{bott.} =$	48.23	in ³
$C_{top} =$	7.2500	in	A =	25.2541	in ²	$C_{top} =$	7.2500	in	A =	25.2541	in ²
$C_{bottom} =$	7.2500	in	$r_x =$	3.7209	in	$C_{bottom} =$	7.2500	in	$r_x =$	3.7209	in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		5.3021	7.0000	37.1146	70.4140	0.0000	0.0000	70.4140
2	Left Flange		9.9760	0.3440	3.4317	0.3935	6.6560	441.9601	442.3536
	Right Flange		9.9760	13.6560	136.2323	0.3935	6.6560	441.9601	442.3536
Total			25.25		176.78	71.20		883.92	955.12
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties				
x-bar =	7.0000	in	S _{right} =	136.45 in ³	x-bar =	7.0000	in	S _{right} =	136.45 in ³
I _y =	955.12	in ⁴	S _{left} =	136.45 in ³	I _y =	955.12	in ⁴	S _{left} =	136.45 in ³
C _{right} =	7.0000	in	A =	25.2541 in ²	C _{right} =	7.0000	in	A =	25.2541 in ²
C _{left} =	7.0000	in	r _y =	6.1498 in	C _{left} =	7.0000	in	r _y =	6.1498 in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

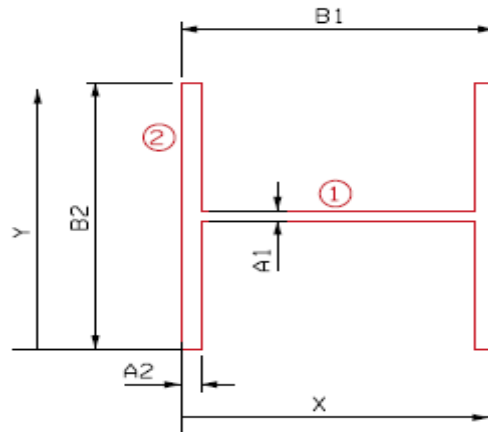
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam **14WF78**

- $A_1 = t_w = 0.4280$ in
- $A_2 = t_f = 0.7180$ in
- $B_1 = d = 14.0600$ in
- $B_2 = b_f = 12.0000$ in



Member U130-L131

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		5.4031	6.0000	32.4184	0.0825	0.0000	0.0000	0.0825
2	Flange Plates		17.2320	6.0000	103.3920	206.7840	0.0000	0.0000	206.7840
Total			22.64		135.81	206.87		0.00	206.87
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0000	in	$S_{top} =$	34.48	in ³	y-bar =	6.0000	in	$S_{top} =$	34.48	in ³
$I_x =$	206.87	in ⁴	$S_{bott.} =$	34.48	in ³	$I_x =$	206.87	in ⁴	$S_{bott.} =$	34.48	in ³
$c_{top} =$	6.0000	in	A =	22.6351	in ²	$c_{top} =$	6.0000	in	A =	22.6351	in ²
$c_{bottom} =$	6.0000	in	$r_x =$	3.0231	in	$c_{bottom} =$	6.0000	in	$r_x =$	3.0231	in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		5.4031	7.0300	37.9836	71.7552	0.0000	0.0000	71.7552
2	Left Flange		8.6160	0.3590	3.0931	0.3701	6.6710	383.4313	383.8015
	Right Flange		8.6160	13.7010	118.0478	0.3701	6.6710	383.4313	383.8015
Total			22.64		159.12	72.50		766.86	839.36
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties				
x-bar =	7.0300	in	S _{right} =	119.40 in ³	x-bar =	7.0300	in	S _{right} =	119.40 in ³
I _y =	839.36	in ⁴	S _{left} =	119.40 in ³	I _y =	839.36	in ⁴	S _{left} =	119.40 in ³
C _{right} =	7.0300	in	A =	22.6351 in ²	C _{right} =	7.0300	in	A =	22.6351 in ²
C _{left} =	7.0300	in	r _y =	6.0895 in	C _{left} =	7.0300	in	r _y =	6.0895 in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam 14WF78

- $A_1 = t_w = 0.4280$ in
- $A_2 = t_f = 0.7180$ in
- $B_1 = d = 14.0600$ in
- $B_2 = b_f = 12.0000$ in



Member U132-L131

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		5.4031	6.0000	32.4184	0.0825	0.0000	0.0000	0.0825
2	Flange Plates		17.2320	6.0000	103.3920	206.7840	0.0000	0.0000	206.7840
Total			22.64		135.81	206.87		0.00	206.87
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0000	in	$S_{top} =$	34.48	in ³	y-bar =	6.0000	in	$S_{top} =$	34.48	in ³
$I_x =$	206.87	in ⁴	$S_{bott.} =$	34.48	in ³	$I_x =$	206.87	in ⁴	$S_{bott.} =$	34.48	in ³
$c_{top} =$	6.0000	in	A =	22.6351	in ²	$c_{top} =$	6.0000	in	A =	22.6351	in ²
$c_{bottom} =$	6.0000	in	$r_x =$	3.0231	in	$c_{bottom} =$	6.0000	in	$r_x =$	3.0231	in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		5.4031	7.0300	37.9836	71.7552	0.0000	0.0000	71.7552
2	Left Flange		8.6160	0.3590	3.0931	0.3701	6.6710	383.4313	383.8015
	Right Flange		8.6160	13.7010	118.0478	0.3701	6.6710	383.4313	383.8015
Total			22.64		159.12	72.50		766.86	839.36
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	7.0300	in	S _{right} =	119.40	in ³	x-bar =	7.0300	in	S _{right} =	119.40	in ³
I _y =	839.36	in ⁴	S _{left} =	119.40	in ³	I _y =	839.36	in ⁴	S _{left} =	119.40	in ³
C _{right} =	7.0300	in	A =	22.6351	in ²	C _{right} =	7.0300	in	A =	22.6351	in ²
C _{left} =	7.0300	in	r _y =	6.0895	in	C _{left} =	7.0300	in	r _y =	6.0895	in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam 14WF78

- $A_1 = t_w = 0.4280$ in
- $A_2 = t_f = 0.7180$ in
- $B_1 = d = 14.0600$ in
- $B_2 = b_f = 12.0000$ in



Member U133-L132

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		5.4031	6.0000	32.4184	0.0825	0.0000	0.0000	0.0825
2	Flange Plates		17.2320	6.0000	103.3920	206.7840	0.0000	0.0000	206.7840
Total			22.64		135.81	206.87		0.00	206.87
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0000	in	$S_{top} =$	34.48	in ³	y-bar =	6.0000	in	$S_{top} =$	34.48	in ³
$I_x =$	206.87	in ⁴	$S_{bott.} =$	34.48	in ³	$I_x =$	206.87	in ⁴	$S_{bott.} =$	34.48	in ³
$c_{top} =$	6.0000	in	A =	22.6351	in ²	$c_{top} =$	6.0000	in	A =	22.6351	in ²
$c_{bottom} =$	6.0000	in	$r_x =$	3.0231	in	$c_{bottom} =$	6.0000	in	$r_x =$	3.0231	in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		5.4031	7.0300	37.9836	71.7552	0.0000	0.0000	71.7552
2	Left Flange		8.6160	0.3590	3.0931	0.3701	6.6710	383.4313	383.8015
	Right Flange		8.6160	13.7010	118.0478	0.3701	6.6710	383.4313	383.8015
Total			22.64		159.12	72.50		766.86	839.36
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	7.0300	in	S _{right} =	119.40	in ³	x-bar =	7.0300	in	S _{right} =	119.40	in ³
I _y =	839.36	in ⁴	S _{left} =	119.40	in ³	I _y =	839.36	in ⁴	S _{left} =	119.40	in ³
C _{right} =	7.0300	in	A =	22.6351	in ²	C _{right} =	7.0300	in	A =	22.6351	in ²
C _{left} =	7.0300	in	r _y =	6.0895	in	C _{left} =	7.0300	in	r _y =	6.0895	in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam 14WF119

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.9380$ in
- $B_1 = d = 14.5000$ in
- $B_2 = b_f = 14.6500$ in



Member U134-L133

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		7.1957	7.3250	52.7084	0.1948	0.0000	0.0000	0.1948
2	Flange Plates		27.4834	7.3250	201.3159	491.5463	0.0000	0.0000	491.5463
Total			34.68		254.02	491.74		0.00	491.74
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	7.3250	in	S _{top} = 67.13 in ³	y-bar =	7.3250	in	S _{top} = 67.13 in ³
I _x =	491.74	in ⁴	S _{bottom} = 67.13 in ³	I _x =	491.74	in ⁴	S _{bottom} = 67.13 in ³
c _{top} =	7.3250	in	A = 34.6791 in ²	c _{top} =	7.3250	in	A = 34.6791 in ²
c _{bottom} =	7.3250	in	r _x = 3.7656 in	c _{bottom} =	7.3250	in	r _x = 3.7656 in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		7.1957	7.2500	52.1687	95.5619	0.0000	0.0000	95.5619
2	Left Flange		13.7417	0.4690	6.4449	1.0075	6.7810	631.8703	632.8779
	Right Flange		13.7417	14.0310	192.8098	1.0075	6.7810	631.8703	632.8779
Total			34.68		251.42	97.58		1263.74	1361.32
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	7.2500	in	S _{right} =	187.77	in ³	x-bar =	7.2500	in	S _{right} =	187.77	in ³
I _y =	1361.32	in ⁴	S _{left} =	187.77	in ³	I _y =	1361.32	in ⁴	S _{left} =	187.77	in ³
C _{right} =	7.2500	in	A =	34.6791	in ²	C _{right} =	7.2500	in	A =	34.6791	in ²
C _{left} =	7.2500	in	r _y =	6.2654	in	C _{left} =	7.2500	in	r _y =	6.2654	in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

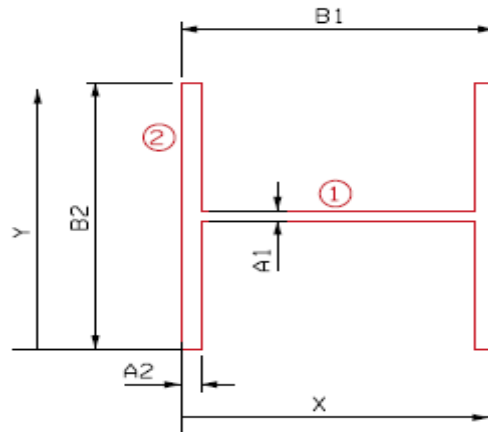
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam 14WF167

- $A_1 = t_w = 0.7800$ in
- $A_2 = t_f = 1.2480$ in
- $B_1 = d = 15.1200$ in
- $B_2 = b_f = 15.6000$ in



Member U135-L134

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		9.8467	7.8000	76.8044	0.4992	0.0000	0.0000	0.4992
2	Flange Plates		38.9376	7.8000	303.7133	789.6545	0.0000	0.0000	789.6545
Total			48.78		380.52	790.15		0.00	790.15
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	7.8000	in	$S_{top} = 101.30$	in ³	y-bar =	7.8000	in	$S_{top} = 101.30$	in ³		
$I_x =$	790.15	in ⁴	$S_{bott.} = 101.30$	in ³	$I_x =$	790.15	in ⁴	$S_{bott.} = 101.30$	in ³		
$c_{top} =$	7.8000	in	A =	48.7843	in ²	$c_{top} =$	7.8000	in	A =	48.7843	in ²
$c_{bottom} =$	7.8000	in	$r_x =$	4.0245	in	$c_{bottom} =$	7.8000	in	$r_x =$	4.0245	in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		9.8467	7.5600	74.4412	130.7689	0.0000	0.0000	130.7689
2	Left Flange		19.4688	0.6240	12.1485	2.5269	6.9360	936.6069	939.1338
	Right Flange		19.4688	14.4960	282.2197	2.5269	6.9360	936.6069	939.1338
Total			48.78		368.81	135.82		1873.21	2009.04
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	7.5600	in	S _{right} =	265.75	in ³	x-bar =	7.5600	in	S _{right} =	265.75	in ³
I _y =	2009.04	in ⁴	S _{left} =	265.75	in ³	I _y =	2009.04	in ⁴	S _{left} =	265.75	in ³
C _{right} =	7.5600	in	A =	48.7843	in ²	C _{right} =	7.5600	in	A =	48.7843	in ²
C _{left} =	7.5600	in	r _y =	6.4173	in	C _{left} =	7.5600	in	r _y =	6.4173	in



Made By DWC
Checked By KMW

Date 1/26/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

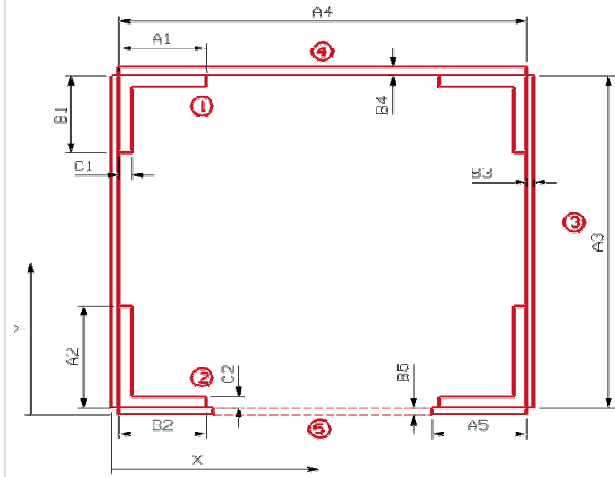
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L0-L1

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5031	330.8057	330.8260
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5031	208.1357	210.7472
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.1844	502.9900	503.0104
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.1844	342.1506	344.7621
3	Plate	19.5000	13.3750	260.8125	1098.5000	1.3406	35.0460	1133.5460
4	Plate	8.8125	26.5625	234.0820	0.1033	11.8469	1236.8243	1236.9276
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.5281	949.7966	949.8493
Total		42.42		624.26	1103.92		3605.75	4709.67
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	23.5000	0.0625	-1.4688	26.7188	-39.2432	-0.0005	12.4336	-227.0615
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.47	-39.24	0.00			-227.06



Made By DWC
Checked By KMW

Date 1/26/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.7156 in	S _{top} =	391.35 in ³	y-bar =	14.2851 in	S _{top} =	359.62 in ³
I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³	I _x =	4482.61 in ⁴	S _{bott.} =	313.80 in ³
C _{top} =	12.0344 in	A =	42.4219 in ²	C _{top} =	12.4649 in	A =	40.9531 in ²
C _{bottom} =	14.7156 in	r _x =	10.5366 in	C _{bottom} =	14.2851 in	r _x =	10.4622 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	9.7500	0.1875	1.8281	0.1143	11.9375	1389.4131	1389.5273	
3 (Right)	Plate	9.7500	24.0625	234.6094	0.1143	11.9375	1389.4131	1389.5273	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.3750	7.5938	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.8750	46.9688	6.7500	8.7500	172.2656	179.0156	
Total		42.42		514.37	425.99		4218.24	4644.23	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0625	23.5000	-1.4688	12.1250	-17.8086	-67.5931	0.0000	0.0000	-67.5931
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.47		-17.81	-67.59		0.00	-67.59

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	383.03 in ³	x-bar =	12.1250 in	S _{right} =	377.45 in ³
I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³	I _y =	4576.64 in ⁴	S _{left} =	377.45 in ³
C _{right} =	12.1250 in	A =	42.4219 in ²	C _{right} =	12.1250 in	A =	40.9531 in ²
C _{left} =	12.1250 in	r _y =	10.4631 in	C _{left} =	12.1250 in	r _y =	10.5713 in



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L1-L2

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5031	330.8057	330.8260
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5031	208.1357	210.7472
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.1844	502.9900	503.0104
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.1844	342.1506	344.7621
3	Plate	19.5000	13.3750	260.8125	1098.5000	1.3406	35.0460	1133.5460
4	Plate	8.8125	26.5625	234.0820	0.1033	11.8469	1236.8243	1236.9276
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.5281	949.7966	949.8493
Total		42.42		624.26	1103.92		3605.75	4709.67
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.7156 in	S _{top} =	391.35 in ³	y-bar =	14.7156 in	S _{top} =	391.35 in ³
I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³	I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³
C _{top} =	12.0344 in	A =	42.4219 in ²	C _{top} =	12.0344 in	A =	42.4219 in ²
C _{bottom} =	14.7156 in	r _x =	10.5366 in	C _{bottom} =	14.7156 in	r _x =	10.5366 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	9.7500	0.1875	1.8281	0.1143	11.9375	1389.4131	1389.5273	
3 (Right)	Plate	9.7500	24.0625	234.6094	0.1143	11.9375	1389.4131	1389.5273	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.3750	7.5938	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.8750	46.9688	6.7500	8.7500	172.2656	179.0156	
Total		42.42		514.37	425.99		4218.24	4644.23	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	383.03 in ³	x-bar =	12.1250 in	S _{right} =	383.03 in ³
I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³	I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³
C _{right} =	12.1250 in	A =	42.4219 in ²	C _{right} =	12.1250 in	A =	42.4219 in ²
C _{left} =	12.1250 in	r _y =	10.4631 in	C _{left} =	12.1250 in	r _y =	10.4631 in



Made By DWC
Checked By KMW

Date 1/26/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.4375$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.4375$ in

Top Cover Plate:

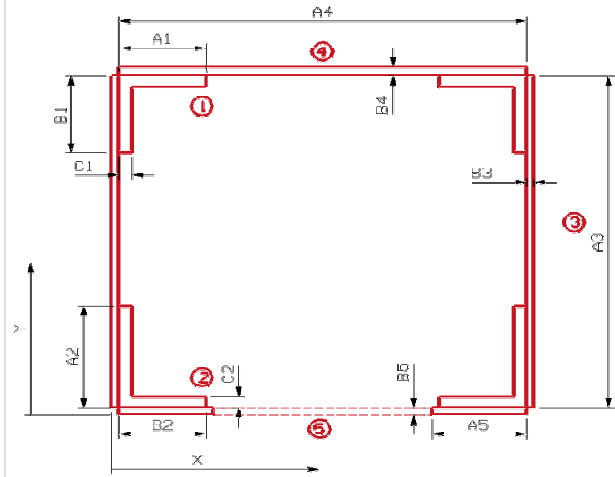
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member L2-L3

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.2500	26.2813	137.9766	0.0837	12.1823	779.1420	779.2258
	Vertical Leg	6.6172	22.2813	147.4392	31.5372	8.1823	443.0190	474.5562
2	Horizontal Leg	5.2500	0.7188	3.7734	0.0837	13.3802	939.9087	939.9924
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	9.3802	582.2363	613.7735
3	Plate	22.7500	13.5000	307.1250	1281.5833	0.5990	8.1618	1289.7452
4	Plate	8.8125	26.6875	235.1836	0.1033	12.5885	1396.5270	1396.6303
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	13.8490	1150.7634	1150.8884
Total		61.30		864.22	1345.05		5299.76	6644.81
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	6.0000	0.1250	-0.7500	26.5000	-19.8750	-0.0010	12.7121	-121.1983
2	6.0000	0.1250	-0.7500	26.5000	-19.8750	-0.0010	12.7121	-121.1983
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.50	-39.75	0.00		-242.40	-242.40



Made By DWC
Checked By KMW

Date 1/26/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.0990 in	S _{top} =	520.10 in ³	y-bar =	13.7879 in	S _{top} =	489.22 in ³
I _x =	6644.81 in ⁴	S _{bottom} =	471.30 in ³	I _x =	6402.41 in ⁴	S _{bottom} =	464.35 in ³
C _{top} =	12.7760 in	A =	61.2969 in ²	C _{top} =	13.0871 in	A =	59.7969 in ²
C _{bottom} =	14.0990 in	r _x =	10.4117 in	C _{bottom} =	13.7879 in	r _x =	10.3474 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.4375	9.0234	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	20.9375	54.9609	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.4375	9.0234	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	20.9375	54.9609	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.4375	10.3125	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.9375	62.8125	9.0000	8.7500	229.6875	238.6875	
Total		61.30		747.06	455.63		6282.01	6737.64	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1250	6.0000	-0.7500	3.4375	-2.5781	-2.2500	8.7500	-57.4219	-59.6719
2	0.1250	6.0000	-0.7500	20.9375	-15.7031	-2.2500	8.7500	-57.4219	-59.6719
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.50		-18.28	-4.50		-114.84	-119.34

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	552.83 in ³	x-bar =	12.1875 in	S _{right} =	543.04 in ³
I _y =	6737.64 in ⁴	S _{left} =	552.83 in ³	I _y =	6618.30 in ⁴	S _{left} =	543.04 in ³
C _{right} =	12.1875 in	A =	61.2969 in ²	C _{right} =	12.1875 in	A =	59.7969 in ²
C _{left} =	12.1875 in	r _y =	10.4842 in	C _{left} =	12.1875 in	r _y =	10.5204 in



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.5000$ in

Top Cover Plate:

$A_4 = b = 22.0000$ in
 $B_4 = t = 0.4375$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.8125$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.5625$ in



Member L3-L4

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	6.0000	26.3125	157.8750	0.1250	12.1745	889.3168	889.4418
	Vertical Leg	7.5000	22.3125	167.3438	35.1563	8.1745	501.1735	536.3297
2	Horizontal Leg	6.0000	0.8125	4.8750	0.1250	13.3255	1065.4071	1065.5321
	Vertical Leg	7.5000	4.8125	36.0938	35.1563	9.3255	652.2313	687.3876
3	Plate	42.2500	13.5625	573.0156	2380.0833	0.5755	13.9912	2394.0745
4	Plate	9.6250	26.7813	257.7695	0.1535	12.6433	1538.5834	1538.7369
5	Perforated Plate	5.9063	0.2813	1.6611	0.1557	13.8567	1134.0494	1134.2052
Total		84.78		1198.63	2450.96		5794.75	8245.71
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.1380 in	S _{top} =	641.09 in ³	y-bar =	14.1380 in	S _{top} =	641.09 in ³
I _x =	8245.71 in ⁴	S _{bott.} =	583.23 in ³	I _x =	8245.71 in ⁴	S _{bott.} =	583.23 in ³
C _{top} =	12.8620 in	A =	84.7813 in ²	C _{top} =	12.8620 in	A =	84.7813 in ²
C _{bottom} =	14.1380 in	r _x =	9.8620 in	C _{bottom} =	14.1380 in	r _x =	9.8620 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.0000	3.8125	11.4375	9.0000	8.0000	192.0000	201.0000	
	Vertical Leg	3.7500	1.0625	3.9844	0.0781	10.7500	433.3594	433.4375	
1 (Right)	Horizontal Leg	3.0000	19.8125	59.4375	9.0000	8.0000	192.0000	201.0000	
	Vertical Leg	3.7500	22.5625	84.6094	0.0781	10.7500	433.3594	433.4375	
2 (Left)	Horizontal Leg	3.0000	3.8125	11.4375	9.0000	8.0000	192.0000	201.0000	
	Vertical Leg	3.7500	1.0625	3.9844	0.0781	10.7500	433.3594	433.4375	
2 (Right)	Horizontal Leg	3.0000	19.8125	59.4375	9.0000	8.0000	192.0000	201.0000	
	Vertical Leg	3.7500	22.5625	84.6094	0.0781	10.7500	433.3594	433.4375	
3 (Left)	Plate	21.1250	0.4063	8.5820	1.1622	11.4063	2748.4161	2749.5783	
3 (Right)	Plate	21.1250	23.2188	490.4961	1.1622	11.4063	2748.4161	2749.5783	
4	Plate	9.6250	11.8125	113.6953	388.2083	0.0000	0.0000	388.2083	
5 (Left)	Perforated Plate	2.9531	3.4375	10.1514	6.7830	8.3750	207.1340	213.9170	
5 (Right)	Perforated Plate	2.9531	20.1875	59.6162	6.7830	8.3750	207.1340	213.9170	
Total		84.78		1001.48	440.41		8412.54	8852.95	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	11.8125 in	S _{right} =	749.46 in ³	x-bar =	11.8125 in	S _{right} =	749.46 in ³
I _y =	8852.95 in ⁴	S _{left} =	749.46 in ³	I _y =	8852.95 in ⁴	S _{left} =	749.46 in ³
C _{right} =	11.8125 in	A =	84.7813 in ²	C _{right} =	11.8125 in	A =	84.7813 in ²
C _{left} =	11.8125 in	r _y =	10.2187 in	C _{left} =	11.8125 in	r _y =	10.2187 in



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6250$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6250$ in

Top Cover Plate:

$A_4 = b = 22.0000$ in
 $B_4 = t = 0.5000$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.8750$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.6250$ in



Member L4-L5

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	7.5000	26.3125	197.3438	0.2441	12.0825	1094.8931	1095.1373
	Vertical Leg	9.2188	22.3125	205.6934	41.7845	8.0825	602.2250	644.0094
2	Horizontal Leg	7.5000	0.9375	7.0313	0.2441	13.2925	1325.1879	1325.4320
	Vertical Leg	9.2188	4.9375	45.5176	41.7845	9.2925	796.0517	837.8361
3	Plate	45.5000	13.6250	619.9375	2563.1667	0.6050	16.6565	2579.8232
4	Plate	11.0000	26.8750	295.6250	0.2292	12.6450	1758.8441	1759.0733
5	Perforated Plate	6.5625	0.3125	2.0508	0.2136	13.9175	1271.1433	1271.3569
Total		96.50		1373.20	2647.67		6865.00	9512.67
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00	0.00	0.00	0.00



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.2300 in	S _{top} =	737.70 in ³	y-bar =	14.2300 in	S _{top} =	737.70 in ³
I _x =	9512.67 in ⁴	S _{bott.} =	668.49 in ³	I _x =	9512.67 in ⁴	S _{bott.} =	668.49 in ³
C _{top} =	12.8950 in	A =	96.5000 in ²	C _{top} =	12.8950 in	A =	96.5000 in ²
C _{bottom} =	14.2300 in	r _x =	9.9286 in	C _{bottom} =	14.2300 in	r _x =	9.9286 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.7500	3.8750	14.5313	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.1875	5.4736	0.1500	10.6875	526.4951	526.6451	
1 (Right)	Horizontal Leg	3.7500	19.8750	74.5313	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	22.5625	103.9990	0.1500	10.6875	526.4951	526.6451	
2 (Left)	Horizontal Leg	3.7500	3.8750	14.5313	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.1875	5.4736	0.1500	10.6875	526.4951	526.6451	
2 (Right)	Horizontal Leg	3.7500	19.8750	74.5313	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	22.5625	103.9990	0.1500	10.6875	526.4951	526.6451	
3 (Left)	Plate	22.7500	0.4375	9.9531	1.4515	11.4375	2976.0732	2977.5247	
3 (Right)	Plate	22.7500	23.3125	530.3594	1.4515	11.4375	2976.0732	2977.5247	
4	Plate	11.0000	11.8750	130.6250	443.6667	0.0000	0.0000	443.6667	
5 (Left)	Perforated Plate	3.2813	3.5000	11.4844	7.5366	8.3750	230.1489	237.6855	
5 (Right)	Perforated Plate	3.2813	20.2500	66.4453	7.5366	8.3750	230.1489	237.6855	
Total		96.50		1145.94	507.24		9478.42	9985.67	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	11.8750 in	S _{right} =	840.90 in ³	x-bar =	11.8750 in	S _{right} =	840.90 in ³
I _y =	9985.67 in ⁴	S _{left} =	840.90 in ³	I _y =	9985.67 in ⁴	S _{left} =	840.90 in ³
C _{right} =	11.8750 in	A =	96.5000 in ²	C _{right} =	11.8750 in	A =	96.5000 in ²
C _{left} =	11.8750 in	r _y =	10.1724 in	C _{left} =	11.8750 in	r _y =	10.1724 in



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3750$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member L5-L6

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.0000	26.3125	78.9375	0.0352	12.0632	436.5636	436.5988
	Vertical Leg	2.7188	24.3125	66.0996	2.9772	10.0632	275.3233	278.3005
2	Horizontal Leg	3.0000	0.6875	2.0625	0.0352	13.5618	551.7658	551.8010
	Vertical Leg	2.7188	2.6875	7.3066	2.9772	11.5618	363.4284	366.4056
3	Plate	22.7500	13.5000	307.1250	1281.5833	0.7493	12.7724	1294.3557
4	Plate	8.8125	26.6875	235.1836	0.1033	12.4382	1363.3753	1363.4786
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	13.9993	1175.8795	1176.0045
Total		49.00		698.21	1287.84		4179.11	5466.94
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	14.2493	in	S _{top} =	433.00	in ³	y-bar =	14.2493	in	S _{top} =	433.00	in ³
I _x =	5466.94	in ⁴	S _{bott.} =	383.66	in ³	I _x =	5466.94	in ⁴	S _{bott.} =	383.66	in ³
C _{top} =	12.6257	in	A =	49.0000	in ²	C _{top} =	12.6257	in	A =	49.0000	in ²
C _{bottom} =	14.2493	in	r _x =	10.5627	in	C _{bottom} =	14.2493	in	r _x =	10.5627	in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.5000	2.4375	3.6563	2.0000	9.7500	142.5938	144.5938	
	Vertical Leg	1.3594	0.6250	0.8496	0.0159	11.5625	181.7368	181.7527	
1 (Right)	Horizontal Leg	1.5000	21.9375	32.9063	2.0000	9.7500	142.5938	144.5938	
	Vertical Leg	1.3594	23.7500	32.2852	0.0159	11.5625	181.7368	181.7527	
2 (Left)	Horizontal Leg	1.5000	2.4375	3.6563	2.0000	9.7500	142.5938	144.5938	
	Vertical Leg	1.3594	0.6250	0.8496	0.0159	11.5625	181.7368	181.7527	
2 (Right)	Horizontal Leg	1.5000	21.9375	32.9063	2.0000	9.7500	142.5938	144.5938	
	Vertical Leg	1.3594	23.7500	32.2852	0.0159	11.5625	181.7368	181.7527	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.4375	10.3125	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.9375	62.8125	9.0000	8.7500	229.6875	238.6875	
Total		49.00		597.19	431.99		5015.66	5447.64	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.1875	in	S _{right} =	446.99	in ³	x-bar =	12.1875	in	S _{right} =	446.99	in ³
I _y =	5447.64	in ⁴	S _{left} =	446.99	in ³	I _y =	5447.64	in ⁴	S _{left} =	446.99	in ³
C _{right} =	12.1875	in	A =	49.0000	in ²	C _{right} =	12.1875	in	A =	49.0000	in ²
C _{left} =	12.1875	in	r _y =	10.5440	in	C _{left} =	12.1875	in	r _y =	10.5440	in



Made By DWC
Checked By KMW

Date 1/26/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L6-L7

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5031	330.8057	330.8260
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5031	208.1357	210.7472
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.1844	502.9900	503.0104
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.1844	342.1506	344.7621
3	Plate	19.5000	13.3750	260.8125	1098.5000	1.3406	35.0460	1133.5460
4	Plate	8.8125	26.5625	234.0820	0.1033	11.8469	1236.8243	1236.9276
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.5281	949.7966	949.8493
Total		42.42		624.26	1103.92		3605.75	4709.67
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	5.0000	0.2500	-1.2500	26.6250	-33.2813	-0.0065	12.2710	-188.2208
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.25	-33.28	-0.01		-188.22	-188.23



Made By DWC
Checked By KMW

Date 1/26/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.7156 in	S _{top} =	391.35 in ³	y-bar =	14.3540 in	S _{top} =	364.75 in ³
I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³	I _x =	4521.44 in ⁴	S _{bott.} =	314.99 in ³
C _{top} =	12.0344 in	A =	42.4219 in ²	C _{top} =	12.3960 in	A =	41.1719 in ²
C _{bottom} =	14.7156 in	r _x =	10.5366 in	C _{bottom} =	14.3540 in	r _x =	10.4794 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	9.7500	0.1875	1.8281	0.1143	11.9375	1389.4131	1389.5273	
3 (Right)	Plate	9.7500	24.0625	234.6094	0.1143	11.9375	1389.4131	1389.5273	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.3750	7.5938	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.8750	46.9688	6.7500	8.7500	172.2656	179.0156	
Total		42.42		514.37	425.99		4218.24	4644.23	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.2500	5.0000	-1.2500	12.1250	-15.1563	-2.6042	0.0000	0.0000	-2.6042
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.25		-15.16	-2.60		0.00	-2.60

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	383.03 in ³	x-bar =	12.1250 in	S _{right} =	382.81 in ³
I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³	I _y =	4641.63 in ⁴	S _{left} =	382.81 in ³
C _{right} =	12.1250 in	A =	42.4219 in ²	C _{right} =	12.1250 in	A =	41.1719 in ²
C _{left} =	12.1250 in	r _y =	10.4631 in	C _{left} =	12.1250 in	r _y =	10.6178 in



Made By DWC
Checked By KMW

Date 1/26/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

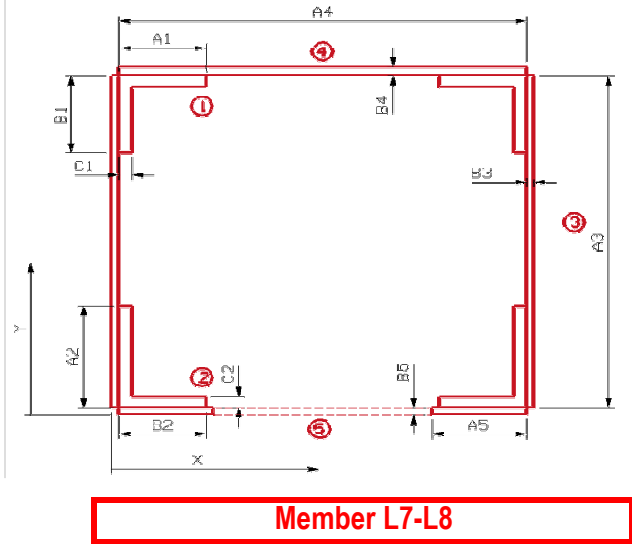
Top Angles: $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3750$ in

Bottom Angles: $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3750$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate: $A_3 = b = 26.0000$ in
 $B_3 = t = 0.5000$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.0000	26.3125	78.9375	0.0352	12.1098	439.9435	439.9786
	Vertical Leg	2.7188	24.3125	66.0996	2.9772	10.1098	277.8794	280.8566
2	Horizontal Leg	3.0000	0.6875	2.0625	0.0352	13.5152	547.9800	548.0151
	Vertical Leg	2.7188	2.6875	7.3066	2.9772	11.5152	360.5043	363.4815
3	Plate	26.0000	13.5000	351.0000	1464.6667	0.7027	12.8376	1477.5043
4	Plate	8.8125	26.6875	235.1836	0.1033	12.4848	1373.6116	1373.7149
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	13.9527	1168.0631	1168.1881
Total		52.25		742.09	1470.92		4180.82	5651.74
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.1875	6.0000	-1.1250	23.5000	-26.4375	-3.3750	9.3568	-98.4941
2	0.0625	8.0000	-0.5000	4.5000	-2.2500	-2.6667	9.6432	-46.4953
3	0.0625	3.6250	-0.2266	2.6875	-0.6089	-0.2481	11.4557	-29.7323
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.85	-29.30	-6.29		-174.72	-181.01



Made By DWC
Checked By KMW

Date 1/26/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.2027 in	S _{top} =	445.99 in ³	y-bar =	14.1432 in	S _{top} =	429.69 in ³
I _x =	5651.74 in ⁴	S _{bott.} =	397.93 in ³	I _x =	5470.73 in ⁴	S _{bott.} =	386.81 in ³
C _{top} =	12.6723 in	A =	52.2500 in ²	C _{top} =	12.7318 in	A =	50.3984 in ²
C _{bottom} =	14.2027 in	r _x =	10.4003 in	C _{bottom} =	14.1432 in	r _x =	10.4187 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.5000	2.5000	3.7500	2.0000	9.7500	142.5938	144.5938	
	Vertical Leg	1.3594	0.6875	0.9346	0.0159	11.5625	181.7368	181.7527	
1 (Right)	Horizontal Leg	1.5000	22.0000	33.0000	2.0000	9.7500	142.5938	144.5938	
	Vertical Leg	1.3594	23.8125	32.3701	0.0159	11.5625	181.7368	181.7527	
2 (Left)	Horizontal Leg	1.5000	2.5000	3.7500	2.0000	9.7500	142.5938	144.5938	
	Vertical Leg	1.3594	0.6875	0.9346	0.0159	11.5625	181.7368	181.7527	
2 (Right)	Horizontal Leg	1.5000	22.0000	33.0000	2.0000	9.7500	142.5938	144.5938	
	Vertical Leg	1.3594	23.8125	32.3701	0.0159	11.5625	181.7368	181.7527	
3 (Left)	Plate	13.0000	0.2500	3.2500	0.2708	12.0000	1872.0000	1872.2708	
3 (Right)	Plate	13.0000	24.2500	315.2500	0.2708	12.0000	1872.0000	1872.2708	
4	Plate	8.8125	12.2500	107.9531	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.5000	10.5000	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	21.0000	63.0000	9.0000	8.7500	229.6875	238.6875	
Total		52.25		640.06	432.16		5500.70	5932.86	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	6.0000	0.1875	-1.1250	24.4063	-27.4570	-0.0033	12.6001	-178.6079	-178.6112
2	8.0000	0.0625	-0.5000	24.4688	-12.2344	-0.0002	12.6626	-80.1707	-80.1709
3	3.6250	0.0625	-0.2266	23.6563	-5.3596	-0.0001	11.8501	-31.8150	-31.8151
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.85		-45.05	0.00		-290.59	-290.60

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2500 in	S _{right} =	484.32 in ³	x-bar =	11.8061 in	S _{right} =	444.49 in ³
I _y =	5932.86 in ⁴	S _{left} =	484.32 in ³	I _y =	5642.26 in ⁴	S _{left} =	477.91 in ³
C _{right} =	12.2500 in	A =	52.2500 in ²	C _{right} =	12.6939 in	A =	50.3984 in ²
C _{left} =	12.2500 in	r _y =	10.6559 in	C _{left} =	11.8061 in	r _y =	10.5808 in



Made By DWC
Checked By KMW

Date 1/26/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.4375$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.4375$ in

Top Cover Plate:

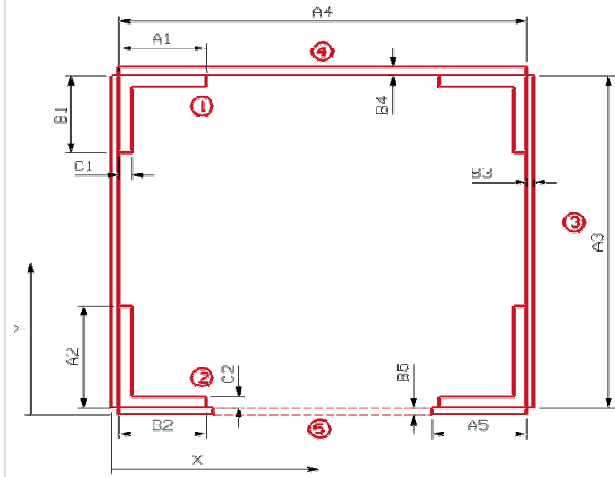
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.7500$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member L8-L9

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.2500	26.2813	137.9766	0.0837	12.3078	795.2797	795.3635
	Vertical Leg	6.6172	22.2813	147.4392	31.5372	8.3078	456.7149	488.2520
2	Horizontal Leg	5.2500	0.7188	3.7734	0.0837	13.2547	922.3576	922.4414
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	9.2547	566.7591	598.2962
3	Plate	39.0000	13.5000	526.5000	2197.0000	0.4735	8.7422	2205.7422
4	Plate	8.8125	26.6875	235.1836	0.1033	12.7140	1424.5140	1424.6173
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	13.7235	1129.9991	1130.1241
Total		77.55		1083.60	2260.47		5304.37	7564.84
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	6.0000	0.1875	-1.1250	26.5000	-29.8125	-0.0033	12.6346	-179.5875
2	6.0000	0.1875	-1.1250	26.5000	-29.8125	-0.0033	12.6346	-179.5875
3	6.0000	0.1250	-0.7500	0.5000	-0.3750	-0.0010	13.3654	-133.9753
4	6.0000	0.1250	-0.7500	0.5000	-0.3750	-0.0010	13.3654	-133.9753
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-3.75	-60.38	-0.01		-627.13	-627.13



Made By DWC
Checked By KMW

Date 1/26/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	13.9735	in	S _{top} =	586.35	in ³	y-bar =	13.8654	in	S _{top} =	533.28	in ³
I _x =	7564.84	in ⁴	S _{bott.} =	541.37	in ³	I _x =	6937.70	in ⁴	S _{bott.} =	500.36	in ³
C _{top} =	12.9015	in	A =	77.5469	in ²	C _{top} =	13.0096	in	A =	73.7969	in ²
C _{bottom} =	13.9735	in	r _x =	9.8768	in	C _{bottom} =	13.8654	in	r _x =	9.6959	in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.7500	9.8438	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.9688	3.2052	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	21.2500	55.7813	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	24.0313	79.5096	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.7500	9.8438	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.9688	3.2052	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	21.2500	55.7813	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	24.0313	79.5096	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	19.5000	0.3750	7.3125	0.9141	12.1250	2866.8047	2867.7188	
3 (Right)	Plate	19.5000	24.6250	480.1875	0.9141	12.1250	2866.8047	2867.7188	
4	Plate	8.8125	12.5000	110.1563	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.7500	11.2500	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	21.2500	63.7500	9.0000	8.7500	229.6875	238.6875	
Total		77.55		969.34	457.10		8756.66	9213.76	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1875	6.0000	-1.1250	3.7500	-4.2188	-3.3750	8.7500	-86.1328	-89.5078
2	0.1875	6.0000	-1.1250	21.2500	-23.9063	-3.3750	8.7500	-86.1328	-89.5078
3	0.1250	6.0000	-0.7500	3.7500	-2.8125	-2.2500	8.7500	-57.4219	-59.6719
4	0.1250	6.0000	-0.7500	21.2500	-15.9375	-2.2500	8.7500	-57.4219	-59.6719
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-3.75		-46.88	-11.25		-287.11	-298.36

As-Built Section Properties				As-Inspected Section Properties							
x-bar =	12.5000	in	S _{right} =	737.10	in ³	x-bar =	12.5000	in	S _{right} =	713.23	in ³
I _y =	9213.76	in ⁴	S _{left} =	737.10	in ³	I _y =	8915.40	in ⁴	S _{left} =	713.23	in ³
C _{right} =	12.5000	in	A =	77.5469	in ²	C _{right} =	12.5000	in	A =	73.7969	in ²
C _{left} =	12.5000	in	r _y =	10.9002	in	C _{left} =	12.5000	in	r _y =	10.9914	in



Made By DWC
Checked By KMW

Date 1/26/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.6250$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_f = 0.6250$ in

Top Cover Plate:

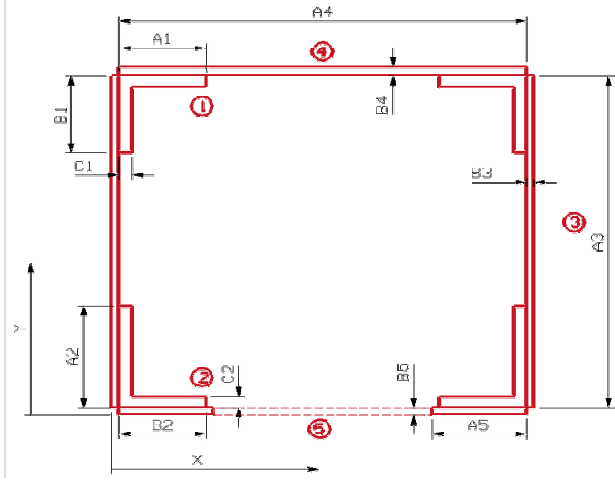
$A_4 = b = 22.0000$ in
 $B_4 = t = 0.5000$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.9375$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.6250$ in



Member L9-L10

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	7.5000	26.3125	197.3438	0.2441	12.1022	1098.4688	1098.7129
	Vertical Leg	9.2188	22.3125	205.6934	41.7845	8.1022	605.1662	646.9507
2	Horizontal Leg	7.5000	0.9375	7.0313	0.2441	13.2728	1321.2602	1321.5044
	Vertical Leg	9.2188	4.9375	45.5176	41.7845	9.2728	792.6778	834.4622
3	Plate	48.7500	13.6250	664.2188	2746.2500	0.5853	16.7023	2762.9523
4	Plate	11.0000	26.8750	295.6250	0.2292	12.6647	1764.3324	1764.5616
5	Perforated Plate	6.5625	0.3125	2.0508	0.2136	13.8978	1267.5449	1267.7585
Total		99.75		1417.48	2830.75		6866.15	9696.90
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	22.0000	0.0625	-1.3750	26.8750	-36.9531	-0.0004	12.8417	-226.7497
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.38	-36.95	0.00		-226.75	-226.75



Made By DWC
Checked By KMW

Date 1/26/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.2103	in	S _{top} = 750.84 in ³	y-bar =	14.0333	in	S _{top} = 723.37 in ³
I _x =	9696.90	in ⁴	S _{bott.} = 682.38 in ³	I _x =	9470.15	in ⁴	S _{bott.} = 674.83 in ³
C _{top} =	12.9147	in	A = 99.7500 in ²	C _{top} =	13.0917	in	A = 98.3750 in ²
C _{bottom} =	14.2103	in	r _x = 9.8596 in	C _{bottom} =	14.0333	in	r _x = 9.8115 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.7500	3.9375	14.7656	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.2500	5.7617	0.1500	10.6875	526.4951	526.6451	
1 (Right)	Horizontal Leg	3.7500	19.9375	74.7656	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	22.6250	104.2871	0.1500	10.6875	526.4951	526.6451	
2 (Left)	Horizontal Leg	3.7500	3.9375	14.7656	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.2500	5.7617	0.1500	10.6875	526.4951	526.6451	
2 (Right)	Horizontal Leg	3.7500	19.9375	74.7656	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	22.6250	104.2871	0.1500	10.6875	526.4951	526.6451	
3 (Left)	Plate	24.3750	0.4688	11.4258	1.7853	11.4688	3206.0980	3207.8833	
3 (Right)	Plate	24.3750	23.4063	570.5273	1.7853	11.4688	3206.0980	3207.8833	
4	Plate	11.0000	11.9375	131.3125	443.6667	0.0000	0.0000	443.6667	
5 (Left)	Perforated Plate	3.2813	3.5625	11.6895	7.5366	8.3750	230.1489	237.6855	
5 (Right)	Perforated Plate	3.2813	20.3125	66.6504	7.5366	8.3750	230.1489	237.6855	
Total		99.75		1190.77	507.91		9938.47	10446.38	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0625	22.0000	-1.3750	11.9375	-16.4141	-55.4583	0.0000	0.0000	-55.4583
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.38		-16.41	-55.46		0.00	-55.46

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	11.9375	in	S _{right} = 875.09 in ³	x-bar =	11.9375	in	S _{right} = 870.44 in ³
I _y =	10446.38	in ⁴	S _{left} = 875.09 in ³	I _y =	10390.93	in ⁴	S _{left} = 870.44 in ³
C _{right} =	11.9375	in	A = 99.7500 in ²	C _{right} =	11.9375	in	A = 98.3750 in ²
C _{left} =	11.9375	in	r _y = 10.2336 in	C _{left} =	11.9375	in	r _y = 10.2774 in



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6250$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6250$ in

Top Cover Plate:

$A_4 = b = 22.0000$ in
 $B_4 = t = 0.5000$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.9375$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.6250$ in



Member L10-L11

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	7.5000	26.3125	197.3438	0.2441	12.1022	1098.4688	1098.7129
	Vertical Leg	9.2188	22.3125	205.6934	41.7845	8.1022	605.1662	646.9507
2	Horizontal Leg	7.5000	0.9375	7.0313	0.2441	13.2728	1321.2602	1321.5044
	Vertical Leg	9.2188	4.9375	45.5176	41.7845	9.2728	792.6778	834.4622
3	Plate	48.7500	13.6250	664.2188	2746.2500	0.5853	16.7023	2762.9523
4	Plate	11.0000	26.8750	295.6250	0.2292	12.6647	1764.3324	1764.5616
5	Perforated Plate	6.5625	0.3125	2.0508	0.2136	13.8978	1267.5449	1267.7585
Total		99.75		1417.48	2830.75		6866.15	9696.90
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.2103 in	S _{top} =	750.84 in ³	y-bar =	14.2103 in	S _{top} =	750.84 in ³
I _x =	9696.90 in ⁴	S _{bott.} =	682.38 in ³	I _x =	9696.90 in ⁴	S _{bott.} =	682.38 in ³
C _{top} =	12.9147 in	A =	99.7500 in ²	C _{top} =	12.9147 in	A =	99.7500 in ²
C _{bottom} =	14.2103 in	r _x =	9.8596 in	C _{bottom} =	14.2103 in	r _x =	9.8596 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.7500	3.9375	14.7656	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.2500	5.7617	0.1500	10.6875	526.4951	526.6451	
1 (Right)	Horizontal Leg	3.7500	19.9375	74.7656	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	22.6250	104.2871	0.1500	10.6875	526.4951	526.6451	
2 (Left)	Horizontal Leg	3.7500	3.9375	14.7656	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.2500	5.7617	0.1500	10.6875	526.4951	526.6451	
2 (Right)	Horizontal Leg	3.7500	19.9375	74.7656	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	22.6250	104.2871	0.1500	10.6875	526.4951	526.6451	
3 (Left)	Plate	24.3750	0.4688	11.4258	1.7853	11.4688	3206.0980	3207.8833	
3 (Right)	Plate	24.3750	23.4063	570.5273	1.7853	11.4688	3206.0980	3207.8833	
4	Plate	11.0000	11.9375	131.3125	443.6667	0.0000	0.0000	443.6667	
5 (Left)	Perforated Plate	3.2813	3.5625	11.6895	7.5366	8.3750	230.1489	237.6855	
5 (Right)	Perforated Plate	3.2813	20.3125	66.6504	7.5366	8.3750	230.1489	237.6855	
Total		99.75		1190.77	507.91		9938.47	10446.38	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	11.9375 in	S _{right} =	875.09 in ³	x-bar =	11.9375 in	S _{right} =	875.09 in ³
I _y =	10446.38 in ⁴	S _{left} =	875.09 in ³	I _y =	10446.38 in ⁴	S _{left} =	875.09 in ³
C _{right} =	11.9375 in	A =	99.7500 in ²	C _{right} =	11.9375 in	A =	99.7500 in ²
C _{left} =	11.9375 in	r _y =	10.2336 in	C _{left} =	11.9375 in	r _y =	10.2336 in



Made By DWC
Checked By KMW

Date 1/27/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6250$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6250$ in

Top Cover Plate:

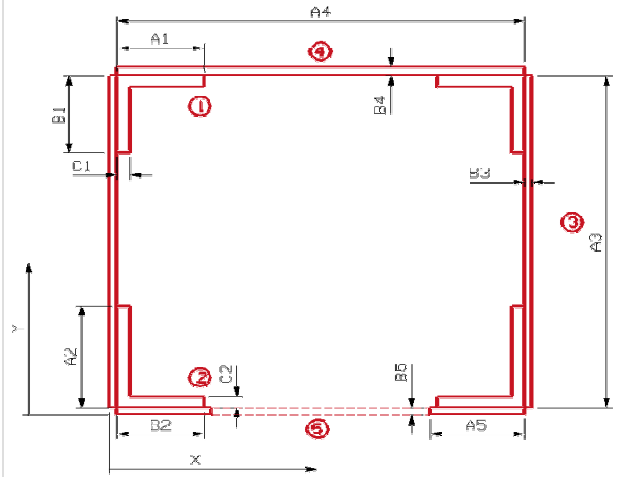
$A_4 = b = 22.0000$ in
 $B_4 = t = 0.5000$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.8750$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.6250$ in



Member L11-L12

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	7.5000	26.3125	197.3438	0.2441	12.0825	1094.8931	1095.1373
	Vertical Leg	9.2188	22.3125	205.6934	41.7845	8.0825	602.2250	644.0094
2	Horizontal Leg	7.5000	0.9375	7.0313	0.2441	13.2925	1325.1879	1325.4320
	Vertical Leg	9.2188	4.9375	45.5176	41.7845	9.2925	796.0517	837.8361
3	Plate	45.5000	13.6250	619.9375	2563.1667	0.6050	16.6565	2579.8232
4	Plate	11.0000	26.8750	295.6250	0.2292	12.6450	1758.8441	1759.0733
5	Perforated Plate	6.5625	0.3125	2.0508	0.2136	13.9175	1271.1433	1271.3569
Total		96.50		1373.20	2647.67		6865.00	9512.67
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	22.0000	0.1250	-2.7500	27.0625	-74.4219	-0.0036	13.2089	-479.8045
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.75	-74.42	0.00		-479.80	-479.81



Made By DWC
Checked By KMW

Date 1/27/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.2300 in	S _{top} =	737.70 in ³	y-bar =	13.8536 in	S _{top} =	680.63 in ³
I _x =	9512.67 in ⁴	S _{bott.} =	668.49 in ³	I _x =	9032.86 in ⁴	S _{bott.} =	652.02 in ³
C _{top} =	12.8950 in	A =	96.5000 in ²	C _{top} =	13.2714 in	A =	93.7500 in ²
C _{bottom} =	14.2300 in	r _x =	9.9286 in	C _{bottom} =	13.8536 in	r _x =	9.8158 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.7500	3.8750	14.5313	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.1875	5.4736	0.1500	10.6875	526.4951	526.6451	
1 (Right)	Horizontal Leg	3.7500	19.8750	74.5313	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	22.5625	103.9990	0.1500	10.6875	526.4951	526.6451	
2 (Left)	Horizontal Leg	3.7500	3.8750	14.5313	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.1875	5.4736	0.1500	10.6875	526.4951	526.6451	
2 (Right)	Horizontal Leg	3.7500	19.8750	74.5313	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	22.5625	103.9990	0.1500	10.6875	526.4951	526.6451	
3 (Left)	Plate	22.7500	0.4375	9.9531	1.4515	11.4375	2976.0732	2977.5247	
3 (Right)	Plate	22.7500	23.3125	530.3594	1.4515	11.4375	2976.0732	2977.5247	
4	Plate	11.0000	11.8750	130.6250	443.6667	0.0000	0.0000	443.6667	
5 (Left)	Perforated Plate	3.2813	3.5000	11.4844	7.5366	8.3750	230.1489	237.6855	
5 (Right)	Perforated Plate	3.2813	20.2500	66.4453	7.5366	8.3750	230.1489	237.6855	
Total		96.50		1145.94	507.24		9478.42	9985.67	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1250	22.0000	-2.7500	11.8750	-32.6563	-110.9167	0.0000	0.0000	-110.9167
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.75		-32.66	-110.92		0.00	-110.92

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	11.8750 in	S _{right} =	840.90 in ³	x-bar =	11.8750 in	S _{right} =	831.56 in ³
I _y =	9985.67 in ⁴	S _{left} =	840.90 in ³	I _y =	9874.75 in ⁴	S _{left} =	831.56 in ³
C _{right} =	11.8750 in	A =	96.5000 in ²	C _{right} =	11.8750 in	A =	93.7500 in ²
C _{left} =	11.8750 in	r _y =	10.1724 in	C _{left} =	11.8750 in	r _y =	10.2631 in



Made By DWC
Checked By KMW

Date 1/27/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.5625$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.5625$ in

Top Cover Plate:

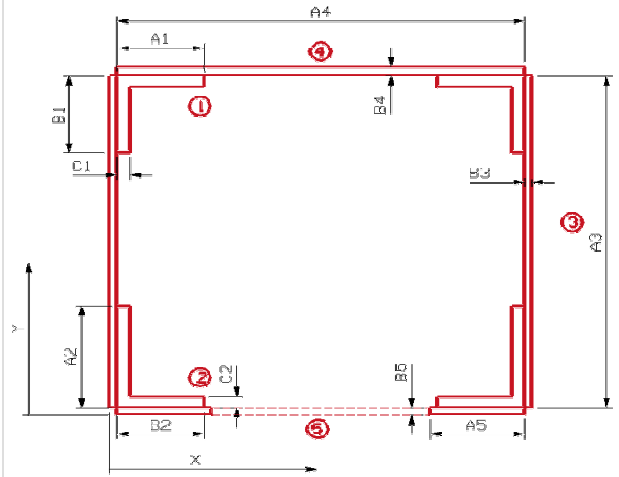
$A_4 = b = 22.0000$ in
 $B_4 = t = 0.5000$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.8125$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.6250$ in



Member L12-L13

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	6.7500	26.3438	177.8203	0.1780	12.0703	983.4295	983.6075
	Vertical Leg	8.3672	22.3438	186.9543	38.5702	8.0703	544.9590	583.5293
2	Horizontal Leg	6.7500	0.9063	6.1172	0.1780	13.3672	1206.0954	1206.2733
	Vertical Leg	8.3672	4.9063	41.0515	38.5702	9.3672	734.1669	772.7371
3	Plate	42.2500	13.6250	575.6563	2380.0833	0.6484	17.7631	2397.8464
4	Plate	11.0000	26.8750	295.6250	0.2292	12.6016	1746.8025	1747.0317
5	Perforated Plate	6.5625	0.3125	2.0508	0.2136	13.9609	1279.0761	1279.2897
Total		90.05		1285.28	2458.02		6512.29	8970.31
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	16.0000	0.3750	-6.0000	26.9375	-161.6250	-0.0703	13.5682	-1104.5715
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-6.00	-161.63	-0.07		-1104.57	-1104.64



Made By DWC
Checked By KMW

Date 1/27/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.2734 in	S _{top} =	697.99 in ³	y-bar =	13.3693 in	S _{top} =	571.81 in ³
I _x =	8970.31 in ⁴	S _{bott.} =	628.46 in ³	I _x =	7865.67 in ⁴	S _{bott.} =	588.34 in ³
C _{top} =	12.8516 in	A =	90.0469 in ²	C _{top} =	13.7557 in	A =	84.0469 in ²
C _{bottom} =	14.2734 in	r _x =	9.9809 in	C _{bottom} =	13.3693 in	r _x =	9.6740 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.3750	3.8125	12.8672	10.1250	8.0000	216.0000	226.1250	
	Vertical Leg	4.1836	1.0938	4.5758	0.1103	10.7188	480.6598	480.7701	
1 (Right)	Horizontal Leg	3.3750	19.8125	66.8672	10.1250	8.0000	216.0000	226.1250	
	Vertical Leg	4.1836	22.5313	94.2616	0.1103	10.7188	480.6598	480.7701	
2 (Left)	Horizontal Leg	3.3750	3.8125	12.8672	10.1250	8.0000	216.0000	226.1250	
	Vertical Leg	4.1836	1.0938	4.5758	0.1103	10.7188	480.6598	480.7701	
2 (Right)	Horizontal Leg	3.3750	19.8125	66.8672	10.1250	8.0000	216.0000	226.1250	
	Vertical Leg	4.1836	22.5313	94.2616	0.1103	10.7188	480.6598	480.7701	
3 (Left)	Plate	21.1250	0.4063	8.5820	1.1622	11.4063	2748.4161	2749.5783	
3 (Right)	Plate	21.1250	23.2188	490.4961	1.1622	11.4063	2748.4161	2749.5783	
4	Plate	11.0000	11.8125	129.9375	443.6667	0.0000	0.0000	443.6667	
5 (Left)	Perforated Plate	3.2813	3.4375	11.2793	7.5366	8.3750	230.1489	237.6855	
5 (Right)	Perforated Plate	3.2813	20.1875	66.2402	7.5366	8.3750	230.1489	237.6855	
Total		90.05		1063.68	502.01		8743.77	9245.77	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.3750	16.0000	-6.0000	11.8125	-70.8750	-128.0000	0.0000	0.0000	-128.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-6.00		-70.88	-128.00		0.00	-128.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	11.8125 in	S _{right} =	782.71 in ³	x-bar =	11.8125 in	S _{right} =	771.88 in ³
I _y =	9245.77 in ⁴	S _{left} =	782.71 in ³	I _y =	9117.77 in ⁴	S _{left} =	771.88 in ³
C _{right} =	11.8125 in	A =	90.0469 in ²	C _{right} =	11.8125 in	A =	84.0469 in ²
C _{left} =	11.8125 in	r _y =	10.1330 in	C _{left} =	11.8125 in	r _y =	10.4156 in



Made By DWC
Checked By KMW

Date 1/27/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

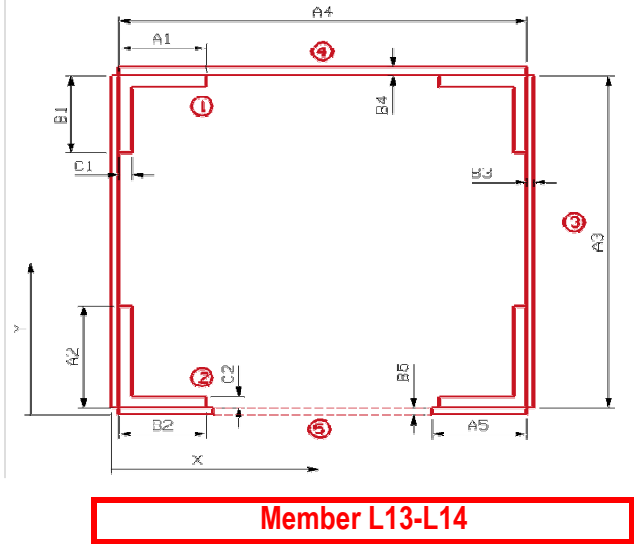
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.5625$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.5625$ in

Top Cover Plate:
 $A_4 = b = 22.0000$ in
 $B_4 = t = 0.5000$ in

Web Plate:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.8125$ in

Perforated Cover Plate
 $A_5 = b = 5.2500$ in
 $B_5 = t = 0.6250$ in



X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	6.7500	26.3438	177.8203	0.1780	12.0703	983.4295	983.6075
	Vertical Leg	8.3672	22.3438	186.9543	38.5702	8.0703	544.9590	583.5293
2	Horizontal Leg	6.7500	0.9063	6.1172	0.1780	13.3672	1206.0954	1206.2733
	Vertical Leg	8.3672	4.9063	41.0515	38.5702	9.3672	734.1669	772.7371
3	Plate	42.2500	13.6250	575.6563	2380.0833	0.6484	17.7631	2397.8464
4	Plate	11.0000	26.8750	295.6250	0.2292	12.6016	1746.8025	1747.0317
5	Perforated Plate	6.5625	0.3125	2.0508	0.2136	13.9609	1279.0761	1279.2897
Total		90.05		1285.28	2458.02		6512.29	8970.31
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	9.0000	0.1875	-1.6875	27.0313	-45.6152	-0.0049	13.0015	-285.2532
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.69	-45.62	0.00		-285.25	-285.26



Made By DWC
Checked By KMW

Date 1/27/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.2734 in	S _{top} =	697.99 in ³	y-bar =	14.0298 in	S _{top} =	663.22 in ³
I _x =	8970.31 in ⁴	S _{bott.} =	628.46 in ³	I _x =	8685.06 in ⁴	S _{bott.} =	619.05 in ³
C _{top} =	12.8516 in	A =	90.0469 in ²	C _{top} =	13.0952 in	A =	88.3594 in ²
C _{bottom} =	14.2734 in	r _x =	9.9809 in	C _{bottom} =	14.0298 in	r _x =	9.9143 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.3750	3.8125	12.8672	10.1250	8.0000	216.0000	226.1250	
	Vertical Leg	4.1836	1.0938	4.5758	0.1103	10.7188	480.6598	480.7701	
1 (Right)	Horizontal Leg	3.3750	19.8125	66.8672	10.1250	8.0000	216.0000	226.1250	
	Vertical Leg	4.1836	22.5313	94.2616	0.1103	10.7188	480.6598	480.7701	
2 (Left)	Horizontal Leg	3.3750	3.8125	12.8672	10.1250	8.0000	216.0000	226.1250	
	Vertical Leg	4.1836	1.0938	4.5758	0.1103	10.7188	480.6598	480.7701	
2 (Right)	Horizontal Leg	3.3750	19.8125	66.8672	10.1250	8.0000	216.0000	226.1250	
	Vertical Leg	4.1836	22.5313	94.2616	0.1103	10.7188	480.6598	480.7701	
3 (Left)	Plate	21.1250	0.4063	8.5820	1.1622	11.4063	2748.4161	2749.5783	
3 (Right)	Plate	21.1250	23.2188	490.4961	1.1622	11.4063	2748.4161	2749.5783	
4	Plate	11.0000	11.8125	129.9375	443.6667	0.0000	0.0000	443.6667	
5 (Left)	Perforated Plate	3.2813	3.4375	11.2793	7.5366	8.3750	230.1489	237.6855	
5 (Right)	Perforated Plate	3.2813	20.1875	66.2402	7.5366	8.3750	230.1489	237.6855	
Total		90.05		1063.68	502.01		8743.77	9245.77	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1875	9.0000	-1.6875	5.3125	-8.9648	-11.3906	6.6241	-74.0462	-85.4368
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.69		-8.96	-11.39		-74.05	-85.44

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	11.8125 in	S _{right} =	782.71 in ³	x-bar =	11.9366 in	S _{right} =	783.71 in ³
I _y =	9245.77 in ⁴	S _{left} =	782.71 in ³	I _y =	9160.34 in ⁴	S _{left} =	767.41 in ³
C _{right} =	11.8125 in	A =	90.0469 in ²	C _{right} =	11.6884 in	A =	88.3594 in ²
C _{left} =	11.8125 in	r _y =	10.1330 in	C _{left} =	11.9366 in	r _y =	10.1819 in



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.6250$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_f = 0.6250$ in

Top Cover Plate:

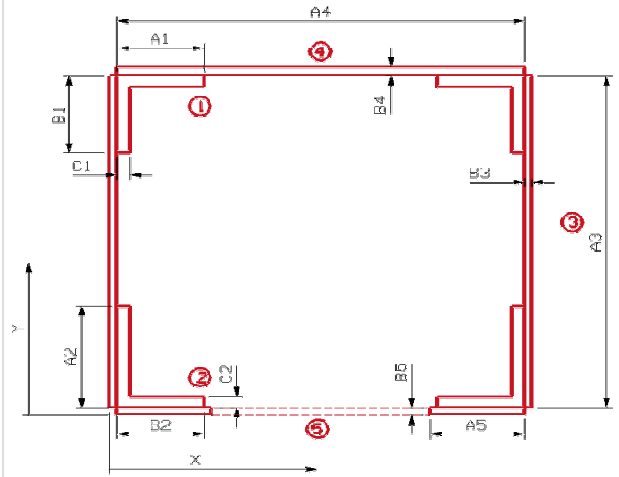
$A_4 = b = 22.0000$ in
 $B_4 = t = 0.5000$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.8125$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.6250$ in



Member L14-L15

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x, gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	7.5000	26.3125	197.3438	0.2441	12.0614	1091.0747	1091.3188
	Vertical Leg	9.2188	22.3125	205.6934	41.7845	8.0614	599.0866	640.8711
2	Horizontal Leg	7.5000	0.9375	7.0313	0.2441	13.3136	1329.3958	1329.6399
	Vertical Leg	9.2188	4.9375	45.5176	41.7845	9.3136	799.6687	841.4532
3	Plate	42.2500	13.6250	575.6563	2380.0833	0.6261	16.5637	2396.6470
4	Plate	11.0000	26.8750	295.6250	0.2292	12.6239	1752.9827	1753.2119
5	Perforated Plate	6.5625	0.3125	2.0508	0.2136	13.9386	1274.9982	1275.2118
Total		93.25		1328.92	2464.58		6863.77	9328.35
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.2511 in	S _{top} =	724.60 in ³	y-bar =	14.2511 in	S _{top} =	724.60 in ³
I _x =	9328.35 in ⁴	S _{bott.} =	654.57 in ³	I _x =	9328.35 in ⁴	S _{bott.} =	654.57 in ³
C _{top} =	12.8739 in	A =	93.2500 in ²	C _{top} =	12.8739 in	A =	93.2500 in ²
C _{bottom} =	14.2511 in	r _x =	10.0018 in	C _{bottom} =	14.2511 in	r _x =	10.0018 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.7500	3.8125	14.2969	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.1250	5.1855	0.1500	10.6875	526.4951	526.6451	
1 (Right)	Horizontal Leg	3.7500	19.8125	74.2969	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	22.5000	103.7109	0.1500	10.6875	526.4951	526.6451	
2 (Left)	Horizontal Leg	3.7500	3.8125	14.2969	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.1250	5.1855	0.1500	10.6875	526.4951	526.6451	
2 (Right)	Horizontal Leg	3.7500	19.8125	74.2969	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	22.5000	103.7109	0.1500	10.6875	526.4951	526.6451	
3 (Left)	Plate	21.1250	0.4063	8.5820	1.1622	11.4063	2748.4161	2749.5783	
3 (Right)	Plate	21.1250	23.2188	490.4961	1.1622	11.4063	2748.4161	2749.5783	
4	Plate	11.0000	11.8125	129.9375	443.6667	0.0000	0.0000	443.6667	
5 (Left)	Perforated Plate	3.2813	3.4375	11.2793	7.5366	8.3750	230.1489	237.6855	
5 (Right)	Perforated Plate	3.2813	20.1875	66.2402	7.5366	8.3750	230.1489	237.6855	
Total		93.25		1101.52	506.66		9023.11	9529.77	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	11.8125 in	S _{right} =	806.75 in ³	x-bar =	11.8125 in	S _{right} =	806.75 in ³
I _y =	9529.77 in ⁴	S _{left} =	806.75 in ³	I _y =	9529.77 in ⁴	S _{left} =	806.75 in ³
C _{right} =	11.8125 in	A =	93.2500 in ²	C _{right} =	11.8125 in	A =	93.2500 in ²
C _{left} =	11.8125 in	r _y =	10.1092 in	C _{left} =	11.8125 in	r _y =	10.1092 in



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

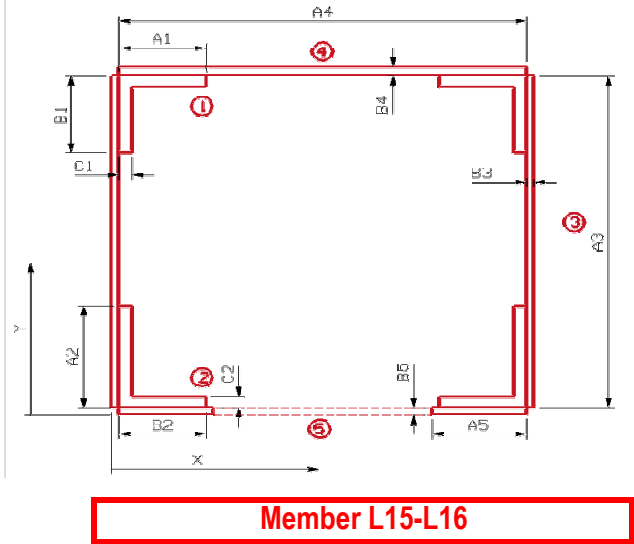
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.6250$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_f = 0.6250$ in

Top Cover Plate:
 $A_4 = b = 22.0000$ in
 $B_4 = t = 0.5000$ in

Web Plate:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.7500$ in

Perforated Cover Plate
 $A_5 = b = 5.2500$ in
 $B_5 = t = 0.6250$ in



X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	7.5000	26.3125	197.3438	0.2441	12.0388	1086.9878	1087.2320
	Vertical Leg	9.2188	22.3125	205.6934	41.7845	8.0388	595.7308	637.5152
2	Horizontal Leg	7.5000	0.9375	7.0313	0.2441	13.3362	1333.9150	1334.1591
	Vertical Leg	9.2188	4.9375	45.5176	41.7845	9.3362	803.5560	845.3405
3	Plate	39.0000	13.6250	531.3750	2197.0000	0.6487	16.4137	2213.4137
4	Plate	11.0000	26.8750	295.6250	0.2292	12.6013	1746.7089	1746.9381
5	Perforated Plate	6.5625	0.3125	2.0508	0.2136	13.9612	1279.1380	1279.3516
Total		90.00		1284.64	2281.50		6862.45	9143.95
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.2737 in	S _{top} =	711.52 in ³	y-bar =	14.2737 in	S _{top} =	711.52 in ³
I _x =	9143.95 in ⁴	S _{bott.} =	640.61 in ³	I _x =	9143.95 in ⁴	S _{bott.} =	640.61 in ³
C _{top} =	12.8513 in	A =	90.0000 in ²	C _{top} =	12.8513 in	A =	90.0000 in ²
C _{bottom} =	14.2737 in	r _x =	10.0797 in	C _{bottom} =	14.2737 in	r _x =	10.0797 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.7500	3.7500	14.0625	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.0625	4.8975	0.1500	10.6875	526.4951	526.6451	
1 (Right)	Horizontal Leg	3.7500	19.7500	74.0625	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	22.4375	103.4229	0.1500	10.6875	526.4951	526.6451	
2 (Left)	Horizontal Leg	3.7500	3.7500	14.0625	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.0625	4.8975	0.1500	10.6875	526.4951	526.6451	
2 (Right)	Horizontal Leg	3.7500	19.7500	74.0625	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	22.4375	103.4229	0.1500	10.6875	526.4951	526.6451	
3 (Left)	Plate	19.5000	0.3750	7.3125	0.9141	11.3750	2523.1172	2524.0313	
3 (Right)	Plate	19.5000	23.1250	450.9375	0.9141	11.3750	2523.1172	2524.0313	
4	Plate	11.0000	11.7500	129.2500	443.6667	0.0000	0.0000	443.6667	
5 (Left)	Perforated Plate	3.2813	3.3750	11.0742	7.5366	8.3750	230.1489	237.6855	
5 (Right)	Perforated Plate	3.2813	20.1250	66.0352	7.5366	8.3750	230.1489	237.6855	
Total		90.00		1057.50	506.17		8572.51	9078.68	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	11.7500 in	S _{right} =	772.65 in ³	x-bar =	11.7500 in	S _{right} =	772.65 in ³
I _y =	9078.68 in ⁴	S _{left} =	772.65 in ³	I _y =	9078.68 in ⁴	S _{left} =	772.65 in ³
C _{right} =	11.7500 in	A =	90.0000 in ²	C _{right} =	11.7500 in	A =	90.0000 in ²
C _{left} =	11.7500 in	r _y =	10.0436 in	C _{left} =	11.7500 in	r _y =	10.0436 in



Made By DWC
Checked By KMW

Date 1/27/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.5000$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.4375$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.5625$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5625$ in



Member L16-L17

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	6.0000	26.3125	157.8750	0.1250	12.1188	881.1885	881.3135
	Vertical Leg	7.5000	22.3125	167.3438	35.1563	8.1188	494.3590	529.5153
2	Horizontal Leg	6.0000	0.8125	4.8750	0.1250	13.3812	1074.3428	1074.4678
	Vertical Leg	7.5000	4.8125	36.0938	35.1563	9.3812	660.0551	695.2114
3	Plate	29.2500	13.5625	396.7031	1647.7500	0.6312	11.6545	1659.4045
4	Plate	10.2813	26.7813	275.3447	0.1640	12.5875	1629.0212	1629.1852
5	Perforated Plate	6.7500	0.2813	1.8984	0.1780	13.9125	1306.5092	1306.6872
Total		73.28		1040.13	1718.65		6057.13	7775.78
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	4.0000	0.1250	-0.5000	26.9375	-13.4688	-0.0007	12.8313	-82.3215
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.50	-13.47	0.00		-82.32	-82.32



Made By DWC
Checked By KMW

Date 1/27/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.1937	in	$S_{top} = 607.19 \text{ in}^3$	y-bar =	14.1062	in	$S_{top} = 596.68 \text{ in}^3$
$I_x =$	7775.78	in^4	$S_{bott.} = 547.83 \text{ in}^3$	$I_x =$	7693.46	in^4	$S_{bott.} = 545.40 \text{ in}^3$
$C_{top} =$	12.8063	in	$A = 73.2813 \text{ in}^2$	$C_{top} =$	12.8938	in	$A = 72.7813 \text{ in}^2$
$C_{bottom} =$	14.1937	in	$r_x = 10.3009 \text{ in}$	$C_{bottom} =$	14.1062	in	$r_x = 10.2814 \text{ in}$

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I_o	d	Ad^2	$I_{y,gross}$	
Element	Description	(in^2)	(in)	(in^3)	(in^4)	(in)	(in^4)	(in^4)	
1 (Left)	Horizontal Leg	3.0000	3.5625	10.6875	9.0000	8.7500	229.6875	238.6875	
	Vertical Leg	3.7500	0.8125	3.0469	0.0781	11.5000	495.9375	496.0156	
1 (Right)	Horizontal Leg	3.0000	21.0625	63.1875	9.0000	8.7500	229.6875	238.6875	
	Vertical Leg	3.7500	23.8125	89.2969	0.0781	11.5000	495.9375	496.0156	
2 (Left)	Horizontal Leg	3.0000	3.5625	10.6875	9.0000	8.7500	229.6875	238.6875	
	Vertical Leg	3.7500	0.8125	3.0469	0.0781	11.5000	495.9375	496.0156	
2 (Right)	Horizontal Leg	3.0000	21.0625	63.1875	9.0000	8.7500	229.6875	238.6875	
	Vertical Leg	3.7500	23.8125	89.2969	0.0781	11.5000	495.9375	496.0156	
3 (Left)	Plate	14.6250	0.2813	4.1133	0.3856	12.0313	2116.9830	2117.3687	
3 (Right)	Plate	14.6250	24.3438	356.0273	0.3856	12.0313	2116.9830	2117.3687	
4	Plate	10.2813	12.3125	126.5879	473.1517	0.0000	0.0000	473.1517	
5 (Left)	Perforated Plate	3.3750	3.5625	12.0234	10.1250	8.7500	258.3984	268.5234	
5 (Right)	Perforated Plate	3.3750	21.0625	71.0859	10.1250	8.7500	258.3984	268.5234	
Total		73.28		902.28	530.49		7653.26	8183.75	
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y,loss}$
Loss #	b (in)	h (in)	(in^2)	(in)	(in^3)	(in^4)	(in)	(in^4)	(in^4)
1	0.1250	4.0000	-0.5000	12.3125	-6.1563	-0.6667	0.0000	0.0000	-0.6667
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.50		-6.16	-0.67		0.00	-0.67

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3125	in	$S_{right} = 664.67 \text{ in}^3$	x-bar =	12.3125	in	$S_{right} = 664.62 \text{ in}^3$
$I_y =$	8183.75	in^4	$S_{left} = 664.67 \text{ in}^3$	$I_y =$	8183.08	in^4	$S_{left} = 664.62 \text{ in}^3$
$C_{right} =$	12.3125	in	$A = 73.2813 \text{ in}^2$	$C_{right} =$	12.3125	in	$A = 72.7813 \text{ in}^2$
$C_{left} =$	12.3125	in	$r_y = 10.5677 \text{ in}$	$C_{left} =$	12.3125	in	$r_y = 10.6035 \text{ in}$



Made By DWC
Checked By KMW

Date 1/27/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.4375$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.4375$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.5000$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member L17-L18

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	5.2500	26.2813	137.9766	0.0837	12.2124	783.0045	783.0882	
	Vertical Leg	6.6172	22.2813	147.4392	31.5372	8.2124	446.2908	477.8280	
2	Horizontal Leg	5.2500	0.7188	3.7734	0.0837	13.3501	935.6764	935.7601	
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	9.3501	578.4984	610.0356	
3	Plate	26.0000	13.5000	351.0000	1464.6667	0.5688	8.4121	1473.0788	
4	Plate	8.8125	26.6875	235.1836	0.1033	12.6187	1403.2264	1403.3297	
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	13.8188	1145.7569	1145.8819	
Total		64.55		908.10	1528.14		5300.87	6829.00	
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	
1	6.0000	0.1250	-0.7500	26.8125	-20.1094	-0.0010	13.4723	-136.1271	-136.1280
2	6.0000	0.2500	-1.5000	26.7500	-40.1250	-0.0078	13.4098	-269.7339	-269.7417
3	5.0000	0.0625	-0.3125	26.8438	-8.3887	-0.0001	13.5035	-56.9830	-56.9831
4	2.0000	0.3750	-0.7500	26.6875	-20.0156	-0.0088	13.3473	-133.6127	-133.6215
5	0.0625	8.0000	-0.5000	18.5000	-9.2500	-2.6667	5.1598	-13.3117	-15.9784
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-3.81	-97.89	-2.68		-609.77	-612.45	



Made By DWC
Checked By KMW

Date 1/27/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.0688 in	S _{top} =	533.26 in ³	y-bar =	13.3402 in	S _{top} =	459.30 in ³
I _x =	6829.00 in ⁴	S _{bott.} =	485.40 in ³	I _x =	6216.55 in ⁴	S _{bott.} =	466.00 in ³
C _{top} =	12.8062 in	A =	64.5469 in ²	C _{top} =	13.5348 in	A =	60.7344 in ²
C _{bottom} =	14.0688 in	r _x =	10.2859 in	C _{bottom} =	13.3402 in	r _x =	10.1171 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.5000	9.1875	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.7188	2.3781	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	21.0000	55.1250	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7813	78.6825	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.5000	9.1875	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.7188	2.3781	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	21.0000	55.1250	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7813	78.6825	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	13.0000	0.2500	3.2500	0.2708	12.0000	1872.0000	1872.2708	
3 (Right)	Plate	13.0000	24.2500	315.2500	0.2708	12.0000	1872.0000	1872.2708	
4	Plate	8.8125	12.2500	107.9531	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.5000	10.5000	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	21.0000	63.0000	9.0000	8.7500	229.6875	238.6875	
Total		64.55		790.70	455.81		6767.05	7222.86	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1250	6.0000	-0.7500	3.5000	-2.6250	-2.2500	8.6785	-56.4870	-58.7370
2	0.2500	6.0000	-1.5000	9.5000	-14.2500	-4.5000	2.6785	-10.7614	-15.2614
3	0.0625	5.0000	-0.3125	15.0000	-4.6875	-0.6510	2.8215	-2.4878	-3.1388
4	0.3750	2.0000	-0.7500	23.0000	-17.2500	-0.2500	10.8215	-87.8290	-88.0790
5	8.0000	0.0625	-0.5000	24.4688	-12.2344	-0.0002	12.2903	-75.5254	-75.5255
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-3.81		-51.05	-7.65		-233.09	-240.74

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2500 in	S _{right} =	589.62 in ³	x-bar =	12.1785 in	S _{right} =	566.66 in ³
I _y =	7222.86 in ⁴	S _{left} =	589.62 in ³	I _y =	6982.12 in ⁴	S _{left} =	573.32 in ³
C _{right} =	12.2500 in	A =	64.5469 in ²	C _{right} =	12.3215 in	A =	60.7344 in ²
C _{left} =	12.2500 in	r _y =	10.5783 in	C _{left} =	12.1785 in	r _y =	10.7220 in



Made By DWC
Checked By KMW

Date 1/27/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

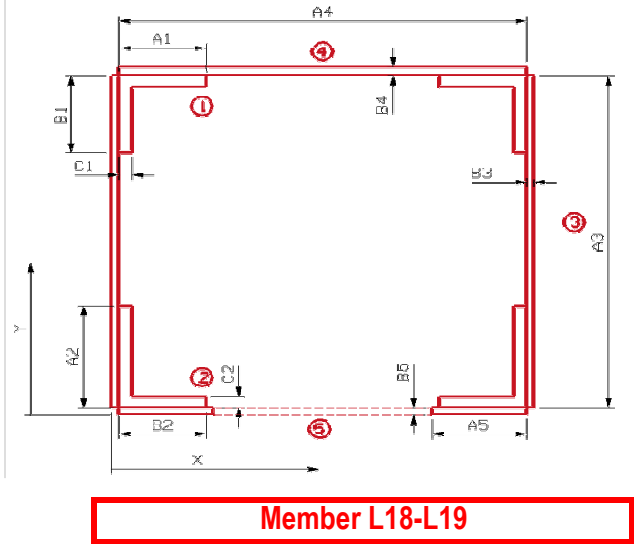
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.4375$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.4375$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.5000$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x, gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.2500	26.2813	137.9766	0.0837	12.2124	783.0045	783.0882
	Vertical Leg	6.6172	22.2813	147.4392	31.5372	8.2124	446.2908	477.8280
2	Horizontal Leg	5.2500	0.7188	3.7734	0.0837	13.3501	935.6764	935.7601
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	9.3501	578.4984	610.0356
3	Plate	26.0000	13.5000	351.0000	1464.6667	0.5688	8.4121	1473.0788
4	Plate	8.8125	26.6875	235.1836	0.1033	12.6187	1403.2264	1403.3297
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	13.8188	1145.7569	1145.8819
Total		64.55		908.10	1528.14		5300.87	6829.00
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	23.5000	0.2500	-5.8750	26.7500	-157.1563	-0.0306	14.3105	-1203.1382
2	6.0000	0.1250	-0.7500	26.5000	-19.8750	-0.0010	14.0605	-148.2726
3	6.0000	0.1250	-0.7500	26.5000	-19.8750	-0.0010	14.0605	-148.2726
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-7.38	-196.91	-0.03		-1499.68	-1499.72



Made By DWC
Checked By KMW

Date 1/27/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.0688 in	S _{top} =	533.26 in ³	y-bar =	12.4395 in	S _{top} =	369.18 in ³
I _x =	6829.00 in ⁴	S _{bott.} =	485.40 in ³	I _x =	5329.29 in ⁴	S _{bott.} =	428.42 in ³
C _{top} =	12.8062 in	A =	64.5469 in ²	C _{top} =	14.4355 in	A =	57.1719 in ²
C _{bottom} =	14.0688 in	r _x =	10.2859 in	C _{bottom} =	12.4395 in	r _x =	9.6548 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.5000	9.1875	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.7188	2.3781	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	21.0000	55.1250	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7813	78.6825	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.5000	9.1875	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.7188	2.3781	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	21.0000	55.1250	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7813	78.6825	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	13.0000	0.2500	3.2500	0.2708	12.0000	1872.0000	1872.2708	
3 (Right)	Plate	13.0000	24.2500	315.2500	0.2708	12.0000	1872.0000	1872.2708	
4	Plate	8.8125	12.2500	107.9531	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.5000	10.5000	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	21.0000	63.0000	9.0000	8.7500	229.6875	238.6875	
Total		64.55		790.70	455.81		6767.05	7222.86	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.2500	23.5000	-5.8750	12.2500	-71.9688	-270.3724	0.0000	0.0000	-270.3724
2	0.1250	6.0000	-0.7500	3.5000	-2.6250	-2.2500	8.7500	-57.4219	-59.6719
3	0.1250	6.0000	-0.7500	21.0000	-15.7500	-2.2500	8.7500	-57.4219	-59.6719
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-7.38		-90.34	-274.87		-114.84	-389.72

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2500 in	S _{right} =	589.62 in ³	x-bar =	12.2500 in	S _{right} =	557.81 in ³
I _y =	7222.86 in ⁴	S _{left} =	589.62 in ³	I _y =	6833.15 in ⁴	S _{left} =	557.81 in ³
C _{right} =	12.2500 in	A =	64.5469 in ²	C _{right} =	12.2500 in	A =	57.1719 in ²
C _{left} =	12.2500 in	r _y =	10.5783 in	C _{left} =	12.2500 in	r _y =	10.9325 in



Made By DWC
Checked By KMW

Date 1/27/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.4375$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_f = 0.4375$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.5625$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member L19-L20

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x, gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.2500	26.2813	137.9766	0.0837	12.2397	786.5049	786.5886
	Vertical Leg	6.6172	22.2813	147.4392	31.5372	8.2397	449.2593	480.7965
2	Horizontal Leg	5.2500	0.7188	3.7734	0.0837	13.3228	931.8581	931.9418
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	9.3228	575.1292	606.6664
3	Plate	29.2500	13.5000	394.8750	1647.7500	0.5415	8.5781	1656.3281
4	Plate	8.8125	26.6875	235.1836	0.1033	12.6460	1409.2973	1409.4005
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	13.7915	1141.2398	1141.3648
Total		67.80		951.97	1711.22		5301.87	7013.09
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	6.0000	0.1250	-0.7500	26.8125	-20.1094	-0.0010	13.2022	-130.7234
2	6.0000	0.1250	-0.7500	26.5000	-19.8750	-0.0010	12.8897	-124.6081
3	6.0000	0.1250	-0.7500	26.5000	-19.8750	-0.0010	12.8897	-124.6081
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.25	-59.86	0.00		-379.94	-379.94



Made By DWC
Checked By KMW

Date 1/27/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.0415 in	S _{top} =	546.47 in ³	y-bar =	13.6103 in	S _{top} =	500.06 in ³
I _x =	7013.09 in ⁴	S _{bott.} =	499.45 in ³	I _x =	6633.14 in ⁴	S _{bott.} =	487.36 in ³
C _{top} =	12.8335 in	A =	67.7969 in ²	C _{top} =	13.2647 in	A =	65.5469 in ²
C _{bottom} =	14.0415 in	r _x =	10.1707 in	C _{bottom} =	13.6103 in	r _x =	10.0597 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.5625	9.3516	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.7813	2.5848	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	21.0625	55.2891	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.8438	78.8893	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.5625	9.3516	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.7813	2.5848	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	21.0625	55.2891	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.8438	78.8893	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	14.6250	0.2813	4.1133	0.3856	12.0313	2116.9830	2117.3687	
3 (Right)	Plate	14.6250	24.3438	356.0273	0.3856	12.0313	2116.9830	2117.3687	
4	Plate	8.8125	12.3125	108.5039	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.5625	10.6875	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	21.0625	63.1875	9.0000	8.7500	229.6875	238.6875	
Total		67.80		834.75	456.04		7257.02	7713.06	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1250	6.0000	-0.7500	3.5625	-2.6719	-2.2500	8.8501	-58.7435	-60.9935
2	0.1250	6.0000	-0.7500	3.5625	-2.6719	-2.2500	8.8501	-58.7435	-60.9935
3	0.1250	6.0000	-0.7500	21.0625	-15.7969	-2.2500	8.6499	-56.1153	-58.3653
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.25		-21.14	-6.75		-173.60	-180.35

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3125 in	S _{right} =	626.44 in ³	x-bar =	12.4126 in	S _{right} =	616.81 in ³
I _y =	7713.06 in ⁴	S _{left} =	626.44 in ³	I _y =	7532.71 in ⁴	S _{left} =	606.86 in ³
C _{right} =	12.3125 in	A =	67.7969 in ²	C _{right} =	12.2124 in	A =	65.5469 in ²
C _{left} =	12.3125 in	r _y =	10.6662 in	C _{left} =	12.4126 in	r _y =	10.7201 in



Made By DWC
Checked By KMW

Date 1/30/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.4375$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_f = 0.4375$ in

Top Cover Plate:

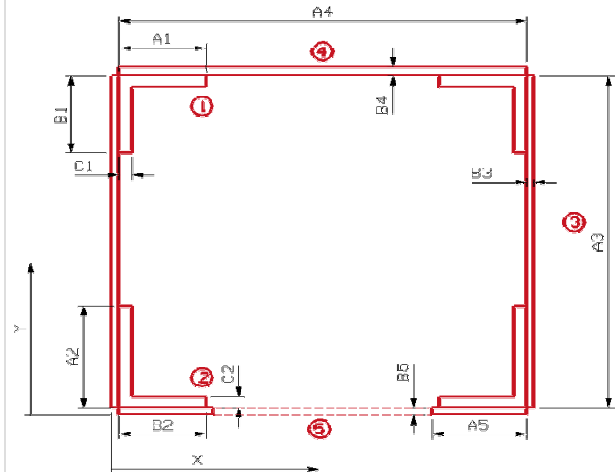
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.5625$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member L20-L21

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.2500	26.2813	137.9766	0.0837	12.2397	786.5049	786.5886
	Vertical Leg	6.6172	22.2813	147.4392	31.5372	8.2397	449.2593	480.7965
2	Horizontal Leg	5.2500	0.7188	3.7734	0.0837	13.3228	931.8581	931.9418
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	9.3228	575.1292	606.6664
3	Plate	29.2500	13.5000	394.8750	1647.7500	0.5415	8.5781	1656.3281
4	Plate	8.8125	26.6875	235.1836	0.1033	12.6460	1409.2973	1409.4005
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	13.7915	1141.2398	1141.3648
Total		67.80		951.97	1711.22		5301.87	7013.09
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	6.0000	0.1250	-0.7500	0.5000	-0.3750	-0.0010	13.8479	-143.8238
2	6.0000	0.1250	-0.7500	0.5000	-0.3750	-0.0010	13.8479	-143.8238
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.50	-0.75	0.00		-287.65	-287.65



Made By DWC
Checked By KMW

Date 1/30/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.0415 in	S _{top} =	546.47 in ³	y-bar =	14.3479 in	S _{top} =	536.87 in ³
I _x =	7013.09 in ⁴	S _{bott.} =	499.45 in ³	I _x =	6725.44 in ⁴	S _{bott.} =	468.74 in ³
C _{top} =	12.8335 in	A =	67.7969 in ²	C _{top} =	12.5271 in	A =	66.2969 in ²
C _{bottom} =	14.0415 in	r _x =	10.1707 in	C _{bottom} =	14.3479 in	r _x =	10.0720 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.5625	9.3516	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.7813	2.5848	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	21.0625	55.2891	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.8438	78.8893	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.5625	9.3516	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.7813	2.5848	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	21.0625	55.2891	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.8438	78.8893	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	14.6250	0.2813	4.1133	0.3856	12.0313	2116.9830	2117.3687	
3 (Right)	Plate	14.6250	24.3438	356.0273	0.3856	12.0313	2116.9830	2117.3687	
4	Plate	8.8125	12.3125	108.5039	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.5625	10.6875	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	21.0625	63.1875	9.0000	8.7500	229.6875	238.6875	
Total		67.80		834.75	456.04		7257.02	7713.06	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1250	6.0000	-0.7500	3.5625	-2.6719	-2.2500	8.7500	-57.4219	-59.6719
2	0.1250	6.0000	-0.7500	21.0625	-15.7969	-2.2500	8.7500	-57.4219	-59.6719
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.50		-18.47	-4.50		-114.84	-119.34

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3125 in	S _{right} =	626.44 in ³	x-bar =	12.3125 in	S _{right} =	616.75 in ³
I _y =	7713.06 in ⁴	S _{left} =	626.44 in ³	I _y =	7593.72 in ⁴	S _{left} =	616.75 in ³
C _{right} =	12.3125 in	A =	67.7969 in ²	C _{right} =	12.3125 in	A =	66.2969 in ²
C _{left} =	12.3125 in	r _y =	10.6662 in	C _{left} =	12.3125 in	r _y =	10.7024 in



Made By DWC
Checked By KMW

Date 1/30/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

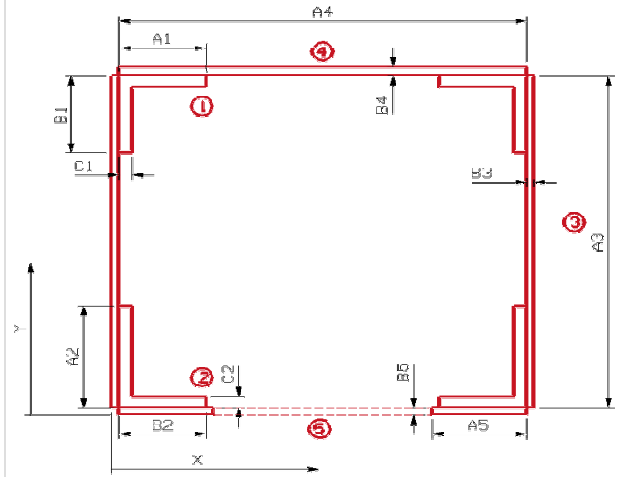
Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3750$ in

Bottom Angles:
 $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3750$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.6250$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member L21-L22

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.0000	26.3125	78.9375	0.0352	12.1876	445.6103	445.6455
	Vertical Leg	2.7188	24.3125	66.0996	2.9772	10.1876	282.1696	285.1467
2	Horizontal Leg	3.0000	0.6875	2.0625	0.0352	13.4374	541.6939	541.7290
	Vertical Leg	2.7188	2.6875	7.3066	2.9772	11.4374	355.6530	358.6301
3	Plate	32.5000	13.5000	438.7500	1830.8333	0.6249	12.6926	1843.5259
4	Plate	8.8125	26.6875	235.1836	0.1033	12.5626	1390.7718	1390.8751
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	13.8749	1155.0827	1155.2077
Total		58.75		829.84	1837.09		4183.67	6020.76
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	23.5000	0.1875	-4.4063	26.7813	-118.0049	-0.0129	13.6825	-824.8981
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-4.41	-118.00	-0.01		-824.90	-824.91



Made By DWC
Checked By KMW

Date 1/30/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.1249 in	S _{top} =	472.21 in ³	y-bar =	13.0987 in	S _{top} =	377.16 in ³
I _x =	6020.76 in ⁴	S _{bott.} =	426.25 in ³	I _x =	5195.85 in ⁴	S _{bott.} =	396.67 in ³
C _{top} =	12.7501 in	A =	58.7500 in ²	C _{top} =	13.7763 in	A =	54.3438 in ²
C _{bottom} =	14.1249 in	r _x =	10.1233 in	C _{bottom} =	13.0987 in	r _x =	9.7781 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.5000	2.6250	3.9375	2.0000	9.7500	142.5938	144.5938	
	Vertical Leg	1.3594	0.8125	1.1045	0.0159	11.5625	181.7368	181.7527	
1 (Right)	Horizontal Leg	1.5000	22.1250	33.1875	2.0000	9.7500	142.5938	144.5938	
	Vertical Leg	1.3594	23.9375	32.5400	0.0159	11.5625	181.7368	181.7527	
2 (Left)	Horizontal Leg	1.5000	2.6250	3.9375	2.0000	9.7500	142.5938	144.5938	
	Vertical Leg	1.3594	0.8125	1.1045	0.0159	11.5625	181.7368	181.7527	
2 (Right)	Horizontal Leg	1.5000	22.1250	33.1875	2.0000	9.7500	142.5938	144.5938	
	Vertical Leg	1.3594	23.9375	32.5400	0.0159	11.5625	181.7368	181.7527	
3 (Left)	Plate	16.2500	0.3125	5.0781	0.5290	12.0625	2364.4385	2364.9674	
3 (Right)	Plate	16.2500	24.4375	397.1094	0.5290	12.0625	2364.4385	2364.9674	
4	Plate	8.8125	12.3750	109.0547	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.6250	10.8750	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	21.1250	63.3750	9.0000	8.7500	229.6875	238.6875	
Total		58.75		727.03	432.68		6485.57	6918.25	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1875	23.5000	-4.4063	12.3750	-54.5273	-202.7793	0.0000	0.0000	-202.7793
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-4.41		-54.53	-202.78		0.00	-202.78

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3750 in	S _{right} =	559.05 in ³	x-bar =	12.3750 in	S _{right} =	542.66 in ³
I _y =	6918.25 in ⁴	S _{left} =	559.05 in ³	I _y =	6715.47 in ⁴	S _{left} =	542.66 in ³
C _{right} =	12.3750 in	A =	58.7500 in ²	C _{right} =	12.3750 in	A =	54.3438 in ²
C _{left} =	12.3750 in	r _y =	10.8516 in	C _{left} =	12.3750 in	r _y =	11.1164 in



Made By DWC
Checked By KMW

Date 1/30/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

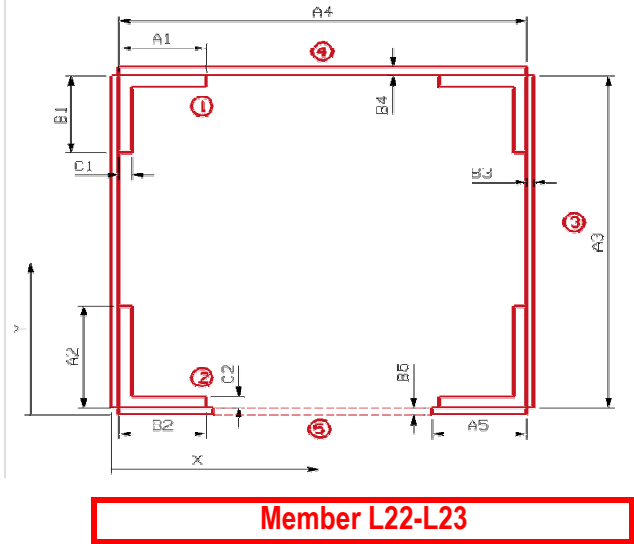
Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:
 $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg		2.5000	26.2188	65.5469	0.0203	11.5985	336.3153	336.3356
	Vertical Leg		2.3047	24.2188	55.8167	2.6115	9.5985	212.3354	214.9469
2	Horizontal Leg		2.5000	0.5313	1.3281	0.0203	14.0890	496.2470	496.2674
	Vertical Leg		2.3047	2.5313	5.8337	2.6115	12.0890	336.8139	339.4254
3	Plate		22.7500	13.3750	304.2813	1281.5833	1.2452	35.2750	1316.8583
4	Plate		8.8125	26.5625	234.0820	0.1033	11.9423	1256.8236	1256.9269
5	Perforated Plate		4.5000	0.1875	0.8438	0.0527	14.4327	937.3641	937.4168
Total			45.67		667.73	1287.00		3611.17	4898.18
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	15.6667	0.2500	-3.9167	26.6250	-104.2813	-0.0204	12.0960	-573.0558	-573.0762
2	6.0000	0.2500	-1.5000	0.1250	-0.1875	-0.0078	14.4040	-311.2148	-311.2226
3	6.0000	0.2500	-1.5000	0.1250	-0.1875	-0.0078	14.4040	-311.2148	-311.2226
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-6.92		-104.66	-0.04		-1195.49	-1195.52



Made By DWC
Checked By KMW

Date 1/30/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.6202 in	S _{top} =	403.81 in ³	y-bar =	14.5290 in	S _{top} =	302.98 in ³
I _x =	4898.18 in ⁴	S _{bottom} =	335.03 in ³	I _x =	3702.66 in ⁴	S _{bottom} =	254.85 in ³
C _{top} =	12.1298 in	A =	45.6719 in ²	C _{top} =	12.2210 in	A =	38.7552 in ²
C _{bottom} =	14.6202 in	r _x =	10.3560 in	C _{bottom} =	14.5290 in	r _x =	9.7744 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.4375	7.7344	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.9375	47.1094	6.7500	8.7500	172.2656	179.0156	
Total		45.67		556.63	426.13		4698.37	5124.50	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.2500	15.6667	-3.9167	8.2708	-32.3941	-80.1103	4.3125	-72.8405	-152.9509
2	0.2500	6.0000	-1.5000	3.4375	-5.1563	-4.5000	9.1458	-125.4692	-129.9692
3	0.2500	6.0000	-1.5000	20.9375	-31.4063	-4.5000	8.3542	-104.6884	-109.1884
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-6.92		-68.96	-89.11		-303.00	-392.11

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	420.47 in ³	x-bar =	12.5833 in	S _{right} =	401.33 in ³
I _y =	5124.50 in ⁴	S _{left} =	420.47 in ³	I _y =	4732.39 in ⁴	S _{left} =	376.08 in ³
C _{right} =	12.1875 in	A =	45.6719 in ²	C _{right} =	11.7917 in	A =	38.7552 in ²
C _{left} =	12.1875 in	r _y =	10.5926 in	C _{left} =	12.5833 in	r _y =	11.0503 in



Made By DWC
Checked By KMW

Date 1/30/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:
 $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L23-L24

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5031	330.8057	330.8260
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5031	208.1357	210.7472
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.1844	502.9900	503.0104
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.1844	342.1506	344.7621
3	Plate	19.5000	13.3750	260.8125	1098.5000	1.3406	35.0460	1133.5460
4	Plate	8.8125	26.5625	234.0820	0.1033	11.8469	1236.8243	1236.9276
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.5281	949.7966	949.8493
Total		42.42		624.26	1103.92		3605.75	4709.67
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	23.5000	0.1875	-4.4063	26.6563	-117.4541	-0.0129	13.3246	-782.3119
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-4.41	-117.45	-0.01		-782.31	-782.32



Made By DWC
Checked By KMW

Date 1/30/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.7156 in	S _{top} =	391.35 in ³	y-bar =	13.3316 in	S _{top} =	292.68 in ³
I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³	I _x =	3927.34 in ⁴	S _{bott.} =	294.59 in ³
C _{top} =	12.0344 in	A =	42.4219 in ²	C _{top} =	13.4184 in	A =	38.0156 in ²
C _{bottom} =	14.7156 in	r _x =	10.5366 in	C _{bottom} =	13.3316 in	r _x =	10.1641 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	9.7500	0.1875	1.8281	0.1143	11.9375	1389.4131	1389.5273	
3 (Right)	Plate	9.7500	24.0625	234.6094	0.1143	11.9375	1389.4131	1389.5273	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.3750	7.5938	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.8750	46.9688	6.7500	8.7500	172.2656	179.0156	
Total		42.42		514.37	425.99		4218.24	4644.23	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1875	23.5000	-4.4063	12.1250	-53.4258	-202.7793	0.0000	0.0000	-202.7793
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-4.41		-53.43	-202.78		0.00	-202.78

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	383.03 in ³	x-bar =	12.1250 in	S _{right} =	366.31 in ³
I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³	I _y =	4441.45 in ⁴	S _{left} =	366.31 in ³
C _{right} =	12.1250 in	A =	42.4219 in ²	C _{right} =	12.1250 in	A =	38.0156 in ²
C _{left} =	12.1250 in	r _y =	10.4631 in	C _{left} =	12.1250 in	r _y =	10.8089 in



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

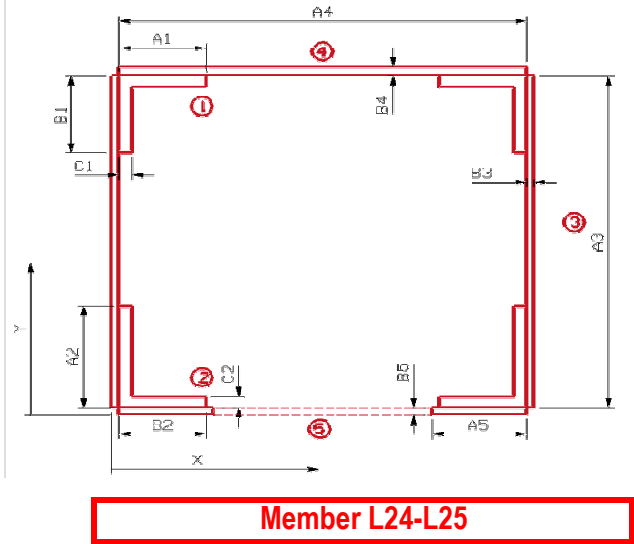
Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_f = 0.3125$ in

Bottom Angles:
 $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3125$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5031	330.8057	330.8260
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5031	208.1357	210.7472
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.1844	502.9900	503.0104
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.1844	342.1506	344.7621
3	Plate	19.5000	13.3750	260.8125	1098.5000	1.3406	35.0460	1133.5460
4	Plate	8.8125	26.5625	234.0820	0.1033	11.8469	1236.8243	1236.9276
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.5281	949.7966	949.8493
Total		42.42		624.26	1103.92		3605.75	4709.67
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.7156 in	S _{top} =	391.35 in ³	y-bar =	14.7156 in	S _{top} =	391.35 in ³
I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³	I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³
C _{top} =	12.0344 in	A =	42.4219 in ²	C _{top} =	12.0344 in	A =	42.4219 in ²
C _{bottom} =	14.7156 in	r _x =	10.5366 in	C _{bottom} =	14.7156 in	r _x =	10.5366 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	9.7500	0.1875	1.8281	0.1143	11.9375	1389.4131	1389.5273	
3 (Right)	Plate	9.7500	24.0625	234.6094	0.1143	11.9375	1389.4131	1389.5273	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.3750	7.5938	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.8750	46.9688	6.7500	8.7500	172.2656	179.0156	
Total		42.42		514.37	425.99		4218.24	4644.23	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	383.03 in ³	x-bar =	12.1250 in	S _{right} =	383.03 in ³
I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³	I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³
C _{right} =	12.1250 in	A =	42.4219 in ²	C _{right} =	12.1250 in	A =	42.4219 in ²
C _{left} =	12.1250 in	r _y =	10.4631 in	C _{left} =	12.1250 in	r _y =	10.4631 in



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

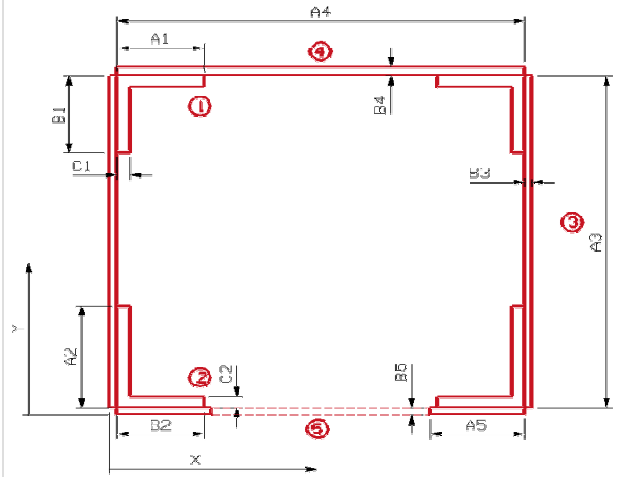
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L25-L26

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5985	336.3153	336.3356
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5985	212.3354	214.9469
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.0890	496.2470	496.2674
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.0890	336.8139	339.4254
3	Plate	22.7500	13.3750	304.2813	1281.5833	1.2452	35.2750	1316.8583
4	Plate	8.8125	26.5625	234.0820	0.1033	11.9423	1256.8236	1256.9269
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.4327	937.3641	937.4168
Total		45.67		667.73	1287.00		3611.17	4898.18
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.6202 in	S _{top} =	403.81 in ³	y-bar =	14.6202 in	S _{top} =	403.81 in ³
I _x =	4898.18 in ⁴	S _{bott.} =	335.03 in ³	I _x =	4898.18 in ⁴	S _{bott.} =	335.03 in ³
C _{top} =	12.1298 in	A =	45.6719 in ²	C _{top} =	12.1298 in	A =	45.6719 in ²
C _{bottom} =	14.6202 in	r _x =	10.3560 in	C _{bottom} =	14.6202 in	r _x =	10.3560 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.4375	7.7344	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.9375	47.1094	6.7500	8.7500	172.2656	179.0156	
Total		45.67		556.63	426.13		4698.37	5124.50	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	420.47 in ³	x-bar =	12.1875 in	S _{right} =	420.47 in ³
I _y =	5124.50 in ⁴	S _{left} =	420.47 in ³	I _y =	5124.50 in ⁴	S _{left} =	420.47 in ³
C _{right} =	12.1875 in	A =	45.6719 in ²	C _{right} =	12.1875 in	A =	45.6719 in ²
C _{left} =	12.1875 in	r _y =	10.5926 in	C _{left} =	12.1875 in	r _y =	10.5926 in



Made By DWC
Checked By KMW

Date 1/30/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_f = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3125$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L26-L27

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5031	330.8057	330.8260
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5031	208.1357	210.7472
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.1844	502.9900	503.0104
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.1844	342.1506	344.7621
3	Plate	19.5000	13.3750	260.8125	1098.5000	1.3406	35.0460	1133.5460
4	Plate	8.8125	26.5625	234.0820	0.1033	11.8469	1236.8243	1236.9276
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.5281	949.7966	949.8493
Total		42.42		624.26	1103.92		3605.75	4709.67
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	6.0000	0.2813	-1.6875	0.1406	-0.2373	-0.0111	15.8348	-423.1234
2	6.0000	0.2813	-1.6875	0.1406	-0.2373	-0.0111	15.8348	-423.1234
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-3.38	-0.47	-0.02		-846.25	-846.27



Made By DWC
Checked By KMW

Date 1/30/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.7156 in	S _{top} =	391.35 in ³	y-bar =	15.9754 in	S _{top} =	358.57 in ³
I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³	I _x =	3863.40 in ⁴	S _{bott.} =	241.83 in ³
C _{top} =	12.0344 in	A =	42.4219 in ²	C _{top} =	10.7746 in	A =	39.0469 in ²
C _{bottom} =	14.7156 in	r _x =	10.5366 in	C _{bottom} =	15.9754 in	r _x =	9.9470 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	9.7500	0.1875	1.8281	0.1143	11.9375	1389.4131	1389.5273	
3 (Right)	Plate	9.7500	24.0625	234.6094	0.1143	11.9375	1389.4131	1389.5273	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.3750	7.5938	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.8750	46.9688	6.7500	8.7500	172.2656	179.0156	
Total		42.42		514.37	425.99		4218.24	4644.23	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.2813	6.0000	-1.6875	3.3750	-5.6953	-5.0625	8.7500	-129.1992	-134.2617
2	0.2813	6.0000	-1.6875	20.8750	-35.2266	-5.0625	8.7500	-129.1992	-134.2617
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-3.38		-40.92	-10.13		-258.40	-268.52

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	383.03 in ³	x-bar =	12.1250 in	S _{right} =	360.88 in ³
I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³	I _y =	4375.71 in ⁴	S _{left} =	360.88 in ³
C _{right} =	12.1250 in	A =	42.4219 in ²	C _{right} =	12.1250 in	A =	39.0469 in ²
C _{left} =	12.1250 in	r _y =	10.4631 in	C _{left} =	12.1250 in	r _y =	10.5860 in



Made By DWC
Checked By KMW

Date 1/30/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:
 $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L27-L28

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5031	330.8057	330.8260
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5031	208.1357	210.7472
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.1844	502.9900	503.0104
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.1844	342.1506	344.7621
3	Plate	19.5000	13.3750	260.8125	1098.5000	1.3406	35.0460	1133.5460
4	Plate	8.8125	26.5625	234.0820	0.1033	11.8469	1236.8243	1236.9276
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.5281	949.7966	949.8493
Total		42.42		624.26	1103.92		3605.75	4709.67
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	23.5000	0.1875	-4.4063	26.6563	-117.4541	-0.0129	13.3246	-782.3119
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-4.41	-117.45	-0.01		-782.31	-782.32



Made By DWC
Checked By KMW

Date 1/30/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.7156 in	S _{top} =	391.35 in ³	y-bar =	13.3316 in	S _{top} =	292.68 in ³
I _x =	4709.67 in ⁴	S _{bottom} =	320.05 in ³	I _x =	3927.34 in ⁴	S _{bottom} =	294.59 in ³
C _{top} =	12.0344 in	A =	42.4219 in ²	C _{top} =	13.4184 in	A =	38.0156 in ²
C _{bottom} =	14.7156 in	r _x =	10.5366 in	C _{bottom} =	13.3316 in	r _x =	10.1641 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	9.7500	0.1875	1.8281	0.1143	11.9375	1389.4131	1389.5273	
3 (Right)	Plate	9.7500	24.0625	234.6094	0.1143	11.9375	1389.4131	1389.5273	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.3750	7.5938	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.8750	46.9688	6.7500	8.7500	172.2656	179.0156	
Total		42.42		514.37	425.99		4218.24	4644.23	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1875	23.5000	-4.4063	12.1250	-53.4258	-202.7793	0.0000	0.0000	-202.7793
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-4.41		-53.43	-202.78		0.00	-202.78

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	383.03 in ³	x-bar =	12.1250 in	S _{right} =	366.31 in ³
I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³	I _y =	4441.45 in ⁴	S _{left} =	366.31 in ³
C _{right} =	12.1250 in	A =	42.4219 in ²	C _{right} =	12.1250 in	A =	38.0156 in ²
C _{left} =	12.1250 in	r _y =	10.4631 in	C _{left} =	12.1250 in	r _y =	10.8089 in



Made By DWC
Checked By KMW

Date 1/30/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L28-L29

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x, gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5985	336.3153	336.3356
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5985	212.3354	214.9469
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.0890	496.2470	496.2674
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.0890	336.8139	339.4254
3	Plate	22.7500	13.3750	304.2813	1281.5833	1.2452	35.2750	1316.8583
4	Plate	8.8125	26.5625	234.0820	0.1033	11.9423	1256.8236	1256.9269
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.4327	937.3641	937.4168
Total		45.67		667.73	1287.00		3611.17	4898.18
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	23.5000	0.3125	-7.3438	26.5938	-195.2979	-0.0598	14.2415	-1489.4699
2	0.1875	26.0000	-4.8750	13.3750	-65.2031	-274.6250	1.0228	-5.0997
3	4.0000	0.0625	-0.2500	0.3750	-0.0938	-0.0001	11.9772	-35.8634
4	4.0000	0.0625	-0.2500	0.3750	-0.0938	-0.0001	11.9772	-35.8634
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-12.72		-260.69	-274.68		-1566.30



Made By DWC
Checked By KMW

Date 1/30/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.6202 in	S _{top} =	403.81 in ³	y-bar =	12.3522 in	S _{top} =	212.34 in ³
I _x =	4898.18 in ⁴	S _{bott.} =	335.03 in ³	I _x =	3057.20 in ⁴	S _{bott.} =	247.50 in ³
C _{top} =	12.1298 in	A =	45.6719 in ²	C _{top} =	14.3978 in	A =	32.9531 in ²
C _{bottom} =	14.6202 in	r _x =	10.3560 in	C _{bottom} =	12.3522 in	r _x =	9.6319 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.4375	7.7344	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.9375	47.1094	6.7500	8.7500	172.2656	179.0156	
Total		45.67		556.63	426.13		4698.37	5124.50	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.3125	23.5000	-7.3438	12.1875	-89.5020	-337.9655	1.7891	-23.5069	-361.4724
2	26.0000	0.1875	-4.8750	24.2813	-118.3711	-0.0143	13.8829	-939.5784	-939.5927
3	0.0625	4.0000	-0.2500	2.4375	-0.6094	-0.3333	7.9609	-15.8439	-16.1772
4	0.0625	4.0000	-0.2500	21.9375	-5.4844	-0.3333	11.5391	-33.2878	-33.6211
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-12.72		-213.97	-338.65		-1012.22	-1350.86

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	420.47 in ³	x-bar =	10.3984 in	S _{right} =	270.00 in ³
I _y =	5124.50 in ⁴	S _{left} =	420.47 in ³	I _y =	3773.63 in ⁴	S _{left} =	362.91 in ³
C _{right} =	12.1875 in	A =	45.6719 in ²	C _{right} =	13.9766 in	A =	32.9531 in ²
C _{left} =	12.1875 in	r _y =	10.5926 in	C _{left} =	10.3984 in	r _y =	10.7012 in



Made By DWC
Checked By KMW

Date 1/30/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.5000$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L29-L30

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.6813	341.1297	341.1500	
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.6813	216.0111	218.6226	
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.0062	490.4368	490.4571	
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.0062	332.2201	334.8317	
3	Plate	26.0000	13.3750	347.7500	1464.6667	1.1625	35.1358	1499.8025	
4	Plate	8.8125	26.5625	234.0820	0.1033	12.0250	1274.2955	1274.3988	
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.3500	926.6497	926.7024	
Total		48.92		711.20	1470.09		3615.88	5085.97	
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)	
1	4.0000	0.1250	-0.5000	0.3750	-0.1875	-0.0007	14.7373	-108.5947	-108.5953
2	4.0000	0.1250	-0.5000	0.3750	-0.1875	-0.0007	14.7373	-108.5947	-108.5953
3	0.0625	13.0000	-0.8125	6.8750	-5.5859	-11.4427	8.2373	-55.1312	-66.5739
4	0.0625	13.0000	-0.8125	6.8750	-5.5859	-11.4427	8.2373	-55.1312	-66.5739
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.63	-11.55	-22.89		-327.45	-350.34	



Made By DWC
Checked By KMW

Date 1/30/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.5375 in	S _{top} =	416.46 in ³	y-bar =	15.1123 in	S _{top} =	406.92 in ³
I _x =	5085.97 in ⁴	S _{bott.} =	349.85 in ³	I _x =	4735.63 in ⁴	S _{bott.} =	313.36 in ³
C _{top} =	12.2125 in	A =	48.9219 in ²	C _{top} =	11.6377 in	A =	46.2969 in ²
C _{bottom} =	14.5375 in	r _x =	10.1961 in	C _{bottom} =	15.1123 in	r _x =	10.1138 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.5000	3.1250	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.6563	0.7562	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	22.0000	27.5000	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.8438	27.4762	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.5000	3.1250	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.6563	0.7562	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	22.0000	27.5000	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.8438	27.4762	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	13.0000	0.2500	3.2500	0.2708	12.0000	1872.0000	1872.2708	
3 (Right)	Plate	13.0000	24.2500	315.2500	0.2708	12.0000	1872.0000	1872.2708	
4	Plate	8.8125	12.2500	107.9531	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.5000	7.8750	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	21.0000	47.2500	6.7500	8.7500	172.2656	179.0156	
Total		48.92		599.29	426.30		5183.41	5609.72	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1250	4.0000	-0.5000	2.5000	-1.2500	-0.6667	9.7500	-47.5313	-48.1979
2	0.1250	4.0000	-0.5000	22.0000	-11.0000	-0.6667	9.7500	-47.5313	-48.1979
3	13.0000	0.0625	-0.8125	0.0313	-0.0254	-0.0003	12.2188	-121.3045	-121.3048
4	13.0000	0.0625	-0.8125	24.4688	-19.8809	-0.0003	12.2188	-121.3045	-121.3048
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.63		-32.16	-1.33		-337.67	-339.01

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2500 in	S _{right} =	457.94 in ³	x-bar =	12.2500 in	S _{right} =	430.26 in ³
I _y =	5609.72 in ⁴	S _{left} =	457.94 in ³	I _y =	5270.71 in ⁴	S _{left} =	430.26 in ³
C _{right} =	12.2500 in	A =	48.9219 in ²	C _{right} =	12.2500 in	A =	46.2969 in ²
C _{left} =	12.2500 in	r _y =	10.7083 in	C _{left} =	12.2500 in	r _y =	10.6699 in



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

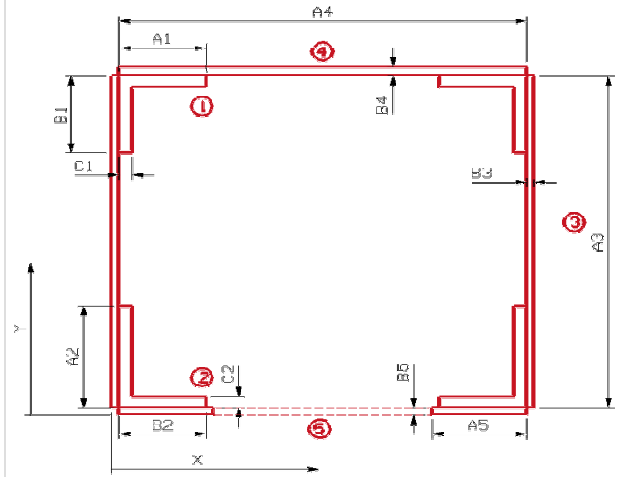
Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:
 $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.5000$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L30-L31

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x, gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.6813	341.1297	341.1500
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.6813	216.0111	218.6226
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.0062	490.4368	490.4571
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.0062	332.2201	334.8317
3	Plate	26.0000	13.3750	347.7500	1464.6667	1.1625	35.1358	1499.8025
4	Plate	8.8125	26.5625	234.0820	0.1033	12.0250	1274.2955	1274.3988
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.3500	926.6497	926.7024
Total		48.92		711.20	1470.09		3615.88	5085.97
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.5375 in	S _{top} =	416.46 in ³	y-bar =	14.5375 in	S _{top} =	416.46 in ³
I _x =	5085.97 in ⁴	S _{bott.} =	349.85 in ³	I _x =	5085.97 in ⁴	S _{bott.} =	349.85 in ³
C _{top} =	12.2125 in	A =	48.9219 in ²	C _{top} =	12.2125 in	A =	48.9219 in ²
C _{bottom} =	14.5375 in	r _x =	10.1961 in	C _{bottom} =	14.5375 in	r _x =	10.1961 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.5000	3.1250	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.6563	0.7562	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	22.0000	27.5000	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.8438	27.4762	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.5000	3.1250	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.6563	0.7562	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	22.0000	27.5000	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.8438	27.4762	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	13.0000	0.2500	3.2500	0.2708	12.0000	1872.0000	1872.2708	
3 (Right)	Plate	13.0000	24.2500	315.2500	0.2708	12.0000	1872.0000	1872.2708	
4	Plate	8.8125	12.2500	107.9531	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.5000	7.8750	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	21.0000	47.2500	6.7500	8.7500	172.2656	179.0156	
Total		48.92		599.29	426.30		5183.41	5609.72	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2500 in	S _{right} =	457.94 in ³	x-bar =	12.2500 in	S _{right} =	457.94 in ³
I _y =	5609.72 in ⁴	S _{left} =	457.94 in ³	I _y =	5609.72 in ⁴	S _{left} =	457.94 in ³
C _{right} =	12.2500 in	A =	48.9219 in ²	C _{right} =	12.2500 in	A =	48.9219 in ²
C _{left} =	12.2500 in	r _y =	10.7083 in	C _{left} =	12.2500 in	r _y =	10.7083 in



Made By DWC
Checked By KMW

Date 1/31/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

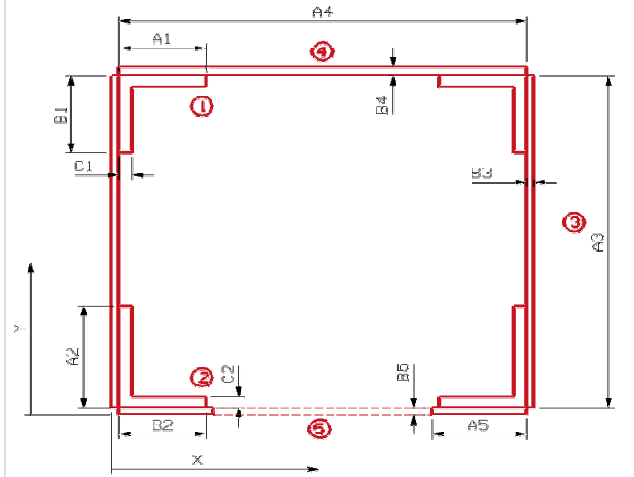
Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:
 $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L31-L32

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x, gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5985	336.3153	336.3356
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5985	212.3354	214.9469
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.0890	496.2470	496.2674
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.0890	336.8139	339.4254
3	Plate	22.7500	13.3750	304.2813	1281.5833	1.2452	35.2750	1316.8583
4	Plate	8.8125	26.5625	234.0820	0.1033	11.9423	1256.8236	1256.9269
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.4327	937.3641	937.4168
Total		45.67		667.73	1287.00		3611.17	4898.18
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	3.6875	0.1875	-0.6914	0.5938	-0.4105	-0.0020	16.0723	-178.6037
2	3.6875	0.1875	-0.6914	0.5938	-0.4105	-0.0020	16.0723	-178.6037
3	0.1875	3.6875	-0.6914	2.5313	-1.7501	-0.7835	14.1348	-138.1382
4	0.1875	3.6875	-0.6914	2.5313	-1.7501	-0.7835	14.1348	-138.1382
5	6.0000	0.2500	-1.5000	0.1250	-0.1875	-0.0078	16.5411	-410.4105
6	6.0000	0.2500	-1.5000	0.1250	-0.1875	-0.0078	16.5411	-410.4105
7	1.0000	0.1250	-0.1250	0.3125	-0.0391	-0.0002	16.3536	-33.4299
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-5.89	-4.74	-1.59		-1487.73	-1489.32



Made By DWC
Checked By KMW

Date 1/31/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.6202 in	S _{top} =	403.81 in ³	y-bar =	16.6661 in	S _{top} =	338.05 in ³
I _x =	4898.18 in ⁴	S _{bottom} =	335.03 in ³	I _x =	3408.86 in ⁴	S _{bottom} =	204.54 in ³
C _{top} =	12.1298 in	A =	45.6719 in ²	C _{top} =	10.0839 in	A =	39.7813 in ²
C _{bottom} =	14.6202 in	r _x =	10.3560 in	C _{bottom} =	16.6661 in	r _x =	9.2569 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.4375	7.7344	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.9375	47.1094	6.7500	8.7500	172.2656	179.0156	
Total		45.67		556.63	426.13		4698.37	5124.50	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1875	3.6875	-0.6914	2.5938	-1.7933	-0.7835	9.6291	-64.1069	-64.8903
2	0.1875	3.6875	-0.6914	21.7813	-15.0597	-0.7835	9.5584	-63.1690	-63.9524
3	3.6875	0.1875	-0.6914	0.6563	-0.4537	-0.0020	11.5666	-92.5006	-92.5027
4	3.6875	0.1875	-0.6914	23.7188	-16.3993	-0.0020	11.4959	-91.3733	-91.3753
5	0.2500	6.0000	-1.5000	3.4375	-5.1563	-4.5000	8.7853	-115.7736	-120.2736
6	0.2500	6.0000	-1.5000	20.9375	-31.4063	-4.5000	8.7147	-113.9177	-118.4177
7	0.1250	1.0000	-0.1250	0.9375	-0.1172	-0.0104	11.2853	-15.9199	-15.9303
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-5.89		-70.39	-10.58		-556.76	-567.34

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	420.47 in ³	x-bar =	12.2228 in	S _{right} =	375.01 in ³
I _y =	5124.50 in ⁴	S _{left} =	420.47 in ³	I _y =	4557.16 in ⁴	S _{left} =	372.84 in ³
C _{right} =	12.1875 in	A =	45.6719 in ²	C _{right} =	12.1522 in	A =	39.7813 in ²
C _{left} =	12.1875 in	r _y =	10.5926 in	C _{left} =	12.2228 in	r _y =	10.7031 in



Made By DWC
Checked By KMW

Date 1/31/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

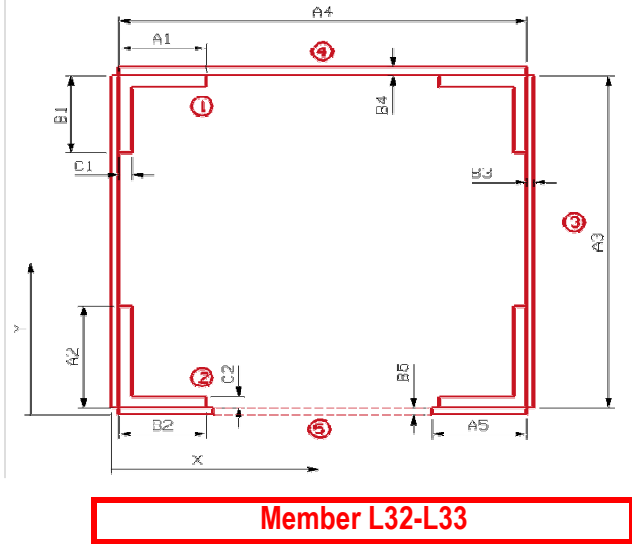
Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_f = 0.3125$ in

Bottom Angles:
 $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3125$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L32-L33

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x, gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5985	336.3153	336.3356
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5985	212.3354	214.9469
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.0890	496.2470	496.2674
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.0890	336.8139	339.4254
3	Plate	22.7500	13.3750	304.2813	1281.5833	1.2452	35.2750	1316.8583
4	Plate	8.8125	26.5625	234.0820	0.1033	11.9423	1256.8236	1256.9269
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.4327	937.3641	937.4168
Total		45.67		667.73	1287.00		3611.17	4898.18
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	3.6875	0.1875	-0.6914	0.5938	-0.4105	-0.0020	16.0211	-177.4670
2	3.6875	0.1875	-0.6914	0.5938	-0.4105	-0.0020	16.0211	-177.4670
3	0.1875	3.6875	-0.6914	2.5313	-1.7501	-0.7835	14.0836	-137.1388
4	0.1875	3.6875	-0.6914	2.5313	-1.7501	-0.7835	14.0836	-137.1388
5	6.0000	0.2500	-1.5000	0.1250	-0.1875	-0.0078	16.4898	-407.8725
6	6.0000	0.2500	-1.5000	0.1250	-0.1875	-0.0078	16.4898	-407.8725
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-5.77	-4.70	-1.59		-1444.96	-1446.54



Made By DWC
Checked By KMW

Date 1/31/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.6202 in	S _{top} =	403.81 in ³	y-bar =	16.6148 in	S _{top} =	340.56 in ³
I _x =	4898.18 in ⁴	S _{bott.} =	335.03 in ³	I _x =	3451.63 in ⁴	S _{bott.} =	207.74 in ³
C _{top} =	12.1298 in	A =	45.6719 in ²	C _{top} =	10.1352 in	A =	39.9063 in ²
C _{bottom} =	14.6202 in	r _x =	10.3560 in	C _{bottom} =	16.6148 in	r _x =	9.3002 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.4375	7.7344	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.9375	47.1094	6.7500	8.7500	172.2656	179.0156	
Total		45.67		556.63	426.13		4698.37	5124.50	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1875	3.6875	-0.6914	2.5938	-1.7933	-0.7835	9.5938	-63.6371	-64.4205
2	0.1875	3.6875	-0.6914	21.7813	-15.0597	-0.7835	9.5938	-63.6371	-64.4205
3	3.6875	0.1875	-0.6914	0.6563	-0.4537	-0.0020	11.5313	-91.9361	-91.9381
4	3.6875	0.1875	-0.6914	23.7188	-16.3993	-0.0020	11.5313	-91.9361	-91.9381
5	0.2500	6.0000	-1.5000	3.4375	-5.1563	-4.5000	8.7500	-114.8438	-119.3438
6	0.2500	6.0000	-1.5000	20.9375	-31.4063	-4.5000	8.7500	-114.8438	-119.3438
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-5.77		-70.27	-10.57		-540.83	-551.40

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	420.47 in ³	x-bar =	12.1875 in	S _{right} =	375.23 in ³
I _y =	5124.50 in ⁴	S _{left} =	420.47 in ³	I _y =	4573.09 in ⁴	S _{left} =	375.23 in ³
C _{right} =	12.1875 in	A =	45.6719 in ²	C _{right} =	12.1875 in	A =	39.9063 in ²
C _{left} =	12.1875 in	r _y =	10.5926 in	C _{left} =	12.1875 in	r _y =	10.7049 in



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.4375$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_f = 0.4375$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.4375$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member L33-L34

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.2500	26.2813	137.9766	0.0837	11.8826	741.2781	741.3618
	Vertical Leg	6.6172	22.2813	147.4392	31.5372	7.8826	411.1599	442.6971
2	Horizontal Leg	5.2500	0.7188	3.7734	0.0837	13.6799	982.4854	982.5691
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	9.6799	620.0355	651.5727
3	Plate	22.7500	13.5000	307.1250	1281.5833	0.8987	18.3729	1299.9562
4	Plate	10.2813	26.7188	274.7021	0.1640	12.3201	1560.5343	1560.6983
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	14.1487	1201.1083	1201.2333
Total		62.77		903.74	1345.11		5534.97	6880.09
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.3987 in	S _{top} =	548.70 in ³	y-bar =	14.3987 in	S _{top} =	548.70 in ³
I _x =	6880.09 in ⁴	S _{bott.} =	477.83 in ³	I _x =	6880.09 in ⁴	S _{bott.} =	477.83 in ³
C _{top} =	12.5388 in	A =	62.7656 in ²	C _{top} =	12.5388 in	A =	62.7656 in ²
C _{bottom} =	14.3987 in	r _x =	10.4697 in	C _{bottom} =	14.3987 in	r _x =	10.4697 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.4375	9.0234	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	20.9375	54.9609	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.4375	9.0234	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	20.9375	54.9609	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	10.2813	12.1875	125.3027	473.1517	0.0000	0.0000	473.1517	
5 (Left)	Perforated Plate	3.0000	3.4375	10.3125	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.9375	62.8125	9.0000	8.7500	229.6875	238.6875	
Total		62.77		764.96	523.23		6282.01	6805.24	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	558.38 in ³	x-bar =	12.1875 in	S _{right} =	558.38 in ³
I _y =	6805.24 in ⁴	S _{left} =	558.38 in ³	I _y =	6805.24 in ⁴	S _{left} =	558.38 in ³
C _{right} =	12.1875 in	A =	62.7656 in ²	C _{right} =	12.1875 in	A =	62.7656 in ²
C _{left} =	12.1875 in	r _y =	10.4126 in	C _{left} =	12.1875 in	r _y =	10.4126 in



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.5625$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.5625$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.8750$ in

Top Cover Plate:

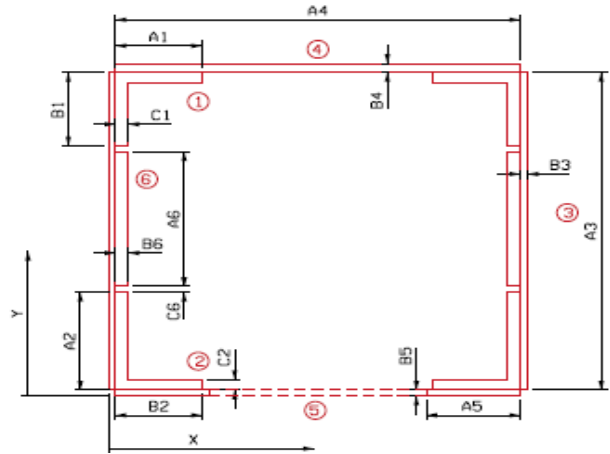
$A_4 = b = 22.0000$ in
 $B_4 = t = 0.5000$ in

Web Plate 2:

$A_6 = b = 10.0000$ in
 $B_6 = t = 0.6250$ in
 $C_6 = \text{gap} = 0.0000$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.6250$ in



Member L34-L35

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	6.7500	26.3438	177.8203	0.1780	12.1669	999.2216	999.3996
	Vertical Leg	8.3672	22.3438	186.9543	38.5702	8.1669	558.0733	596.6435
2	Horizontal Leg	6.7500	0.9063	6.1172	0.1780	13.2706	1188.7392	1188.9171
	Vertical Leg	8.3672	4.9063	41.0515	38.5702	9.2706	719.1137	757.6840
3	Plate	45.5000	13.6250	619.9375	2563.1667	0.5519	13.8578	2577.0245
4	Plate	11.0000	26.8750	295.6250	0.2292	12.6981	1773.6660	1773.8951
5	Perforated Plate	6.5625	0.3125	2.0508	0.2136	13.8644	1261.4497	1261.6634
6	Side Plates	12.5000	13.6250	170.3125	104.1667	0.5519	3.8071	107.9738
Total		105.80		1499.87	2745.27		6517.93	9263.20
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.1769 in	S _{top} =	715.41 in ³	y-bar =	14.1769 in	S _{top} =	715.41 in ³
I _x =	9263.20 in ⁴	S _{bott.} =	653.40 in ³	I _x =	9263.20 in ⁴	S _{bott.} =	653.40 in ³
C _{top} =	12.9481 in	A =	105.7969 in ²	C _{top} =	12.9481 in	A =	105.7969 in ²
C _{bottom} =	14.1769 in	r _x =	9.3572 in	C _{bottom} =	14.1769 in	r _x =	9.3572 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.3750	3.8750	13.0781	10.1250	8.0000	216.0000	226.1250	
	Vertical Leg	4.1836	1.1563	4.8373	0.1103	10.7188	480.6598	480.7701	
1 (Right)	Horizontal Leg	3.3750	19.8750	67.0781	10.1250	8.0000	216.0000	226.1250	
	Vertical Leg	4.1836	22.5938	94.5231	0.1103	10.7188	480.6598	480.7701	
2 (Left)	Horizontal Leg	3.3750	3.8750	13.0781	10.1250	8.0000	216.0000	226.1250	
	Vertical Leg	4.1836	1.1563	4.8373	0.1103	10.7188	480.6598	480.7701	
2 (Right)	Horizontal Leg	3.3750	19.8750	67.0781	10.1250	8.0000	216.0000	226.1250	
	Vertical Leg	4.1836	22.5938	94.5231	0.1103	10.7188	480.6598	480.7701	
3 (Left)	Plate	22.7500	0.4375	9.9531	1.4515	11.4375	2976.0732	2977.5247	
3 (Right)	Plate	22.7500	23.3125	530.3594	1.4515	11.4375	2976.0732	2977.5247	
4	Plate	11.0000	11.8750	130.6250	443.6667	0.0000	0.0000	443.6667	
5 (Left)	Perforated Plate	3.2813	3.5000	11.4844	7.5366	8.3750	230.1489	237.6855	
5 (Right)	Perforated Plate	3.2813	20.2500	66.4453	7.5366	8.3750	230.1489	237.6855	
6 (Left)	Plate	6.2500	1.1875	7.4219	0.2035	10.6875	713.8916	714.0951	
6 (Right)	Plate	6.2500	22.5625	141.0156	0.2035	10.6875	713.8916	714.0951	
Total		105.80		1256.34	502.99		10626.87	11129.86	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	11.8750 in	S _{right} =	937.25 in ³	x-bar =	11.8750 in	S _{right} =	937.25 in ³
I _y =	11129.86 in ⁴	S _{left} =	937.25 in ³	I _y =	11129.86 in ⁴	S _{left} =	937.25 in ³
C _{right} =	11.8750 in	A =	105.7969 in ²	C _{right} =	11.8750 in	A =	105.7969 in ²
C _{left} =	11.8750 in	r _y =	10.2567 in	C _{left} =	11.8750 in	r _y =	10.2567 in



Made By DWC
Checked By KMW

Date 1/31/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.5625$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.5625$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.8750$ in

Top Cover Plate:

$A_4 = b = 22.0000$ in
 $B_4 = t = 0.5000$ in

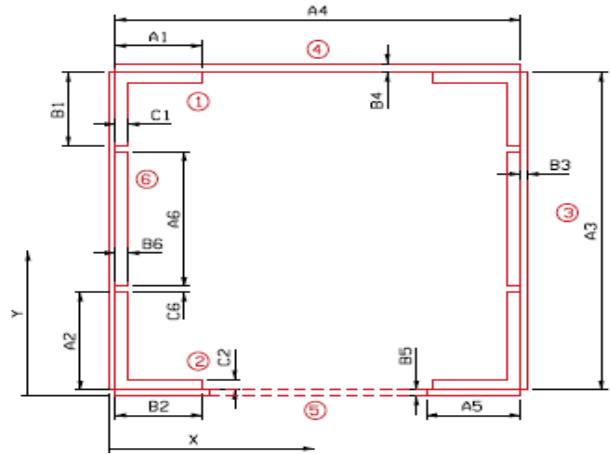
Web Plate 2:

$A_6 = b = 10.0000$ in
 $B_6 = t = 0.6250$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.6250$ in

$C_6 = \text{gap} = 0.0000$ in



Member L35-L36

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	6.7500	26.3438	177.8203	0.1780	12.1669	999.2216	999.3996	
	Vertical Leg	8.3672	22.3438	186.9543	38.5702	8.1669	558.0733	596.6435	
2	Horizontal Leg	6.7500	0.9063	6.1172	0.1780	13.2706	1188.7392	1188.9171	
	Vertical Leg	8.3672	4.9063	41.0515	38.5702	9.2706	719.1137	757.6840	
3	Plate	45.5000	13.6250	619.9375	2563.1667	0.5519	13.8578	2577.0245	
4	Plate	11.0000	26.8750	295.6250	0.2292	12.6981	1773.6660	1773.8951	
5	Perforated Plate	6.5625	0.3125	2.0508	0.2136	13.8644	1261.4497	1261.6634	
6	Side Plates	12.5000	13.6250	170.3125	104.1667	0.5519	3.8071	107.9738	
Total		105.80		1499.87	2745.27		6517.93	9263.20	
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	
1	0.2500	26.0000	-6.5000	13.6250	-88.5625	-366.1667	0.5230	-1.7777	-367.9444
2	4.0000	0.1250	-0.5000	27.0625	-13.5313	-0.0007	12.9145	-83.3925	-83.3932
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-7.00	-102.09	-366.17		-85.17	-451.34	



Made By DWC
Checked By KMW

Date 1/31/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.1769 in	S _{top} =	715.41 in ³	y-bar =	14.1480 in	S _{top} =	679.04 in ³
I _x =	9263.20 in ⁴	S _{bott.} =	653.40 in ³	I _x =	8811.86 in ⁴	S _{bott.} =	622.84 in ³
C _{top} =	12.9481 in	A =	105.7969 in ²	C _{top} =	12.9770 in	A =	98.7969 in ²
C _{bottom} =	14.1769 in	r _x =	9.3572 in	C _{bottom} =	14.1480 in	r _x =	9.4441 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.3750	3.8750	13.0781	10.1250	8.0000	216.0000	226.1250	
	Vertical Leg	4.1836	1.1563	4.8373	0.1103	10.7188	480.6598	480.7701	
1 (Right)	Horizontal Leg	3.3750	19.8750	67.0781	10.1250	8.0000	216.0000	226.1250	
	Vertical Leg	4.1836	22.5938	94.5231	0.1103	10.7188	480.6598	480.7701	
2 (Left)	Horizontal Leg	3.3750	3.8750	13.0781	10.1250	8.0000	216.0000	226.1250	
	Vertical Leg	4.1836	1.1563	4.8373	0.1103	10.7188	480.6598	480.7701	
2 (Right)	Horizontal Leg	3.3750	19.8750	67.0781	10.1250	8.0000	216.0000	226.1250	
	Vertical Leg	4.1836	22.5938	94.5231	0.1103	10.7188	480.6598	480.7701	
3 (Left)	Plate	22.7500	0.4375	9.9531	1.4515	11.4375	2976.0732	2977.5247	
3 (Right)	Plate	22.7500	23.3125	530.3594	1.4515	11.4375	2976.0732	2977.5247	
4	Plate	11.0000	11.8750	130.6250	443.6667	0.0000	0.0000	443.6667	
5 (Left)	Perforated Plate	3.2813	3.5000	11.4844	7.5366	8.3750	230.1489	237.6855	
5 (Right)	Perforated Plate	3.2813	20.2500	66.4453	7.5366	8.3750	230.1489	237.6855	
6 (Left)	Plate	6.2500	1.1875	7.4219	0.2035	10.6875	713.8916	714.0951	
6 (Right)	Plate	6.2500	22.5625	141.0156	0.2035	10.6875	713.8916	714.0951	
Total		105.80		1256.34	502.99		10626.87	11129.86	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	26.0000	0.2500	-6.5000	0.1250	-0.8125	-0.0339	12.5231	-1019.3742	-1019.4081
2	0.1250	4.0000	-0.5000	11.8750	-5.9375	-0.6667	0.7731	-0.2988	-0.9655
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-7.00		-6.75	-0.70		-1019.67	-1020.37

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	11.8750 in	S _{right} =	937.25 in ³	x-bar =	12.6481 in	S _{right} =	910.60 in ³
I _y =	11129.86 in ⁴	S _{left} =	937.25 in ³	I _y =	10109.48 in ⁴	S _{left} =	799.29 in ³
C _{right} =	11.8750 in	A =	105.7969 in ²	C _{right} =	11.1019 in	A =	98.7969 in ²
C _{left} =	11.8750 in	r _y =	10.2567 in	C _{left} =	12.6481 in	r _y =	10.1156 in



Made By DWC
Checked By KMW

Date 1/31/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.4375$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_f = 0.4375$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member L36-L37

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.2500	26.2813	137.9766	0.0837	12.1487	774.8582	774.9420
	Vertical Leg	6.6172	22.2813	147.4392	31.5372	8.1487	439.3950	470.9321
2	Horizontal Leg	5.2500	0.7188	3.7734	0.0837	13.4138	944.6261	944.7098
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	9.4138	586.4069	617.9441
3	Plate	19.5000	13.5000	263.2500	1098.5000	0.6325	7.8012	1106.3012
4	Plate	8.8125	26.6875	235.1836	0.1033	12.5550	1389.0962	1389.1995
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	13.8825	1156.3434	1156.4684
Total		58.05		820.35	1161.97		5298.53	6460.50
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	23.5000	0.1250	-2.9375	26.8125	-78.7617	-0.0038	12.9676	-493.9674
2	0.1250	8.0000	-1.0000	22.5000	-22.5000	-5.3333	8.6551	-74.9111
3	0.1250	8.0000	-1.0000	22.5000	-22.5000	-5.3333	8.6551	-74.9111
4	6.0000	0.1250	-0.7500	0.5000	-0.3750	-0.0010	13.3449	-133.5644
5	6.0000	0.1250	-0.7500	0.5000	-0.3750	-0.0010	13.3449	-133.5644
6	0.1250	8.0000	-1.0000	4.5000	-4.5000	-5.3333	9.3449	-87.3268
7	0.1250	8.0000	-1.0000	4.5000	-4.5000	-5.3333	9.3449	-87.3268
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-8.44	-133.51	-21.34		-1085.57	-1106.91



Made By DWC
Checked By KMW

Date 1/31/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.1325 in	S _{top} =	507.00 in ³	y-bar =	13.8449 in	S _{top} =	410.86 in ³
I _x =	6460.50 in ⁴	S _{bott.} =	457.14 in ³	I _x =	5353.59 in ⁴	S _{bott.} =	386.68 in ³
C _{top} =	12.7425 in	A =	58.0469 in ²	C _{top} =	13.0301 in	A =	49.6094 in ²
C _{bottom} =	14.1325 in	r _x =	10.5498 in	C _{bottom} =	13.8449 in	r _x =	10.3882 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.3750	8.8594	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.5938	1.9645	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	20.8750	54.7969	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.6563	78.2689	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.3750	8.8594	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.5938	1.9645	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	20.8750	54.7969	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.6563	78.2689	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	9.7500	0.1875	1.8281	0.1143	11.9375	1389.4131	1389.5273	
3 (Right)	Plate	9.7500	24.0625	234.6094	0.1143	11.9375	1389.4131	1389.5273	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.3750	10.1250	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.8750	62.6250	9.0000	8.7500	229.6875	238.6875	
Total		58.05		703.82	455.50		5801.88	6257.38	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1250	23.5000	-2.9375	12.1250	-35.6172	-135.1862	0.0000	0.0000	-135.1862
2	8.0000	0.1250	-1.0000	0.3750	-0.3750	-0.0013	11.7500	-138.0625	-138.0638
3	8.0000	0.1250	-1.0000	23.8750	-23.8750	-0.0013	11.7500	-138.0625	-138.0638
4	0.1250	6.0000	-0.7500	3.3750	-2.5313	-2.2500	8.7500	-57.4219	-59.6719
5	0.1250	6.0000	-0.7500	20.8750	-15.6563	-2.2500	8.7500	-57.4219	-59.6719
6	8.0000	0.1250	-1.0000	0.3750	-0.3750	-0.0013	11.7500	-138.0625	-138.0638
7	8.0000	0.1250	-1.0000	23.8750	-23.8750	-0.0013	11.7500	-138.0625	-138.0638
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-8.44		-102.30	-139.69		-667.09	-806.79

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	516.07 in ³	x-bar =	12.1250 in	S _{right} =	449.53 in ³
I _y =	6257.38 in ⁴	S _{left} =	516.07 in ³	I _y =	5450.59 in ⁴	S _{left} =	449.53 in ³
C _{right} =	12.1250 in	A =	58.0469 in ²	C _{right} =	12.1250 in	A =	49.6094 in ²
C _{left} =	12.1250 in	r _y =	10.3826 in	C _{left} =	12.1250 in	r _y =	10.4819 in



Made By DWC
Checked By KMW

Date 1/31/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

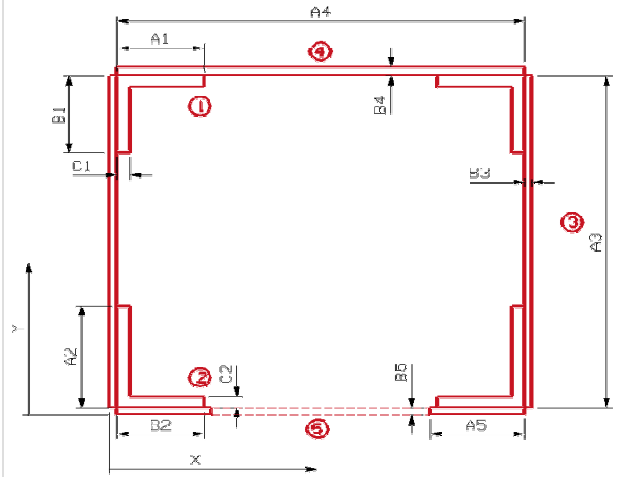
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L37-L38

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5985	336.3153	336.3356
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5985	212.3354	214.9469
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.0890	496.2470	496.2674
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.0890	336.8139	339.4254
3	Plate	22.7500	13.3750	304.2813	1281.5833	1.2452	35.2750	1316.8583
4	Plate	8.8125	26.5625	234.0820	0.1033	11.9423	1256.8236	1256.9269
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.4327	937.3641	937.4168
Total		45.67		667.73	1287.00		3611.17	4898.18
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.2500	6.0000	-1.5000	3.3750	-5.0625	-4.5000	11.7307	-206.4137
2	0.1250	7.0000	-0.8750	9.8750	-8.6406	-3.5729	5.2307	-23.9401
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.38	-13.70	-8.07		-230.35	-238.43



Made By DWC
Checked By KMW

Date 1/31/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.6202 in	S _{top} =	403.81 in ³	y-bar =	15.1057 in	S _{top} =	400.17 in ³
I _x =	4898.18 in ⁴	S _{bott.} =	335.03 in ³	I _x =	4659.75 in ⁴	S _{bott.} =	308.48 in ³
C _{top} =	12.1298 in	A =	45.6719 in ²	C _{top} =	11.6443 in	A =	43.2969 in ²
C _{bottom} =	14.6202 in	r _x =	10.3560 in	C _{bottom} =	15.1057 in	r _x =	10.3742 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.4375	7.7344	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.9375	47.1094	6.7500	8.7500	172.2656	179.0156	
Total		45.67		556.63	426.13		4698.37	5124.50	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	6.0000	0.2500	-1.5000	0.1250	-0.1875	-0.0078	12.7254	-242.9051	-242.9130
2	7.0000	0.1250	-0.8750	0.0625	-0.0547	-0.0011	12.7879	-143.0899	-143.0911
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.38		-0.24	-0.01		-386.00	-386.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	420.47 in ³	x-bar =	12.8504 in	S _{right} =	411.16 in ³
I _y =	5124.50 in ⁴	S _{left} =	420.47 in ³	I _y =	4738.49 in ⁴	S _{left} =	368.74 in ³
C _{right} =	12.1875 in	A =	45.6719 in ²	C _{right} =	11.5246 in	A =	43.2969 in ²
C _{left} =	12.1875 in	r _y =	10.5926 in	C _{left} =	12.8504 in	r _y =	10.4615 in



Made By DWC
Checked By KMW

Date 1/31/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L38-L39

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5985	336.3153	336.3356
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5985	212.3354	214.9469
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.0890	496.2470	496.2674
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.0890	336.8139	339.4254
3	Plate	22.7500	13.3750	304.2813	1281.5833	1.2452	35.2750	1316.8583
4	Plate	8.8125	26.5625	234.0820	0.1033	11.9423	1256.8236	1256.9269
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.4327	937.3641	937.4168
Total		45.67		667.73	1287.00		3611.17	4898.18
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	23.5000	0.1875	-4.4063	26.6563	-117.4541	-0.0129	13.3212	-781.9107
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-4.41	-117.45	-0.01		-781.91	-781.92



Made By DWC
Checked By KMW

Date 1/31/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.6202 in	S _{top} =	403.81 in ³	y-bar =	13.3350 in	S _{top} =	306.84 in ³
I _x =	4898.18 in ⁴	S _{bottom} =	335.03 in ³	I _x =	4116.25 in ⁴	S _{bottom} =	308.68 in ³
C _{top} =	12.1298 in	A =	45.6719 in ²	C _{top} =	13.4150 in	A =	41.2656 in ²
C _{bottom} =	14.6202 in	r _x =	10.3560 in	C _{bottom} =	13.3350 in	r _x =	9.9875 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.4375	7.7344	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.9375	47.1094	6.7500	8.7500	172.2656	179.0156	
Total		45.67		556.63	426.13		4698.37	5124.50	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1875	23.5000	-4.4063	12.1875	-53.7012	-202.7793	0.0000	0.0000	-202.7793
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-4.41		-53.70	-202.78		0.00	-202.78

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	420.47 in ³	x-bar =	12.1875 in	S _{right} =	403.83 in ³
I _y =	5124.50 in ⁴	S _{left} =	420.47 in ³	I _y =	4921.72 in ⁴	S _{left} =	403.83 in ³
C _{right} =	12.1875 in	A =	45.6719 in ²	C _{right} =	12.1875 in	A =	41.2656 in ²
C _{left} =	12.1875 in	r _y =	10.5926 in	C _{left} =	12.1875 in	r _y =	10.9210 in



Made By CTG
 Checked By NRF

Date 1/18/2012
 Date 1/25/2012

Job No. P402110046
 Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.5000$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L39-L40

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x, gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.6813	341.1297	341.1500
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.6813	216.0111	218.6226
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.0062	490.4368	490.4571
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.0062	332.2201	334.8317
3	Plate	26.0000	13.3750	347.7500	1464.6667	1.1625	35.1358	1499.8025
4	Plate	8.8125	26.5625	234.0820	0.1033	12.0250	1274.2955	1274.3988
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.3500	926.6497	926.7024
Total		48.92		711.20	1470.09		3615.88	5085.97
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.5375 in	S _{top} =	416.46 in ³	y-bar =	14.5375 in	S _{top} =	416.46 in ³
I _x =	5085.97 in ⁴	S _{bott.} =	349.85 in ³	I _x =	5085.97 in ⁴	S _{bott.} =	349.85 in ³
C _{top} =	12.2125 in	A =	48.9219 in ²	C _{top} =	12.2125 in	A =	48.9219 in ²
C _{bottom} =	14.5375 in	r _x =	10.1961 in	C _{bottom} =	14.5375 in	r _x =	10.1961 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.5000	3.1250	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.6563	0.7562	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	22.0000	27.5000	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.8438	27.4762	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.5000	3.1250	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.6563	0.7562	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	22.0000	27.5000	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.8438	27.4762	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	13.0000	0.2500	3.2500	0.2708	12.0000	1872.0000	1872.2708	
3 (Right)	Plate	13.0000	24.2500	315.2500	0.2708	12.0000	1872.0000	1872.2708	
4	Plate	8.8125	12.2500	107.9531	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.5000	7.8750	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	21.0000	47.2500	6.7500	8.7500	172.2656	179.0156	
Total		48.92		599.29	426.30		5183.41	5609.72	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2500 in	S _{right} =	457.94 in ³	x-bar =	12.2500 in	S _{right} =	457.94 in ³
I _y =	5609.72 in ⁴	S _{left} =	457.94 in ³	I _y =	5609.72 in ⁴	S _{left} =	457.94 in ³
C _{right} =	12.2500 in	A =	48.9219 in ²	C _{right} =	12.2500 in	A =	48.9219 in ²
C _{left} =	12.2500 in	r _y =	10.7083 in	C _{left} =	12.2500 in	r _y =	10.7083 in



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

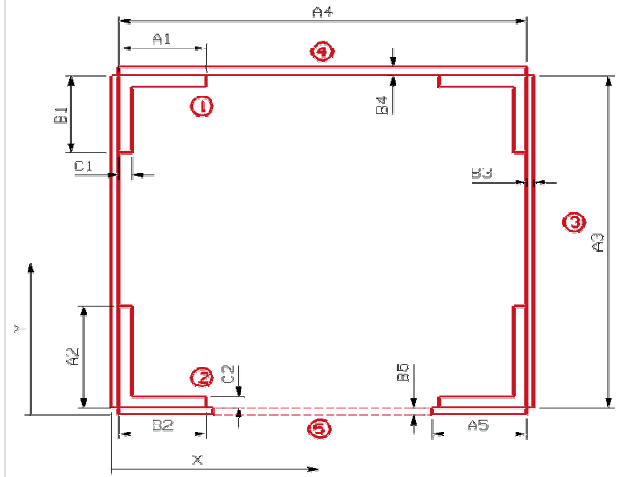
Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:
 $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.5000$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L40-L41

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x, gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.6813	341.1297	341.1500
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.6813	216.0111	218.6226
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.0062	490.4368	490.4571
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.0062	332.2201	334.8317
3	Plate	26.0000	13.3750	347.7500	1464.6667	1.1625	35.1358	1499.8025
4	Plate	8.8125	26.5625	234.0820	0.1033	12.0250	1274.2955	1274.3988
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.3500	926.6497	926.7024
Total		48.92		711.20	1470.09		3615.88	5085.97
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.5375 in	S _{top} =	416.46 in ³	y-bar =	14.5375 in	S _{top} =	416.46 in ³
I _x =	5085.97 in ⁴	S _{bott.} =	349.85 in ³	I _x =	5085.97 in ⁴	S _{bott.} =	349.85 in ³
C _{top} =	12.2125 in	A =	48.9219 in ²	C _{top} =	12.2125 in	A =	48.9219 in ²
C _{bottom} =	14.5375 in	r _x =	10.1961 in	C _{bottom} =	14.5375 in	r _x =	10.1961 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.5000	3.1250	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.6563	0.7562	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	22.0000	27.5000	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.8438	27.4762	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.5000	3.1250	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.6563	0.7562	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	22.0000	27.5000	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.8438	27.4762	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	13.0000	0.2500	3.2500	0.2708	12.0000	1872.0000	1872.2708	
3 (Right)	Plate	13.0000	24.2500	315.2500	0.2708	12.0000	1872.0000	1872.2708	
4	Plate	8.8125	12.2500	107.9531	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.5000	7.8750	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	21.0000	47.2500	6.7500	8.7500	172.2656	179.0156	
Total		48.92		599.29	426.30		5183.41	5609.72	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2500 in	S _{right} =	457.94 in ³	x-bar =	12.2500 in	S _{right} =	457.94 in ³
I _y =	5609.72 in ⁴	S _{left} =	457.94 in ³	I _y =	5609.72 in ⁴	S _{left} =	457.94 in ³
C _{right} =	12.2500 in	A =	48.9219 in ²	C _{right} =	12.2500 in	A =	48.9219 in ²
C _{left} =	12.2500 in	r _y =	10.7083 in	C _{left} =	12.2500 in	r _y =	10.7083 in



Made By DWC
Checked By KMW

Date 1/31/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L41-L42

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5985	336.3153	336.3356
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5985	212.3354	214.9469
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.0890	496.2470	496.2674
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.0890	336.8139	339.4254
3	Plate	22.7500	13.3750	304.2813	1281.5833	1.2452	35.2750	1316.8583
4	Plate	8.8125	26.5625	234.0820	0.1033	11.9423	1256.8236	1256.9269
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.4327	937.3641	937.4168
Total		45.67		667.73	1287.00		3611.17	4898.18
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	6.0000	0.1250	-0.7500	0.0625	-0.0469	-0.0010	14.3691	-154.8542
2	6.0000	0.1250	-0.7500	0.0625	-0.0469	-0.0010	14.3691	-154.8542
3	3.6875	0.1250	-0.4609	0.6250	-0.2881	-0.0006	13.8066	-87.8654
4	3.6875	0.1250	-0.4609	0.6250	-0.2881	-0.0006	13.8066	-87.8654
5	0.1250	3.6875	-0.4609	2.5313	-1.1667	-0.5223	11.9004	-65.2777
6	0.1250	3.6875	-0.4609	2.5313	-1.1667	-0.5223	11.9004	-65.2777
7	23.5000	0.1875	-4.4063	26.6563	-117.4541	-0.0129	12.2246	-658.4746
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-7.75	-120.46	-1.06		-1274.47	-1275.53



Made By DWC
Checked By KMW

Date 1/31/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.6202 in	S _{top} =	403.81 in ³	y-bar =	14.4316 in	S _{top} =	294.09 in ³
I _x =	4898.18 in ⁴	S _{bott.} =	335.03 in ³	I _x =	3622.65 in ⁴	S _{bott.} =	251.02 in ³
C _{top} =	12.1298 in	A =	45.6719 in ²	C _{top} =	12.3184 in	A =	37.9219 in ²
C _{bottom} =	14.6202 in	r _x =	10.3560 in	C _{bottom} =	14.4316 in	r _x =	9.7739 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.4375	7.7344	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.9375	47.1094	6.7500	8.7500	172.2656	179.0156	
Total		45.67		556.63	426.13		4698.37	5124.50	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1250	6.0000	-0.7500	3.4375	-2.5781	-2.2500	8.7500	-57.4219	-59.6719
2	0.1250	6.0000	-0.7500	20.9375	-15.7031	-2.2500	8.7500	-57.4219	-59.6719
3	0.1250	3.6875	-0.4609	2.5938	-1.1956	-0.5223	9.5938	-42.4247	-42.9470
4	0.1250	3.6875	-0.4609	21.7813	-10.0398	-0.5223	9.5938	-42.4247	-42.9470
5	3.6875	0.1250	-0.4609	0.6875	-0.3169	-0.0006	11.5000	-60.9590	-60.9596
6	3.6875	0.1250	-0.4609	23.6875	-10.9185	-0.0006	11.5000	-60.9590	-60.9596
7	0.1875	23.5000	-4.4063	12.1875	-53.7012	-202.7793	0.0000	0.0000	-202.7793
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-7.75		-94.45	-208.33		-321.61	-529.94

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	420.47 in ³	x-bar =	12.1875 in	S _{right} =	376.99 in ³
I _y =	5124.50 in ⁴	S _{left} =	420.47 in ³	I _y =	4594.56 in ⁴	S _{left} =	376.99 in ³
C _{right} =	12.1875 in	A =	45.6719 in ²	C _{right} =	12.1875 in	A =	37.9219 in ²
C _{left} =	12.1875 in	r _y =	10.5926 in	C _{left} =	12.1875 in	r _y =	11.0072 in



Made By DWC
Checked By KMW

Date 1/31/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_f = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3125$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L42-L43

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg		2.5000	26.2188	65.5469	0.0203	11.5031	330.8057	330.8260
	Vertical Leg		2.3047	24.2188	55.8167	2.6115	9.5031	208.1357	210.7472
2	Horizontal Leg		2.5000	0.5313	1.3281	0.0203	14.1844	502.9900	503.0104
	Vertical Leg		2.3047	2.5313	5.8337	2.6115	12.1844	342.1506	344.7621
3	Plate		19.5000	13.3750	260.8125	1098.5000	1.3406	35.0460	1133.5460
4	Plate		8.8125	26.5625	234.0820	0.1033	11.8469	1236.8243	1236.9276
5	Perforated Plate		4.5000	0.1875	0.8438	0.0527	14.5281	949.7966	949.8493
Total			42.42		624.26	1103.92		3605.75	4709.67
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	23.5000	0.2500	-5.8750	26.6250	-156.4219	-0.0306	13.8239	-1122.7067	-1122.7372
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-5.88		-156.42	-0.03		-1122.71	-1122.74



Made By DWC
Checked By KMW

Date 1/31/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.7156 in	S _{top} =	391.35 in ³	y-bar =	12.8011 in	S _{top} =	257.15 in ³
I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³	I _x =	3586.93 in ⁴	S _{bott.} =	280.20 in ³
C _{top} =	12.0344 in	A =	42.4219 in ²	C _{top} =	13.9489 in	A =	36.5469 in ²
C _{bottom} =	14.7156 in	r _x =	10.5366 in	C _{bottom} =	12.8011 in	r _x =	9.9069 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	9.7500	0.1875	1.8281	0.1143	11.9375	1389.4131	1389.5273	
3 (Right)	Plate	9.7500	24.0625	234.6094	0.1143	11.9375	1389.4131	1389.5273	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.3750	7.5938	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.8750	46.9688	6.7500	8.7500	172.2656	179.0156	
Total		42.42		514.37	425.99		4218.24	4644.23	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.2500	23.5000	-5.8750	12.1250	-71.2344	-270.3724	0.0000	0.0000	-270.3724
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-5.88		-71.23	-270.37		0.00	-270.37

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	383.03 in ³	x-bar =	12.1250 in	S _{right} =	360.73 in ³
I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³	I _y =	4373.86 in ⁴	S _{left} =	360.73 in ³
C _{right} =	12.1250 in	A =	42.4219 in ²	C _{right} =	12.1250 in	A =	36.5469 in ²
C _{left} =	12.1250 in	r _y =	10.4631 in	C _{left} =	12.1250 in	r _y =	10.9397 in



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_f = 0.3125$ in

Bottom Angles:
 $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3125$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L43-L44

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5031	330.8057	330.8260
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5031	208.1357	210.7472
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.1844	502.9900	503.0104
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.1844	342.1506	344.7621
3	Plate	19.5000	13.3750	260.8125	1098.5000	1.3406	35.0460	1133.5460
4	Plate	8.8125	26.5625	234.0820	0.1033	11.8469	1236.8243	1236.9276
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.5281	949.7966	949.8493
Total		42.42		624.26	1103.92		3605.75	4709.67
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.7156 in	S _{top} =	391.35 in ³	y-bar =	14.7156 in	S _{top} =	391.35 in ³
I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³	I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³
C _{top} =	12.0344 in	A =	42.4219 in ²	C _{top} =	12.0344 in	A =	42.4219 in ²
C _{bottom} =	14.7156 in	r _x =	10.5366 in	C _{bottom} =	14.7156 in	r _x =	10.5366 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	9.7500	0.1875	1.8281	0.1143	11.9375	1389.4131	1389.5273	
3 (Right)	Plate	9.7500	24.0625	234.6094	0.1143	11.9375	1389.4131	1389.5273	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.3750	7.5938	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.8750	46.9688	6.7500	8.7500	172.2656	179.0156	
Total		42.42		514.37	425.99		4218.24	4644.23	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	383.03 in ³	x-bar =	12.1250 in	S _{right} =	383.03 in ³
I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³	I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³
C _{right} =	12.1250 in	A =	42.4219 in ²	C _{right} =	12.1250 in	A =	42.4219 in ²
C _{left} =	12.1250 in	r _y =	10.4631 in	C _{left} =	12.1250 in	r _y =	10.4631 in



Made By DWC
Checked By KMW

Date 1/31/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

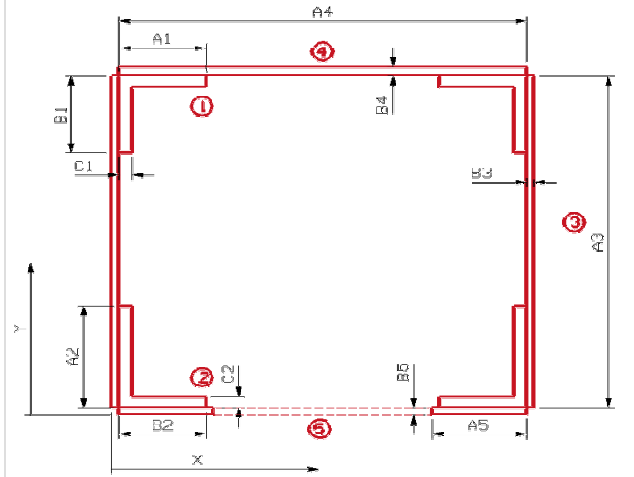
Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_f = 0.5000$ in

Bottom Angles:
 $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.5000$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member L44-L45

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	4.0000	26.2500	105.0000	0.0833	12.0515	580.9547	581.0381	
	Vertical Leg	3.5000	24.2500	84.8750	3.5729	10.0515	353.6144	357.1873	
2	Horizontal Leg	4.0000	0.7500	3.0000	0.0833	13.4485	723.4485	723.5318	
	Vertical Leg	3.5000	2.7500	9.6250	3.5729	11.4485	458.7384	462.3114	
3	Plate	22.7500	13.5000	307.1250	1281.5833	0.6985	11.0997	1292.6831	
4	Plate	8.8125	26.6875	235.1836	0.1033	12.4890	1374.5310	1374.6343	
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	13.9485	1167.3637	1167.4887	
Total		52.56		746.31	1289.12		4669.75	5958.87	
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)	
1	2.0000	0.5000	-1.0000	0.2500	-0.2500	-0.0208	14.2190	-202.1804	-202.2012
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.00	-0.25	-0.02		-202.18	-202.20	



Made By DWC
Checked By KMW

Date 1/31/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.1985 in	S _{top} =	470.07 in ³	y-bar =	14.4690 in	S _{top} =	464.02 in ³
I _x =	5958.87 in ⁴	S _{bott.} =	419.68 in ³	I _x =	5756.67 in ⁴	S _{bott.} =	397.86 in ³
C _{top} =	12.6765 in	A =	52.5625 in ²	C _{top} =	12.4060 in	A =	51.5625 in ²
C _{bottom} =	14.1985 in	r _x =	10.6474 in	C _{bottom} =	14.4690 in	r _x =	10.5662 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.0000	2.4375	4.8750	2.6667	9.7500	190.1250	192.7917	
	Vertical Leg	1.7500	0.6875	1.2031	0.0365	11.5000	231.4375	231.4740	
1 (Right)	Horizontal Leg	2.0000	21.9375	43.8750	2.6667	9.7500	190.1250	192.7917	
	Vertical Leg	1.7500	23.6875	41.4531	0.0365	11.5000	231.4375	231.4740	
2 (Left)	Horizontal Leg	2.0000	2.4375	4.8750	2.6667	9.7500	190.1250	192.7917	
	Vertical Leg	1.7500	0.6875	1.2031	0.0365	11.5000	231.4375	231.4740	
2 (Right)	Horizontal Leg	2.0000	21.9375	43.8750	2.6667	9.7500	190.1250	192.7917	
	Vertical Leg	1.7500	23.6875	41.4531	0.0365	11.5000	231.4375	231.4740	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.4375	10.3125	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.9375	62.8125	9.0000	8.7500	229.6875	238.6875	
Total		52.56		640.61	434.73		5404.58	5839.32	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.5000	2.0000	-1.0000	1.4375	-1.4375	-0.3333	10.9585	-120.0884	-120.4217
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.00		-1.44	-0.33		-120.09	-120.42

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	479.12 in ³	x-bar =	12.3960 in	S _{right} =	477.41 in ³
I _y =	5839.32 in ⁴	S _{left} =	479.12 in ³	I _y =	5718.90 in ⁴	S _{left} =	461.35 in ³
C _{right} =	12.1875 in	A =	52.5625 in ²	C _{right} =	11.9790 in	A =	51.5625 in ²
C _{left} =	12.1875 in	r _y =	10.5401 in	C _{left} =	12.3960 in	r _y =	10.5315 in



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

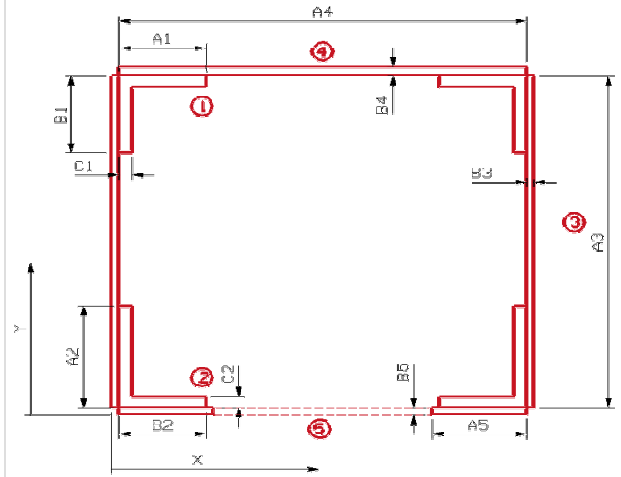
Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_f = 0.5000$ in

Bottom Angles:
 $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.5000$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member L45-L46

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	4.0000	26.2500	105.0000	0.0833	12.0515	580.9547	581.0381
	Vertical Leg	3.5000	24.2500	84.8750	3.5729	10.0515	353.6144	357.1873
2	Horizontal Leg	4.0000	0.7500	3.0000	0.0833	13.4485	723.4485	723.5318
	Vertical Leg	3.5000	2.7500	9.6250	3.5729	11.4485	458.7384	462.3114
3	Plate	22.7500	13.5000	307.1250	1281.5833	0.6985	11.0997	1292.6831
4	Plate	8.8125	26.6875	235.1836	0.1033	12.4890	1374.5310	1374.6343
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	13.9485	1167.3637	1167.4887
Total		52.56		746.31	1289.12		4669.75	5958.87
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00	0.00	0.00	0.00



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.1985 in	S _{top} =	470.07 in ³	y-bar =	14.1985 in	S _{top} =	470.07 in ³
I _x =	5958.87 in ⁴	S _{bott.} =	419.68 in ³	I _x =	5958.87 in ⁴	S _{bott.} =	419.68 in ³
C _{top} =	12.6765 in	A =	52.5625 in ²	C _{top} =	12.6765 in	A =	52.5625 in ²
C _{bottom} =	14.1985 in	r _x =	10.6474 in	C _{bottom} =	14.1985 in	r _x =	10.6474 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.0000	2.4375	4.8750	2.6667	9.7500	190.1250	192.7917	
	Vertical Leg	1.7500	0.6875	1.2031	0.0365	11.5000	231.4375	231.4740	
1 (Right)	Horizontal Leg	2.0000	21.9375	43.8750	2.6667	9.7500	190.1250	192.7917	
	Vertical Leg	1.7500	23.6875	41.4531	0.0365	11.5000	231.4375	231.4740	
2 (Left)	Horizontal Leg	2.0000	2.4375	4.8750	2.6667	9.7500	190.1250	192.7917	
	Vertical Leg	1.7500	0.6875	1.2031	0.0365	11.5000	231.4375	231.4740	
2 (Right)	Horizontal Leg	2.0000	21.9375	43.8750	2.6667	9.7500	190.1250	192.7917	
	Vertical Leg	1.7500	23.6875	41.4531	0.0365	11.5000	231.4375	231.4740	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.4375	10.3125	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.9375	62.8125	9.0000	8.7500	229.6875	238.6875	
Total		52.56		640.61	434.73		5404.58	5839.32	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	479.12 in ³	x-bar =	12.1875 in	S _{right} =	479.12 in ³
I _y =	5839.32 in ⁴	S _{left} =	479.12 in ³	I _y =	5839.32 in ⁴	S _{left} =	479.12 in ³
C _{right} =	12.1875 in	A =	52.5625 in ²	C _{right} =	12.1875 in	A =	52.5625 in ²
C _{left} =	12.1875 in	r _y =	10.5401 in	C _{left} =	12.1875 in	r _y =	10.5401 in



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_f = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3125$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L46-L47

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5031	330.8057	330.8260
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5031	208.1357	210.7472
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.1844	502.9900	503.0104
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.1844	342.1506	344.7621
3	Plate	19.5000	13.3750	260.8125	1098.5000	1.3406	35.0460	1133.5460
4	Plate	8.8125	26.5625	234.0820	0.1033	11.8469	1236.8243	1236.9276
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.5281	949.7966	949.8493
Total		42.42		624.26	1103.92		3605.75	4709.67
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.7156 in	S _{top} =	391.35 in ³	y-bar =	14.7156 in	S _{top} =	391.35 in ³
I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³	I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³
C _{top} =	12.0344 in	A =	42.4219 in ²	C _{top} =	12.0344 in	A =	42.4219 in ²
C _{bottom} =	14.7156 in	r _x =	10.5366 in	C _{bottom} =	14.7156 in	r _x =	10.5366 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	9.7500	0.1875	1.8281	0.1143	11.9375	1389.4131	1389.5273	
3 (Right)	Plate	9.7500	24.0625	234.6094	0.1143	11.9375	1389.4131	1389.5273	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.3750	7.5938	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.8750	46.9688	6.7500	8.7500	172.2656	179.0156	
Total		42.42		514.37	425.99		4218.24	4644.23	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	383.03 in ³	x-bar =	12.1250 in	S _{right} =	383.03 in ³
I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³	I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³
C _{right} =	12.1250 in	A =	42.4219 in ²	C _{right} =	12.1250 in	A =	42.4219 in ²
C _{left} =	12.1250 in	r _y =	10.4631 in	C _{left} =	12.1250 in	r _y =	10.4631 in



Made By NRF
Checked By CTG

Date 1/25/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

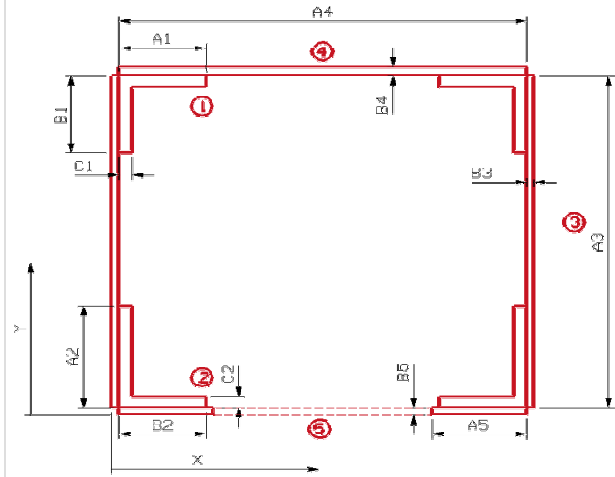
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L47-L48

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5031	330.8057	330.8260
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5031	208.1357	210.7472
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.1844	502.9900	503.0104
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.1844	342.1506	344.7621
3	Plate	19.5000	13.3750	260.8125	1098.5000	1.3406	35.0460	1133.5460
4	Plate	8.8125	26.5625	234.0820	0.1033	11.8469	1236.8243	1236.9276
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.5281	949.7966	949.8493
Total		42.42		624.26	1103.92		3605.75	4709.67
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By NRF
Checked By CTG

Date 1/25/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.7156 in	S _{top} =	391.35 in ³	y-bar =	14.7156 in	S _{top} =	391.35 in ³
I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³	I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³
C _{top} =	12.0344 in	A =	42.4219 in ²	C _{top} =	12.0344 in	A =	42.4219 in ²
C _{bottom} =	14.7156 in	r _x =	10.5366 in	C _{bottom} =	14.7156 in	r _x =	10.5366 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	9.7500	0.1875	1.8281	0.1143	11.9375	1389.4131	1389.5273	
3 (Right)	Plate	9.7500	24.0625	234.6094	0.1143	11.9375	1389.4131	1389.5273	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.3750	7.5938	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.8750	46.9688	6.7500	8.7500	172.2656	179.0156	
Total		42.42		514.37	425.99		4218.24	4644.23	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	383.03 in ³	x-bar =	12.1250 in	S _{right} =	383.03 in ³
I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³	I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³
C _{right} =	12.1250 in	A =	42.4219 in ²	C _{right} =	12.1250 in	A =	42.4219 in ²
C _{left} =	12.1250 in	r _y =	10.4631 in	C _{left} =	12.1250 in	r _y =	10.4631 in



Made By KMW
Checked By ADK

Date 2/7/2012
Date 2/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

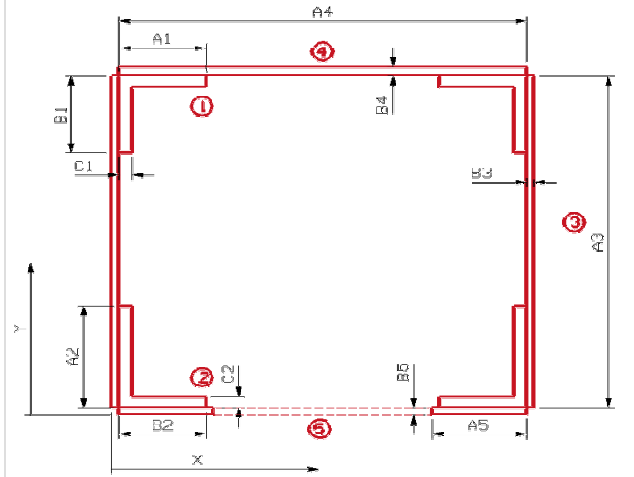
Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_f = 0.3125$ in

Bottom Angles:
 $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3125$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L48-L49

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5985	336.3153	336.3356	
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5985	212.3354	214.9469	
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.0890	496.2470	496.2674	
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.0890	336.8139	339.4254	
3	Plate	22.7500	13.3750	304.2813	1281.5833	1.2452	35.2750	1316.8583	
4	Plate	8.8125	26.5625	234.0820	0.1033	11.9423	1256.8236	1256.9269	
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.4327	937.3641	937.4168	
Total		45.67		667.73	1287.00		3611.17	4898.18	
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	
1	0.1250	26.0000	-3.2500	13.3750	-43.4688	-183.0833	1.3406	-5.8410	-188.9243
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-3.25	-43.47	-183.08		-5.84	-188.92	



Made By KMW
Checked By ADK

Date 2/7/2012
Date 2/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.6202 in	S _{top} =	403.81 in ³	y-bar =	14.7156 in	S _{top} =	391.32 in ³
I _x =	4898.18 in ⁴	S _{bott.} =	335.03 in ³	I _x =	4709.25 in ⁴	S _{bott.} =	320.02 in ³
C _{top} =	12.1298 in	A =	45.6719 in ²	C _{top} =	12.0344 in	A =	42.4219 in ²
C _{bottom} =	14.6202 in	r _x =	10.3560 in	C _{bottom} =	14.7156 in	r _x =	10.5361 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.4375	7.7344	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.9375	47.1094	6.7500	8.7500	172.2656	179.0156	
Total		45.67		556.63	426.13		4698.37	5124.50	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	26.0000	0.1250	-3.2500	0.0000	0.0000	-0.0042	0.0000	0.0000	-0.0042
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-3.25		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	420.47 in ³	x-bar =	13.1212 in	S _{right} =	455.36 in ³
I _y =	5124.50 in ⁴	S _{left} =	420.47 in ³	I _y =	5124.49 in ⁴	S _{left} =	390.55 in ³
C _{right} =	12.1875 in	A =	45.6719 in ²	C _{right} =	11.2538 in	A =	42.4219 in ²
C _{left} =	12.1875 in	r _y =	10.5926 in	C _{left} =	13.1212 in	r _y =	10.9908 in



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.5000$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L49-L50

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.6813	341.1297	341.1500
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.6813	216.0111	218.6226
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.0062	490.4368	490.4571
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.0062	332.2201	334.8317
3	Plate	26.0000	13.3750	347.7500	1464.6667	1.1625	35.1358	1499.8025
4	Plate	8.8125	26.5625	234.0820	0.1033	12.0250	1274.2955	1274.3988
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.3500	926.6497	926.7024
Total		48.92		711.20	1470.09		3615.88	5085.97
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.5375	in	$S_{top} = 416.46 \text{ in}^3$	y-bar =	14.5375	in	$S_{top} = 416.46 \text{ in}^3$
$I_x =$	5085.97	in^4	$S_{bott.} = 349.85 \text{ in}^3$	$I_x =$	5085.97	in^4	$S_{bott.} = 349.85 \text{ in}^3$
$C_{top} =$	12.2125	in	$A = 48.9219 \text{ in}^2$	$C_{top} =$	12.2125	in	$A = 48.9219 \text{ in}^2$
$C_{bottom} =$	14.5375	in	$r_x = 10.1961 \text{ in}$	$C_{bottom} =$	14.5375	in	$r_x = 10.1961 \text{ in}$

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I_o	d	Ad^2	$I_{y,gross}$	
Element	Description	(in^2)	(in)	(in^3)	(in^4)	(in)	(in^4)	(in^4)	
1 (Left)	Horizontal Leg	1.2500	2.5000	3.1250	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.6563	0.7562	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	22.0000	27.5000	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.8438	27.4762	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.5000	3.1250	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.6563	0.7562	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	22.0000	27.5000	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.8438	27.4762	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	13.0000	0.2500	3.2500	0.2708	12.0000	1872.0000	1872.2708	
3 (Right)	Plate	13.0000	24.2500	315.2500	0.2708	12.0000	1872.0000	1872.2708	
4	Plate	8.8125	12.2500	107.9531	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.5000	7.8750	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	21.0000	47.2500	6.7500	8.7500	172.2656	179.0156	
Total		48.92		599.29	426.30		5183.41	5609.72	
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y,loss}$
Loss #	b (in)	h (in)	(in^2)	(in)	(in^3)	(in^4)	(in)	(in^4)	(in^4)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2500	in	$S_{right} = 457.94 \text{ in}^3$	x-bar =	12.2500	in	$S_{right} = 457.94 \text{ in}^3$
$I_y =$	5609.72	in^4	$S_{left} = 457.94 \text{ in}^3$	$I_y =$	5609.72	in^4	$S_{left} = 457.94 \text{ in}^3$
$C_{right} =$	12.2500	in	$A = 48.9219 \text{ in}^2$	$C_{right} =$	12.2500	in	$A = 48.9219 \text{ in}^2$
$C_{left} =$	12.2500	in	$r_y = 10.7083 \text{ in}$	$C_{left} =$	12.2500	in	$r_y = 10.7083 \text{ in}$



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

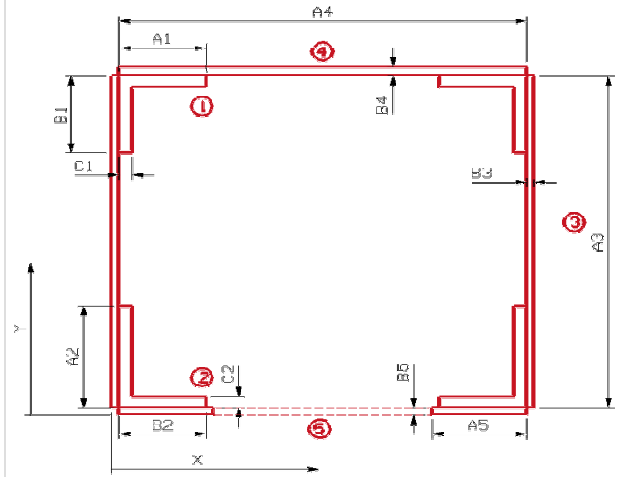
Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_f = 0.3125$ in

Bottom Angles:
 $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3125$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L50-L51

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5985	336.3153	336.3356
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5985	212.3354	214.9469
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.0890	496.2470	496.2674
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.0890	336.8139	339.4254
3	Plate	22.7500	13.3750	304.2813	1281.5833	1.2452	35.2750	1316.8583
4	Plate	8.8125	26.5625	234.0820	0.1033	11.9423	1256.8236	1256.9269
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.4327	937.3641	937.4168
Total		45.67		667.73	1287.00		3611.17	4898.18
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00	0.00	0.00	0.00



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.6202 in	S _{top} =	403.81 in ³	y-bar =	14.6202 in	S _{top} =	403.81 in ³
I _x =	4898.18 in ⁴	S _{bott.} =	335.03 in ³	I _x =	4898.18 in ⁴	S _{bott.} =	335.03 in ³
C _{top} =	12.1298 in	A =	45.6719 in ²	C _{top} =	12.1298 in	A =	45.6719 in ²
C _{bottom} =	14.6202 in	r _x =	10.3560 in	C _{bottom} =	14.6202 in	r _x =	10.3560 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.4375	7.7344	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.9375	47.1094	6.7500	8.7500	172.2656	179.0156	
Total		45.67		556.63	426.13		4698.37	5124.50	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	420.47 in ³	x-bar =	12.1875 in	S _{right} =	420.47 in ³
I _y =	5124.50 in ⁴	S _{left} =	420.47 in ³	I _y =	5124.50 in ⁴	S _{left} =	420.47 in ³
C _{right} =	12.1875 in	A =	45.6719 in ²	C _{right} =	12.1875 in	A =	45.6719 in ²
C _{left} =	12.1875 in	r _y =	10.5926 in	C _{left} =	12.1875 in	r _y =	10.5926 in



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L51-L52

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5985	336.3153	336.3356
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5985	212.3354	214.9469
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.0890	496.2470	496.2674
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.0890	336.8139	339.4254
3	Plate	22.7500	13.3750	304.2813	1281.5833	1.2452	35.2750	1316.8583
4	Plate	8.8125	26.5625	234.0820	0.1033	11.9423	1256.8236	1256.9269
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.4327	937.3641	937.4168
Total		45.67		667.73	1287.00		3611.17	4898.18
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.6202 in	S _{top} =	403.81 in ³	y-bar =	14.6202 in	S _{top} =	403.81 in ³
I _x =	4898.18 in ⁴	S _{bott.} =	335.03 in ³	I _x =	4898.18 in ⁴	S _{bott.} =	335.03 in ³
C _{top} =	12.1298 in	A =	45.6719 in ²	C _{top} =	12.1298 in	A =	45.6719 in ²
C _{bottom} =	14.6202 in	r _x =	10.3560 in	C _{bottom} =	14.6202 in	r _x =	10.3560 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.4375	7.7344	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.9375	47.1094	6.7500	8.7500	172.2656	179.0156	
Total		45.67		556.63	426.13		4698.37	5124.50	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	420.47 in ³	x-bar =	12.1875 in	S _{right} =	420.47 in ³
I _y =	5124.50 in ⁴	S _{left} =	420.47 in ³	I _y =	5124.50 in ⁴	S _{left} =	420.47 in ³
C _{right} =	12.1875 in	A =	45.6719 in ²	C _{right} =	12.1875 in	A =	45.6719 in ²
C _{left} =	12.1875 in	r _y =	10.5926 in	C _{left} =	12.1875 in	r _y =	10.5926 in



Made By DWC
Checked By KMW

Date 2/1/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

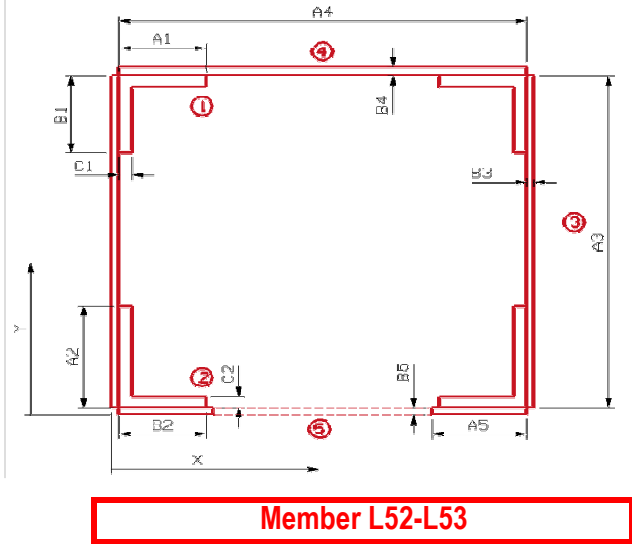
Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:
 $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L52-L53

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5985	336.3153	336.3356
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5985	212.3354	214.9469
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.0890	496.2470	496.2674
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.0890	336.8139	339.4254
3	Plate	22.7500	13.3750	304.2813	1281.5833	1.2452	35.2750	1316.8583
4	Plate	8.8125	26.5625	234.0820	0.1033	11.9423	1256.8236	1256.9269
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.4327	937.3641	937.4168
Total		45.67		667.73	1287.00		3611.17	4898.18
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	6.0000	0.1875	-1.1250	0.0938	-0.1055	-0.0033	15.2792	-262.6350
2	6.0000	0.1875	-1.1250	0.0938	-0.1055	-0.0033	15.2792	-262.6350
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.25	-0.21	-0.01		-525.27	-525.28



Made By DWC
Checked By KMW

Date 2/1/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.6202 in	S _{top} =	403.81 in ³	y-bar =	15.3729 in	S _{top} =	384.36 in ³
I _x =	4898.18 in ⁴	S _{bottom} =	335.03 in ³	I _x =	4372.90 in ⁴	S _{bottom} =	284.45 in ³
C _{top} =	12.1298 in	A =	45.6719 in ²	C _{top} =	11.3771 in	A =	43.4219 in ²
C _{bottom} =	14.6202 in	r _x =	10.3560 in	C _{bottom} =	15.3729 in	r _x =	10.0353 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.4375	7.7344	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.9375	47.1094	6.7500	8.7500	172.2656	179.0156	
Total		45.67		556.63	426.13		4698.37	5124.50	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1875	6.0000	-1.1250	3.4375	-3.8672	-3.3750	8.7500	-86.1328	-89.5078
2	0.1875	6.0000	-1.1250	20.9375	-23.5547	-3.3750	8.7500	-86.1328	-89.5078
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.25		-27.42	-6.75		-172.27	-179.02

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	420.47 in ³	x-bar =	12.1875 in	S _{right} =	405.78 in ³
I _y =	5124.50 in ⁴	S _{left} =	420.47 in ³	I _y =	4945.48 in ⁴	S _{left} =	405.78 in ³
C _{right} =	12.1875 in	A =	45.6719 in ²	C _{right} =	12.1875 in	A =	43.4219 in ²
C _{left} =	12.1875 in	r _y =	10.5926 in	C _{left} =	12.1875 in	r _y =	10.6721 in



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.5625$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.5625$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.5000$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.5000$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.6250$ in



Member L53-L54

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	6.7500	26.3438	177.8203	0.1780	11.9789	968.5920	968.7700
	Vertical Leg	8.3672	22.3438	186.9543	38.5702	7.9789	532.6849	571.2551
2	Horizontal Leg	6.7500	0.9063	6.1172	0.1780	13.4586	1222.6458	1222.8238
	Vertical Leg	8.3672	4.9063	41.0515	38.5702	9.4586	748.5643	787.1346
3	Plate	26.0000	13.6250	354.2500	1464.6667	0.7398	14.2301	1478.8968
4	Plate	11.7500	26.8750	315.7813	0.2448	12.5102	1838.9334	1839.1782
5	Perforated Plate	7.5000	0.3125	2.3438	0.2441	14.0523	1481.0047	1481.2488
Total		75.48		1084.32	1542.65		6806.66	8349.31
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.3648 in	S _{top} =	654.32 in ³	y-bar =	14.3648 in	S _{top} =	654.32 in ³
I _x =	8349.31 in ⁴	S _{bott.} =	581.23 in ³	I _x =	8349.31 in ⁴	S _{bott.} =	581.23 in ³
C _{top} =	12.7602 in	A =	75.4844 in ²	C _{top} =	12.7602 in	A =	75.4844 in ²
C _{bottom} =	14.3648 in	r _x =	10.5171 in	C _{bottom} =	14.3648 in	r _x =	10.5171 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.3750	3.5000	11.8125	10.1250	8.7500	258.3984	268.5234	
	Vertical Leg	4.1836	0.7813	3.2684	0.1103	11.4688	550.2774	550.3877	
1 (Right)	Horizontal Leg	3.3750	21.0000	70.8750	10.1250	8.7500	258.3984	268.5234	
	Vertical Leg	4.1836	23.7188	99.2296	0.1103	11.4688	550.2774	550.3877	
2 (Left)	Horizontal Leg	3.3750	3.5000	11.8125	10.1250	8.7500	258.3984	268.5234	
	Vertical Leg	4.1836	0.7813	3.2684	0.1103	11.4688	550.2774	550.3877	
2 (Right)	Horizontal Leg	3.3750	21.0000	70.8750	10.1250	8.7500	258.3984	268.5234	
	Vertical Leg	4.1836	23.7188	99.2296	0.1103	11.4688	550.2774	550.3877	
3 (Left)	Plate	13.0000	0.2500	3.2500	0.2708	12.0000	1872.0000	1872.2708	
3 (Right)	Plate	13.0000	24.2500	315.2500	0.2708	12.0000	1872.0000	1872.2708	
4	Plate	11.7500	12.2500	143.9375	540.7448	0.0000	0.0000	540.7448	
5 (Left)	Perforated Plate	3.7500	3.5000	13.1250	11.2500	8.7500	287.1094	298.3594	
5 (Right)	Perforated Plate	3.7500	21.0000	78.7500	11.2500	8.7500	287.1094	298.3594	
Total		75.48		924.68	604.73		7552.92	8157.65	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2500 in	S _{right} =	665.93 in ³	x-bar =	12.2500 in	S _{right} =	665.93 in ³
I _y =	8157.65 in ⁴	S _{left} =	665.93 in ³	I _y =	8157.65 in ⁴	S _{left} =	665.93 in ³
C _{right} =	12.2500 in	A =	75.4844 in ²	C _{right} =	12.2500 in	A =	75.4844 in ²
C _{left} =	12.2500 in	r _y =	10.3957 in	C _{left} =	12.2500 in	r _y =	10.3957 in



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.7500$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.7500$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.8125$ in

Top Cover Plate:

$A_4 = b = 22.0000$ in
 $B_4 = t = 0.6250$ in

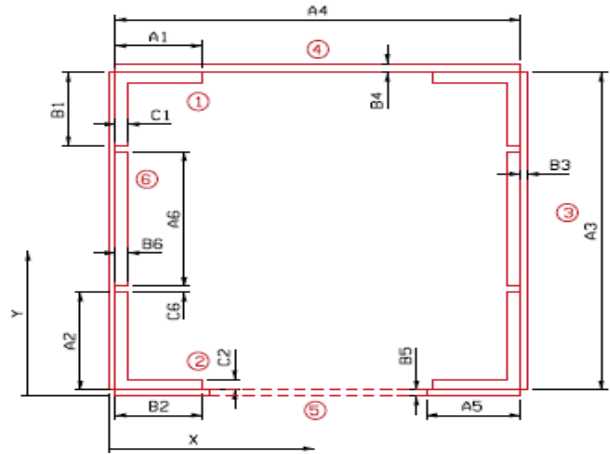
Web Plate 2:

$A_6 = b = 10.0000$ in
 $B_6 = t = 0.7500$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.7500$ in

$C_6 = \text{gap} = 0.0000$ in



Member L54-L55

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	9.0000	26.3750	237.3750	0.4219	11.9698	1289.4929	1289.9148
	Vertical Leg	10.8750	22.3750	243.3281	47.6348	7.9698	690.7615	738.3962
2	Horizontal Leg	9.0000	1.1250	10.1250	0.4219	13.2802	1587.2646	1587.6865
	Vertical Leg	10.8750	5.1250	55.7344	47.6348	9.2802	936.5706	984.2053
3	Plate	42.2500	13.7500	580.9375	2380.0833	0.6552	18.1353	2398.2187
4	Plate	13.7500	27.0625	372.1094	0.4476	12.6573	2202.8624	2203.3100
5	Perforated Plate	7.8750	0.3750	2.9531	0.3691	14.0302	1550.1582	1550.5273
6	Side Plates	15.0000	13.7500	206.2500	125.0000	0.6552	6.4386	131.4386
Total		118.63		1708.81	2602.01		8281.68	10883.70
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.4052 in	S _{top} =	839.15 in ³	y-bar =	14.4052 in	S _{top} =	839.15 in ³
I _x =	10883.70 in ⁴	S _{bott.} =	755.54 in ³	I _x =	10883.70 in ⁴	S _{bott.} =	755.54 in ³
C _{top} =	12.9698 in	A =	118.6250 in ²	C _{top} =	12.9698 in	A =	118.6250 in ²
C _{bottom} =	14.4052 in	r _x =	9.5786 in	C _{bottom} =	14.4052 in	r _x =	9.5786 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.5000	3.8125	17.1563	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	1.1875	6.4570	0.2549	10.6250	613.8428	614.0977	
1 (Right)	Horizontal Leg	4.5000	19.8125	89.1563	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	22.4375	122.0039	0.2549	10.6250	613.8428	614.0977	
2 (Left)	Horizontal Leg	4.5000	3.8125	17.1563	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	1.1875	6.4570	0.2549	10.6250	613.8428	614.0977	
2 (Right)	Horizontal Leg	4.5000	19.8125	89.1563	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	22.4375	122.0039	0.2549	10.6250	613.8428	614.0977	
3 (Left)	Plate	21.1250	0.4063	8.5820	1.1622	11.4063	2748.4161	2749.5783	
3 (Right)	Plate	21.1250	23.2188	490.4961	1.1622	11.4063	2748.4161	2749.5783	
4	Plate	13.7500	11.8125	162.4219	554.5833	0.0000	0.0000	554.5833	
5 (Left)	Perforated Plate	3.9375	3.4375	13.5352	9.0439	8.3750	276.1787	285.2227	
5 (Right)	Perforated Plate	3.9375	20.1875	79.4883	9.0439	8.3750	276.1787	285.2227	
6 (Left)	Plate	7.5000	1.1875	8.9063	0.3516	10.6250	846.6797	847.0313	
6 (Right)	Plate	7.5000	22.4375	168.2813	0.3516	10.6250	846.6797	847.0313	
Total		118.63		1401.26	630.72		11349.92	11980.64	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	11.8125 in	S _{right} =	1014.23 in ³	x-bar =	11.8125 in	S _{right} =	1014.23 in ³
I _y =	11980.64 in ⁴	S _{left} =	1014.23 in ³	I _y =	11980.64 in ⁴	S _{left} =	1014.23 in ³
C _{right} =	11.8125 in	A =	118.6250 in ²	C _{right} =	11.8125 in	A =	118.6250 in ²
C _{left} =	11.8125 in	r _y =	10.0497 in	C _{left} =	11.8125 in	r _y =	10.0497 in



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_l = 0.7500$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_l = 0.7500$ in

Top Cover Plate: PL

$A_6 = b = 22.0000$ in
 $B_6 = t = 0.6250$ in

Side Plate 1: PL

$A_3 = b = 10.0000$ in
 $B_3 = t = 0.7500$ in

Web Plate 1: PL

$A_4 = b = 26.0000$ in
 $B_4 = t = 0.8750$ in

Side Plate 2: PL

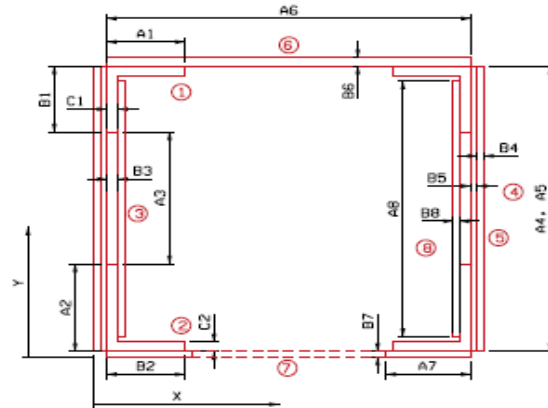
$A_8 = b = 24.0000$ in
 $B_8 = t = 0.8125$ in

Web Plate 2: PL

$A_5 = b = 26.0000$ in
 $B_5 = t = 0.8750$ in

Perforated Bottom Cover Plate: PL

$A_7 = b = 5.2500$ in
 $B_7 = t = 0.7500$ in



Member L55-L56

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg		9.0000	26.3750	237.3750	0.4219	12.2484	1350.2119	1350.6338
	Vertical Leg		10.8750	22.3750	243.3281	47.6348	8.2484	739.8944	787.5292
2	Horizontal Leg		9.0000	1.1250	10.1250	0.4219	13.0016	1521.3721	1521.7939
	Vertical Leg		10.8750	5.1250	55.7344	47.6348	9.0016	881.1863	928.8210
3	Plate		15.0000	13.7500	206.2500	125.0000	0.3766	2.1273	127.1273
4	Plate		45.5000	13.7500	625.6250	2563.1667	0.3766	6.4528	2569.6195
5	Plate		45.5000	13.7500	625.6250	2563.1667	0.3766	6.4528	2569.6195
6	Plate		13.7500	27.0625	372.1094	0.4476	12.9359	2300.8943	2301.3419
7	Perforated Plate		7.8750	0.3750	2.9531	0.3691	13.7516	1489.2115	1489.5807
8	Plate		39.0000	13.7500	536.2500	1872.0000	0.3766	5.5310	1877.5310
Total			206.38		2915.38	7220.26		8303.33	15523.60
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 14.1266 in	$S_{top} = 1171.73 \text{ in}^3$			y-bar = 14.1266 in	$S_{top} = 1171.73 \text{ in}^3$		
$I_x = 15523.60 \text{ in}^4$	$S_{bottom} = 1098.89 \text{ in}^3$			$I_x = 15523.60 \text{ in}^4$	$S_{bottom} = 1098.89 \text{ in}^3$		
$C_{top} = 13.2484 \text{ in}$	$A = 206.3750 \text{ in}^2$			$C_{top} = 13.2484 \text{ in}$	$A = 206.3750 \text{ in}^2$		
$C_{bottom} = 14.1266 \text{ in}$	$r_x = 8.6730 \text{ in}$			$C_{bottom} = 14.1266 \text{ in}$	$r_x = 8.6730 \text{ in}$		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I_o	d	Ad^2	$I_{y, gross}$	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.5000	4.7500	21.3750	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	2.1250	11.5547	0.2549	10.6250	613.8428	614.0977	
1 (Right)	Horizontal Leg	4.5000	20.7500	93.3750	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	23.3750	127.1016	0.2549	10.6250	613.8428	614.0977	
2 (Left)	Horizontal Leg	4.5000	4.7500	21.3750	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	2.1250	11.5547	0.2549	10.6250	613.8428	614.0977	
2 (Right)	Horizontal Leg	4.5000	20.7500	93.3750	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	23.3750	127.1016	0.2549	10.6250	613.8428	614.0977	
3 (Left)	Plate	7.5000	2.1250	15.9375	0.3516	10.6250	846.6797	847.0313	
3 (Right)	Plate	7.5000	23.3750	175.3125	0.3516	10.6250	846.6797	847.0313	
4 (Left)	Plate	22.7500	0.4375	9.9531	1.4515	12.3125	3448.8467	3450.2982	
4 (Right)	Plate	22.7500	25.0625	570.1719	1.4515	12.3125	3448.8467	3450.2982	
5 (Left)	Plate	22.7500	1.3125	29.8594	1.4515	11.4375	2976.0732	2977.5247	
5 (Right)	Plate	22.7500	24.1875	550.2656	1.4515	11.4375	2976.0732	2977.5247	
6	Plate	13.7500	12.7500	175.3125	554.5833	0.0000	0.0000	554.5833	
7 (Left)	Perforated Plate	3.9375	4.3750	17.2266	9.0439	8.3750	276.1787	285.2227	
7 (Right)	Perforated Plate	3.9375	21.1250	83.1797	9.0439	8.3750	276.1787	285.2227	
8 (Left)	Plate	19.5000	2.9063	56.6719	1.0728	9.8438	1889.5386	1890.6113	
8 (Right)	Plate	19.5000	22.5938	440.5781	1.0728	9.8438	1889.5386	1890.6113	
Total		206.38		2631.28	622.59		22482.00	23118.35	
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 12.7500 in	$S_{right} = 1813.20 \text{ in}^3$			x-bar = 12.7500 in	$S_{right} = 1813.20 \text{ in}^3$		
$I_y = 23118.35 \text{ in}^4$	$S_{left} = 1813.20 \text{ in}^3$			$I_y = 23118.35 \text{ in}^4$	$S_{left} = 1813.20 \text{ in}^3$		
$C_{right} = 12.7500 \text{ in}$	$A = 206.3750 \text{ in}^2$			$C_{right} = 12.7500 \text{ in}$	$A = 206.3750 \text{ in}^2$		
$C_{left} = 12.7500 \text{ in}$	$r_y = 10.5840 \text{ in}$			$C_{left} = 12.7500 \text{ in}$	$r_y = 10.5840 \text{ in}$		



Made By DWC
Checked By KMW

Date 2/1/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_l = 0.7500$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_l = 0.7500$ in

Top Cover Plate: PL

$A_6 = b = 22.0000$ in
 $B_6 = t = 0.6250$ in

Side Plate 1: PL

$A_3 = b = 10.0000$ in
 $B_3 = t = 0.7500$ in

Web Plate 1: PL

$A_4 = b = 26.0000$ in
 $B_4 = t = 0.8750$ in

Side Plate 2: PL

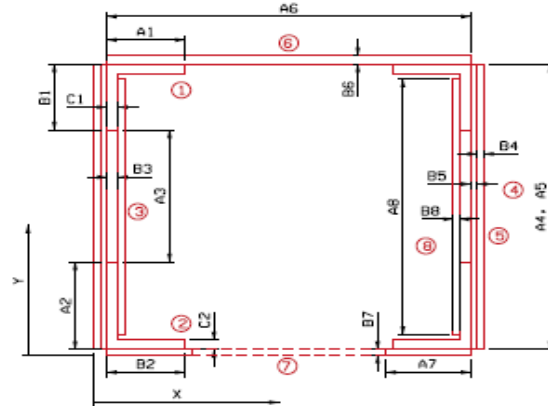
$A_8 = b = 24.0000$ in
 $B_8 = t = 0.7500$ in

Web Plate 2: PL

$A_5 = b = 26.0000$ in
 $B_5 = t = 0.8750$ in

Perforated Bottom Cover Plate: PL

$A_7 = b = 5.2500$ in
 $B_7 = t = 0.7500$ in



Member L56-L57

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg		9.0000	26.3750	237.3750	0.4219	12.2429	1348.9875	1349.4094
	Vertical Leg		10.8750	22.3750	243.3281	47.6348	8.2429	738.8982	786.5329
2	Horizontal Leg		9.0000	1.1250	10.1250	0.4219	13.0071	1522.6724	1523.0943
	Vertical Leg		10.8750	5.1250	55.7344	47.6348	9.0071	882.2742	929.9090
3	Plate		15.0000	13.7500	206.2500	125.0000	0.3821	2.1905	127.1905
4	Plate		45.5000	13.7500	625.6250	2563.1667	0.3821	6.6446	2569.8113
5	Plate		45.5000	13.7500	625.6250	2563.1667	0.3821	6.6446	2569.8113
6	Plate		13.7500	27.0625	372.1094	0.4476	12.9304	2298.9186	2299.3662
7	Perforated Plate		7.8750	0.3750	2.9531	0.3691	13.7571	1490.4149	1490.7841
8	Plate		36.0000	13.7500	495.0000	1728.0000	0.3821	5.2573	1733.2573
Total			203.38		2874.13	7076.26		8302.90	15379.17
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	22.0000	0.1250	-2.7500	27.3125	-75.1094	-0.0036	13.4574	-498.0317	-498.0353
2	6.0000	0.1250	-0.7500	26.7500	-20.0625	-0.0010	12.8949	-124.7094	-124.7104
3	6.0000	0.1250	-0.7500	26.7500	-20.0625	-0.0010	12.8949	-124.7094	-124.7104
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-4.25		-115.23	-0.01		-747.45	-747.46



Made By DWC
Checked By KMW

Date 2/1/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.1321 in	S _{top} =	1161.32 in ³	y-bar =	13.8551 in	S _{top} =	1082.23 in ³
I _x =	15379.17 in ⁴	S _{bott.} =	1088.24 in ³	I _x =	14631.71 in ⁴	S _{bott.} =	1056.05 in ³
C _{top} =	13.2429 in	A =	203.3750 in ²	C _{top} =	13.5199 in	A =	199.1250 in ²
C _{bottom} =	14.1321 in	r _x =	8.6960 in	C _{bottom} =	13.8551 in	r _x =	8.5720 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1 (Left)	Horizontal Leg	4.5000	4.7500	21.3750	13.5000	8.0000	288.0000	301.5000
	Vertical Leg	5.4375	2.1250	11.5547	0.2549	10.6250	613.8428	614.0977
1 (Right)	Horizontal Leg	4.5000	20.7500	93.3750	13.5000	8.0000	288.0000	301.5000
	Vertical Leg	5.4375	23.3750	127.1016	0.2549	10.6250	613.8428	614.0977
2 (Left)	Horizontal Leg	4.5000	4.7500	21.3750	13.5000	8.0000	288.0000	301.5000
	Vertical Leg	5.4375	2.1250	11.5547	0.2549	10.6250	613.8428	614.0977
2 (Right)	Horizontal Leg	4.5000	20.7500	93.3750	13.5000	8.0000	288.0000	301.5000
	Vertical Leg	5.4375	23.3750	127.1016	0.2549	10.6250	613.8428	614.0977
3 (Left)	Plate	7.5000	2.1250	15.9375	0.3516	10.6250	846.6797	847.0313
3 (Right)	Plate	7.5000	23.3750	175.3125	0.3516	10.6250	846.6797	847.0313
4 (Left)	Plate	22.7500	0.4375	9.9531	1.4515	12.3125	3448.8467	3450.2982
4 (Right)	Plate	22.7500	25.0625	570.1719	1.4515	12.3125	3448.8467	3450.2982
5 (Left)	Plate	22.7500	1.3125	29.8594	1.4515	11.4375	2976.0732	2977.5247
5 (Right)	Plate	22.7500	24.1875	550.2656	1.4515	11.4375	2976.0732	2977.5247
6	Plate	13.7500	12.7500	175.3125	554.5833	0.0000	0.0000	554.5833
7 (Left)	Perforated Plate	3.9375	4.3750	17.2266	9.0439	8.3750	276.1787	285.2227
7 (Right)	Perforated Plate	3.9375	21.1250	83.1797	9.0439	8.3750	276.1787	285.2227
8 (Left)	Plate	18.0000	2.8750	51.7500	0.8438	9.8750	1755.2813	1756.1250
8 (Right)	Plate	18.0000	22.6250	407.2500	0.8438	9.8750	1755.2813	1756.1250
Total		203.38		2593.03	622.13		22213.49	22849.38
Section Losses		A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.1250	22.0000	-2.7500	12.7500	-35.0625	-110.9167	0.0000	0.0000
2	0.1250	6.0000	-0.7500	4.7500	-3.5625	-2.2500	8.0000	-48.0000
3	0.1250	6.0000	-0.7500	20.7500	-15.5625	-2.2500	8.0000	-48.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-4.25	-54.19	-115.42		-96.00	-211.42

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.7500 in	S _{right} =	1792.11 in ³	x-bar =	12.7500 in	S _{right} =	1775.53 in ³
I _y =	22849.38 in ⁴	S _{left} =	1792.11 in ³	I _y =	22637.96 in ⁴	S _{left} =	1775.53 in ³
C _{right} =	12.7500 in	A =	203.3750 in ²	C _{right} =	12.7500 in	A =	199.1250 in ²
C _{left} =	12.7500 in	r _y =	10.5996 in	C _{left} =	12.7500 in	r _y =	10.6624 in



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6875$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6875$ in

Top Cover Plate:

$A_4 = b = 22.0000$ in
 $B_4 = t = 0.6250$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.9375$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.7500$ in



Member L57-L58

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	8.2500	26.4063	217.8516	0.3250	11.9298	1174.1411	1174.4661	
	Vertical Leg	10.0547	22.4063	225.2878	44.8042	7.9298	632.2562	677.0604	
2	Horizontal Leg	8.2500	1.0938	9.0234	0.3250	13.3827	1477.5473	1477.8723	
	Vertical Leg	10.0547	5.0938	51.2161	44.8042	9.3827	885.1649	929.9692	
3	Plate	48.7500	13.7500	670.3125	2746.2500	0.7264	25.7268	2771.9768	
4	Plate	13.7500	27.0625	372.1094	0.4476	12.5861	2178.1192	2178.5668	
5	Perforated Plate	7.8750	0.3750	2.9531	0.3691	14.1014	1565.9507	1566.3198	
Total		106.98		1548.75	2837.33		7938.91	10776.23	
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	
1	16.5000	0.2500	-4.1250	27.2500	-112.4063	-0.0215	13.2858	-728.1153	-728.1368
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Total			-4.13	-112.41	-0.02		-728.12	-728.14	



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.4764 in	S _{top} =	835.46 in ³	y-bar =	13.9642 in	S _{top} =	749.25 in ³
I _x =	10776.23 in ⁴	S _{bott.} =	744.40 in ³	I _x =	10048.09 in ⁴	S _{bott.} =	719.56 in ³
C _{top} =	12.8986 in	A =	106.9844 in ²	C _{top} =	13.4108 in	A =	102.8594 in ²
C _{bottom} =	14.4764 in	r _x =	10.0363 in	C _{bottom} =	13.9642 in	r _x =	9.8837 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	3.9375	16.2422	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.2813	6.4413	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	19.9375	82.2422	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.5938	113.5865	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	3.9375	16.2422	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.2813	6.4413	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	19.9375	82.2422	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.5938	113.5865	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	24.3750	0.4688	11.4258	1.7853	11.4688	3206.0980	3207.8833	
3 (Right)	Plate	24.3750	23.4063	570.5273	1.7853	11.4688	3206.0980	3207.8833	
4	Plate	13.7500	11.9375	164.1406	554.5833	0.0000	0.0000	554.5833	
5 (Left)	Perforated Plate	3.9375	3.5625	14.0273	9.0439	8.3750	276.1787	285.2227	
5 (Right)	Perforated Plate	3.9375	20.3125	79.9805	9.0439	8.3750	276.1787	285.2227	
Total		106.98		1277.13	626.53		10304.09	10930.62	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.2500	16.5000	-4.1250	9.1875	-37.8984	-93.5859	2.8603	-33.7476	-127.3335
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-4.13		-37.90	-93.59		-33.75	-127.33

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	11.9375 in	S _{right} =	915.65 in ³	x-bar =	12.0478 in	S _{right} =	913.43 in ³
I _y =	10930.62 in ⁴	S _{left} =	915.65 in ³	I _y =	10803.29 in ⁴	S _{left} =	896.70 in ³
C _{right} =	11.9375 in	A =	106.9844 in ²	C _{right} =	11.8272 in	A =	102.8594 in ²
C _{left} =	11.9375 in	r _y =	10.1079 in	C _{left} =	12.0478 in	r _y =	10.2484 in



Made By DWC
Checked By CTG

Date 2/1/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.5000$ in

Top Cover Plate:

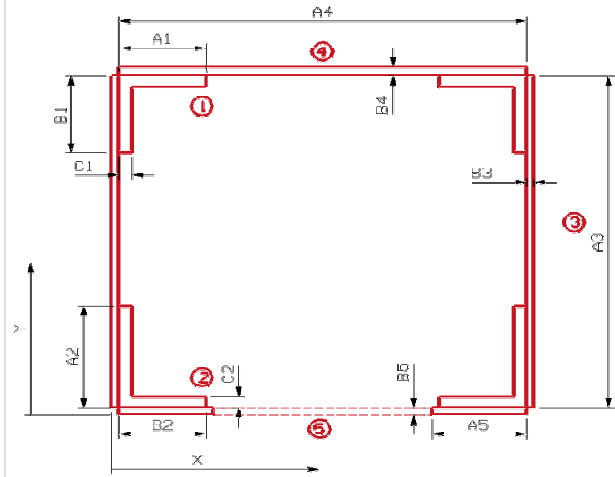
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.5000$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.6250$ in



Member L58-L59

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	6.0000	26.3750	158.2500	0.1250	11.9407	855.4776	855.6026	
	Vertical Leg	7.5000	22.3750	167.8125	35.1563	7.9407	472.9068	508.0631	
2	Horizontal Leg	6.0000	0.8750	5.2500	0.1250	13.5593	1103.1325	1103.2575	
	Vertical Leg	7.5000	4.8750	36.5625	35.1563	9.5593	685.3559	720.5121	
3	Plate	22.7500	13.6250	309.9688	1281.5833	0.8093	14.9016	1296.4849	
4	Plate	11.7500	26.8750	315.7813	0.2448	12.4407	1818.5508	1818.7955	
5	Perforated Plate	7.5000	0.3125	2.3438	0.2441	14.1218	1495.6956	1495.9397	
Total		69.00		995.97	1352.63		6446.02	7798.66	
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	
1	17.6250	0.2500	-4.4063	27.0000	-118.9688	-0.0229	13.7330	-831.0024	-831.0253
2	6.0000	0.1250	-0.7500	26.6250	-19.9688	-0.0010	13.3580	-133.8278	-133.8288
3	6.0000	0.1250	-0.7500	26.6250	-19.9688	-0.0010	13.3580	-133.8278	-133.8288
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-5.91	-158.91	-0.02		-1098.66	-1098.68	



Made By DWC
Checked By CTG

Date 2/1/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.4343 in	S _{top} =	614.52 in ³	y-bar =	13.2670 in	S _{top} =	483.47 in ³
I _x =	7798.66 in ⁴	S _{bott.} =	540.29 in ³	I _x =	6699.97 in ⁴	S _{bott.} =	505.01 in ³
C _{top} =	12.6907 in	A =	69.0000 in ²	C _{top} =	13.8580 in	A =	63.0938 in ²
C _{bottom} =	14.4343 in	r _x =	10.6313 in	C _{bottom} =	13.2670 in	r _x =	10.3049 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.0000	3.4375	10.3125	9.0000	8.7500	229.6875	238.6875	
	Vertical Leg	3.7500	0.6875	2.5781	0.0781	11.5000	495.9375	496.0156	
1 (Right)	Horizontal Leg	3.0000	20.9375	62.8125	9.0000	8.7500	229.6875	238.6875	
	Vertical Leg	3.7500	23.6875	88.8281	0.0781	11.5000	495.9375	496.0156	
2 (Left)	Horizontal Leg	3.0000	3.4375	10.3125	9.0000	8.7500	229.6875	238.6875	
	Vertical Leg	3.7500	0.6875	2.5781	0.0781	11.5000	495.9375	496.0156	
2 (Right)	Horizontal Leg	3.0000	20.9375	62.8125	9.0000	8.7500	229.6875	238.6875	
	Vertical Leg	3.7500	23.6875	88.8281	0.0781	11.5000	495.9375	496.0156	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	11.7500	12.1875	143.2031	540.7448	0.0000	0.0000	540.7448	
5 (Left)	Perforated Plate	3.7500	3.4375	12.8906	11.2500	8.7500	287.1094	298.3594	
5 (Right)	Perforated Plate	3.7500	20.9375	78.5156	11.2500	8.7500	287.1094	298.3594	
Total		69.00		840.94	599.92		6735.68	7335.60	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.2500	17.6250	-4.4063	9.2500	-40.7578	-114.0634	3.1783	-44.5103	-158.5737
2	0.1250	6.0000	-0.7500	3.4375	-2.5781	-2.2500	8.9908	-60.6259	-62.8759
3	0.1250	6.0000	-0.7500	17.9375	-13.4531	-2.2500	5.5092	-22.7634	-25.0134
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-5.91		-56.79	-118.56		-127.90	-246.46

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	601.90 in ³	x-bar =	12.4283 in	S _{right} =	593.40 in ³
I _y =	7335.60 in ⁴	S _{left} =	601.90 in ³	I _y =	7089.14 in ⁴	S _{left} =	570.40 in ³
C _{right} =	12.1875 in	A =	69.0000 in ²	C _{right} =	11.9467 in	A =	63.0938 in ²
C _{left} =	12.1875 in	r _y =	10.3108 in	C _{left} =	12.4283 in	r _y =	10.5999 in



Made By DWC
Checked By KMW

Date 2/1/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.4375$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.4375$ in

Top Cover Plate:

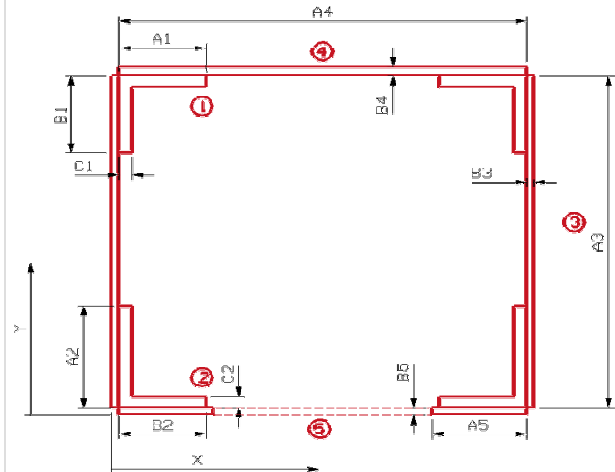
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member L59-L60

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	5.2500	26.2813	137.9766	0.0837	12.1487	774.8582	774.9420	
	Vertical Leg	6.6172	22.2813	147.4392	31.5372	8.1487	439.3950	470.9321	
2	Horizontal Leg	5.2500	0.7188	3.7734	0.0837	13.4138	944.6261	944.7098	
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	9.4138	586.4069	617.9441	
3	Plate	19.5000	13.5000	263.2500	1098.5000	0.6325	7.8012	1106.3012	
4	Plate	8.8125	26.6875	235.1836	0.1033	12.5550	1389.0962	1389.1995	
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	13.8825	1156.3434	1156.4684	
Total		58.05		820.35	1161.97		5298.53	6460.50	
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	
1	0.2500	26.0000	-6.5000	13.5000	-87.7500	-366.1667	0.3440	-0.7691	-366.9357
2	6.0000	0.1250	-0.7500	26.5000	-19.8750	-0.0010	12.6560	-120.1312	-120.1322
3	6.0000	0.1250	-0.7500	26.5000	-19.8750	-0.0010	12.6560	-120.1312	-120.1322
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-8.00	-127.50	-366.17			-241.03	-607.20



Made By DWC
Checked By KMW

Date 2/1/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	14.1325	in	S _{top} =	507.00	in ³	y-bar =	13.8440	in	S _{top} =	449.18	in ³
I _x =	6460.50	in ⁴	S _{bott.} =	457.14	in ³	I _x =	5853.30	in ⁴	S _{bott.} =	422.80	in ³
C _{top} =	12.7425	in	A =	58.0469	in ²	C _{top} =	13.0310	in	A =	50.0469	in ²
C _{bottom} =	14.1325	in	r _x =	10.5498	in	C _{bottom} =	13.8440	in	r _x =	10.8146	in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.3750	8.8594	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.5938	1.9645	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	20.8750	54.7969	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.6563	78.2689	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.3750	8.8594	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.5938	1.9645	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	20.8750	54.7969	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.6563	78.2689	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	9.7500	0.1875	1.8281	0.1143	11.9375	1389.4131	1389.5273	
3 (Right)	Plate	9.7500	24.0625	234.6094	0.1143	11.9375	1389.4131	1389.5273	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.3750	10.1250	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.8750	62.6250	9.0000	8.7500	229.6875	238.6875	
Total		58.05		703.82	455.50		5801.88	6257.38	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	26.0000	0.2500	-6.5000	0.1250	-0.8125	-0.0339	13.6035	-1202.8583	-1202.8922
2	0.1250	6.0000	-0.7500	3.3750	-2.5313	-2.2500	10.3535	-80.3962	-82.6462
3	0.1250	6.0000	-0.7500	17.8750	-13.4063	-2.2500	4.1465	-12.8951	-15.1451
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-8.00		-16.75	-4.53		-1296.15	-1300.68

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.1250	in	S _{right} =	516.07	in ³	x-bar =	13.7285	in	S _{right} =	471.10	in ³
I _y =	6257.38	in ⁴	S _{left} =	516.07	in ³	I _y =	4956.69	in ⁴	S _{left} =	361.05	in ³
C _{right} =	12.1250	in	A =	58.0469	in ²	C _{right} =	10.5215	in	A =	50.0469	in ²
C _{left} =	12.1250	in	r _y =	10.3826	in	C _{left} =	13.7285	in	r _y =	9.9519	in



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

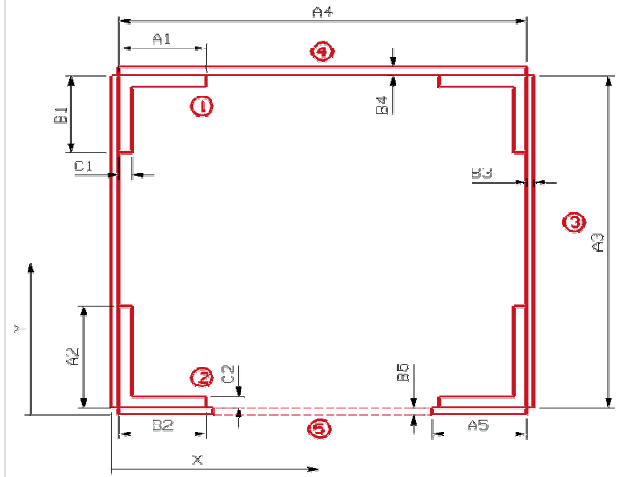
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.4375$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_f = 0.4375$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member L60-L61

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.2500	26.2813	137.9766	0.0837	12.1487	774.8582	774.9420
	Vertical Leg	6.6172	22.2813	147.4392	31.5372	8.1487	439.3950	470.9321
2	Horizontal Leg	5.2500	0.7188	3.7734	0.0837	13.4138	944.6261	944.7098
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	9.4138	586.4069	617.9441
3	Plate	19.5000	13.5000	263.2500	1098.5000	0.6325	7.8012	1106.3012
4	Plate	8.8125	26.6875	235.1836	0.1033	12.5550	1389.0962	1389.1995
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	13.8825	1156.3434	1156.4684
Total		58.05		820.35	1161.97		5298.53	6460.50
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	14.1325	in	S _{top} =	507.00	in ³	y-bar =	14.1325	in	S _{top} =	507.00	in ³
I _x =	6460.50	in ⁴	S _{bott.} =	457.14	in ³	I _x =	6460.50	in ⁴	S _{bott.} =	457.14	in ³
C _{top} =	12.7425	in	A =	58.0469	in ²	C _{top} =	12.7425	in	A =	58.0469	in ²
C _{bottom} =	14.1325	in	r _x =	10.5498	in	C _{bottom} =	14.1325	in	r _x =	10.5498	in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.3750	8.8594	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.5938	1.9645	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	20.8750	54.7969	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.6563	78.2689	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.3750	8.8594	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.5938	1.9645	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	20.8750	54.7969	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.6563	78.2689	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	9.7500	0.1875	1.8281	0.1143	11.9375	1389.4131	1389.5273	
3 (Right)	Plate	9.7500	24.0625	234.6094	0.1143	11.9375	1389.4131	1389.5273	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.3750	10.1250	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.8750	62.6250	9.0000	8.7500	229.6875	238.6875	
Total		58.05		703.82	455.50		5801.88	6257.38	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.1250	in	S _{right} =	516.07	in ³	x-bar =	12.1250	in	S _{right} =	516.07	in ³
I _y =	6257.38	in ⁴	S _{left} =	516.07	in ³	I _y =	6257.38	in ⁴	S _{left} =	516.07	in ³
C _{right} =	12.1250	in	A =	58.0469	in ²	C _{right} =	12.1250	in	A =	58.0469	in ²
C _{left} =	12.1250	in	r _y =	10.3826	in	C _{left} =	12.1250	in	r _y =	10.3826	in



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.4375$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_f = 0.4375$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member L61-L62

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.2500	26.2813	137.9766	0.0837	12.1823	779.1420	779.2258
	Vertical Leg	6.6172	22.2813	147.4392	31.5372	8.1823	443.0190	474.5562
2	Horizontal Leg	5.2500	0.7188	3.7734	0.0837	13.3802	939.9087	939.9924
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	9.3802	582.2363	613.7735
3	Plate	22.7500	13.5000	307.1250	1281.5833	0.5990	8.1618	1289.7452
4	Plate	8.8125	26.6875	235.1836	0.1033	12.5885	1396.5270	1396.6303
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	13.8490	1150.7634	1150.8884
Total		61.30		864.22	1345.05		5299.76	6644.81
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00	0.00	0.00	0.00



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.0990 in	S _{top} =	520.10 in ³	y-bar =	14.0990 in	S _{top} =	520.10 in ³
I _x =	6644.81 in ⁴	S _{bott.} =	471.30 in ³	I _x =	6644.81 in ⁴	S _{bott.} =	471.30 in ³
C _{top} =	12.7760 in	A =	61.2969 in ²	C _{top} =	12.7760 in	A =	61.2969 in ²
C _{bottom} =	14.0990 in	r _x =	10.4117 in	C _{bottom} =	14.0990 in	r _x =	10.4117 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.4375	9.0234	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	20.9375	54.9609	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.4375	9.0234	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	20.9375	54.9609	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.4375	10.3125	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.9375	62.8125	9.0000	8.7500	229.6875	238.6875	
Total		61.30		747.06	455.63		6282.01	6737.64	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	552.83 in ³	x-bar =	12.1875 in	S _{right} =	552.83 in ³
I _y =	6737.64 in ⁴	S _{left} =	552.83 in ³	I _y =	6737.64 in ⁴	S _{left} =	552.83 in ³
C _{right} =	12.1875 in	A =	61.2969 in ²	C _{right} =	12.1875 in	A =	61.2969 in ²
C _{left} =	12.1875 in	r _y =	10.4842 in	C _{left} =	12.1875 in	r _y =	10.4842 in



Made By KMW
Checked By ADK

Date 2/3/2012
Date 2/16/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

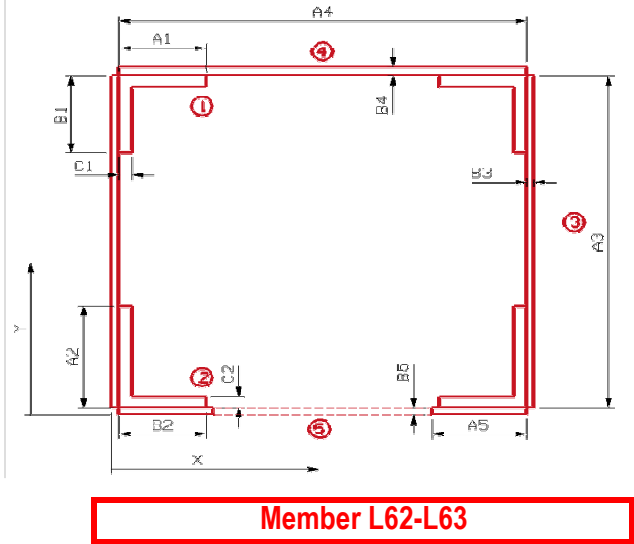
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.4375$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_f = 0.4375$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.2500	26.2813	137.9766	0.0837	12.1823	779.1420	779.2258
	Vertical Leg	6.6172	22.2813	147.4392	31.5372	8.1823	443.0190	474.5562
2	Horizontal Leg	5.2500	0.7188	3.7734	0.0837	13.3802	939.9087	939.9924
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	9.3802	582.2363	613.7735
3	Plate	22.7500	13.5000	307.1250	1281.5833	0.5990	8.1618	1289.7452
4	Plate	8.8125	26.6875	235.1836	0.1033	12.5885	1396.5270	1396.6303
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	13.8490	1150.7634	1150.8884
Total		61.30		864.22	1345.05		5299.76	6644.81
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	2.5000	0.1563	-0.3906	26.5000	-10.3516	-0.0008	12.5741	-61.7608
2	2.5000	0.1563	-0.3906	26.5000	-10.3516	-0.0008	12.5741	-61.7608
3	0.1250	2.5000	-0.3125	25.2500	-7.8906	-0.1628	11.3241	-40.0734
4	0.1250	2.5000	-0.3125	25.2500	-7.8906	-0.1628	11.3241	-40.0734
5	2.5000	0.0938	-0.2344	0.5000	-0.1172	-0.0002	13.4259	-42.2473
6	2.5000	0.0938	-0.2344	0.5000	-0.1172	-0.0002	13.4259	-42.2473
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.88	-36.72	-0.33		-288.16	-288.49



Made By KMW
Checked By ADK

Date 2/3/2012
Date 2/16/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.0990 in	S _{top} =	520.10 in ³	y-bar =	13.9259 in	S _{top} =	490.87 in ³
I _x =	6644.81 in ⁴	S _{bottom} =	471.30 in ³	I _x =	6356.32 in ⁴	S _{bottom} =	456.44 in ³
C _{top} =	12.7760 in	A =	61.2969 in ²	C _{top} =	12.9491 in	A =	59.4219 in ²
C _{bottom} =	14.0990 in	r _x =	10.4117 in	C _{bottom} =	13.9259 in	r _x =	10.3426 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.4375	9.0234	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	20.9375	54.9609	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.4375	9.0234	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	20.9375	54.9609	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.4375	10.3125	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.9375	62.8125	9.0000	8.7500	229.6875	238.6875	
Total		61.30		747.06	455.63		6282.01	6737.64	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1563	2.5000	-0.3906	1.6875	-0.6592	-0.2035	10.5000	-43.0664	-43.2699
2	0.1563	2.5000	-0.3906	22.6875	-8.8623	-0.2035	10.5000	-43.0664	-43.2699
3	2.5000	0.1250	-0.3125	0.4375	-0.1367	-0.0004	11.7500	-43.1445	-43.1449
4	2.5000	0.1250	-0.3125	23.9375	-7.4805	-0.0004	11.7500	-43.1445	-43.1449
5	0.0938	2.5000	-0.2344	1.6875	-0.3955	-0.1221	10.5000	-25.8398	-25.9619
6	0.0938	2.5000	-0.2344	22.6875	-5.3174	-0.1221	10.5000	-25.8398	-25.9619
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.88		-22.85	-0.65		-224.10	-224.75

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	552.83 in ³	x-bar =	12.1875 in	S _{right} =	534.39 in ³
I _y =	6737.64 in ⁴	S _{left} =	552.83 in ³	I _y =	6512.89 in ⁴	S _{left} =	534.39 in ³
C _{right} =	12.1875 in	A =	61.2969 in ²	C _{right} =	12.1875 in	A =	59.4219 in ²
C _{left} =	12.1875 in	r _y =	10.4842 in	C _{left} =	12.1875 in	r _y =	10.4692 in



Made By KMW
Checked By ADK

Date 2/3/2012
Date 2/16/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:
 $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.5000$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L63-L64

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.6813	341.1297	341.1500
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.6813	216.0111	218.6226
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.0062	490.4368	490.4571
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.0062	332.2201	334.8317
3	Plate	26.0000	13.3750	347.7500	1464.6667	1.1625	35.1358	1499.8025
4	Plate	8.8125	26.5625	234.0820	0.1033	12.0250	1274.2955	1274.3988
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.3500	926.6497	926.7024
Total		48.92		711.20	1470.09		3615.88	5085.97
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	6.0000	0.3125	-1.8750	0.1563	-0.2930	-0.0153	16.1421	-488.5614
2	6.0000	0.3125	-1.8750	0.1563	-0.2930	-0.0153	16.1421	-488.5614
3	0.1250	6.5000	-0.8125	3.6250	-2.9453	-2.8607	12.6733	-130.4979
4	0.1250	13.0000	-1.6250	6.8750	-11.1719	-22.8854	9.4233	-144.2980
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-6.19	-14.70	-25.78		-1251.92	-1277.70



Made By KMW
Checked By ADK

Date 2/3/2012
Date 2/16/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.5375 in	S _{top} =	416.46 in ³	y-bar =	16.2983 in	S _{top} =	364.37 in ³
I _x =	5085.97 in ⁴	S _{bottom} =	349.85 in ³	I _x =	3808.27 in ⁴	S _{bottom} =	233.66 in ³
C _{top} =	12.2125 in	A =	48.9219 in ²	C _{top} =	10.4517 in	A =	42.7344 in ²
C _{bottom} =	14.5375 in	r _x =	10.1961 in	C _{bottom} =	16.2983 in	r _x =	9.4401 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.5000	3.1250	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.6563	0.7562	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	22.0000	27.5000	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.8438	27.4762	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.5000	3.1250	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.6563	0.7562	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	22.0000	27.5000	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.8438	27.4762	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	13.0000	0.2500	3.2500	0.2708	12.0000	1872.0000	1872.2708	
3 (Right)	Plate	13.0000	24.2500	315.2500	0.2708	12.0000	1872.0000	1872.2708	
4	Plate	8.8125	12.2500	107.9531	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.5000	7.8750	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	21.0000	47.2500	6.7500	8.7500	172.2656	179.0156	
Total		48.92		599.29	426.30		5183.41	5609.72	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.3125	6.0000	-1.8750	3.5000	-6.5625	-5.6250	9.4452	-167.2706	-172.8956
2	0.3125	6.0000	-1.8750	21.0000	-39.3750	-5.6250	8.0548	-121.6510	-127.2760
3	6.5000	0.1250	-0.8125	0.0625	-0.0508	-0.0011	12.8827	-134.8448	-134.8458
4	13.0000	0.1250	-1.6250	0.0625	-0.1016	-0.0021	12.8827	-269.6896	-269.6917
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-6.19		-46.09	-11.25		-693.46	-704.71

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2500 in	S _{right} =	457.94 in ³	x-bar =	12.9452 in	S _{right} =	424.50 in ³
I _y =	5609.72 in ⁴	S _{left} =	457.94 in ³	I _y =	4905.01 in ⁴	S _{left} =	378.91 in ³
C _{right} =	12.2500 in	A =	48.9219 in ²	C _{right} =	11.5548 in	A =	42.7344 in ²
C _{left} =	12.2500 in	r _y =	10.7083 in	C _{left} =	12.9452 in	r _y =	10.7135 in



Made By KMW
Checked By ADK

Date 2/3/2012
Date 2/16/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

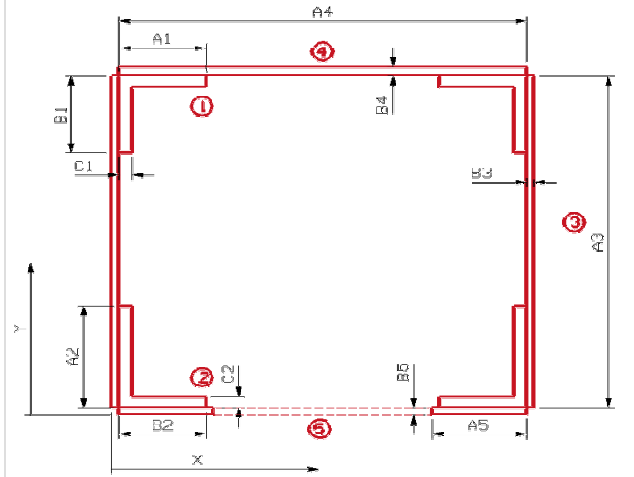
Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:
 $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L64-L65

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x, gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5985	336.3153	336.3356	
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5985	212.3354	214.9469	
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.0890	496.2470	496.2674	
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.0890	336.8139	339.4254	
3	Plate	22.7500	13.3750	304.2813	1281.5833	1.2452	35.2750	1316.8583	
4	Plate	8.8125	26.5625	234.0820	0.1033	11.9423	1256.8236	1256.9269	
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.4327	937.3641	937.4168	
Total		45.67		667.73	1287.00		3611.17	4898.18	
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x, loss}	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	
1	0.1250	6.5000	-0.8125	3.6250	-2.9453	-2.8607	11.1922	-101.7782	-104.6389
2	2.5000	0.0625	-0.1563	26.3750	-4.1211	-0.0001	11.5578	-20.8723	-20.8723
3	2.5000	0.0625	-0.1563	26.3750	-4.1211	-0.0001	11.5578	-20.8723	-20.8723
4	0.0938	26.0000	-2.4375	13.3750	-32.6016	-137.3125	1.4422	-5.0699	-142.3824
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-3.56	-43.79	-140.17			-148.59	-288.77



Made By KMW
Checked By ADK

Date 2/3/2012
Date 2/16/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.6202 in	S _{top} =	403.81 in ³	y-bar =	14.8172 in	S _{top} =	386.28 in ³
I _x =	4898.18 in ⁴	S _{bott.} =	335.03 in ³	I _x =	4609.41 in ⁴	S _{bott.} =	311.09 in ³
C _{top} =	12.1298 in	A =	45.6719 in ²	C _{top} =	11.9328 in	A =	42.1094 in ²
C _{bottom} =	14.6202 in	r _x =	10.3560 in	C _{bottom} =	14.8172 in	r _x =	10.4624 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.4375	7.7344	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.9375	47.1094	6.7500	8.7500	172.2656	179.0156	
Total		45.67		556.63	426.13		4698.37	5124.50	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	6.5000	0.1250	-0.8125	0.0625	-0.0508	-0.0011	11.6562	-110.3918	-110.3928
2	0.0625	2.5000	-0.1563	1.6875	-0.2637	-0.0814	10.0312	-15.7226	-15.8040
3	0.0625	2.5000	-0.1563	22.6875	-3.5449	-0.0814	10.9688	-18.7992	-18.8806
4	26.0000	0.0938	-2.4375	24.3281	-59.2998	-0.0018	12.6094	-387.5571	-387.5589
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-3.56		-63.16	-0.17		-532.47	-532.64

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	420.47 in ³	x-bar =	11.7187 in	S _{right} =	362.81 in ³
I _y =	5124.50 in ⁴	S _{left} =	420.47 in ³	I _y =	4591.86 in ⁴	S _{left} =	391.84 in ³
C _{right} =	12.1875 in	A =	45.6719 in ²	C _{right} =	12.6563 in	A =	42.1094 in ²
C _{left} =	12.1875 in	r _y =	10.5926 in	C _{left} =	11.7187 in	r _y =	10.4425 in



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

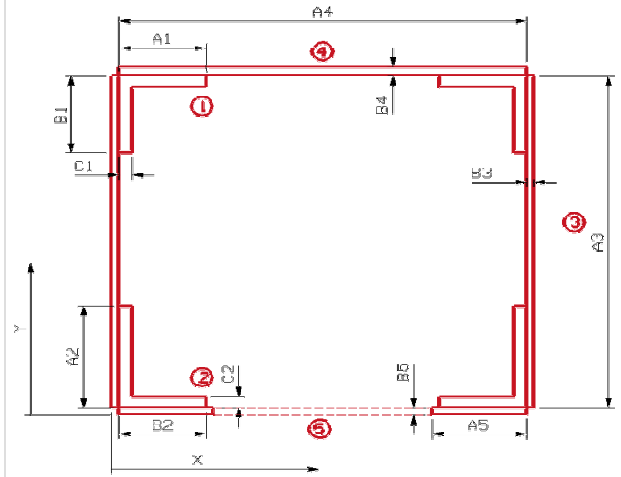
Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:
 $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L65-L66

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5031	330.8057	330.8260
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5031	208.1357	210.7472
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.1844	502.9900	503.0104
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.1844	342.1506	344.7621
3	Plate	19.5000	13.3750	260.8125	1098.5000	1.3406	35.0460	1133.5460
4	Plate	8.8125	26.5625	234.0820	0.1033	11.8469	1236.8243	1236.9276
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.5281	949.7966	949.8493
Total		42.42		624.26	1103.92		3605.75	4709.67
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00	0.00	0.00	0.00



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.7156 in	S _{top} =	391.35 in ³	y-bar =	14.7156 in	S _{top} =	391.35 in ³
I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³	I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³
C _{top} =	12.0344 in	A =	42.4219 in ²	C _{top} =	12.0344 in	A =	42.4219 in ²
C _{bottom} =	14.7156 in	r _x =	10.5366 in	C _{bottom} =	14.7156 in	r _x =	10.5366 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	9.7500	0.1875	1.8281	0.1143	11.9375	1389.4131	1389.5273	
3 (Right)	Plate	9.7500	24.0625	234.6094	0.1143	11.9375	1389.4131	1389.5273	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.3750	7.5938	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.8750	46.9688	6.7500	8.7500	172.2656	179.0156	
Total		42.42		514.37	425.99		4218.24	4644.23	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	383.03 in ³	x-bar =	12.1250 in	S _{right} =	383.03 in ³
I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³	I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³
C _{right} =	12.1250 in	A =	42.4219 in ²	C _{right} =	12.1250 in	A =	42.4219 in ²
C _{left} =	12.1250 in	r _y =	10.4631 in	C _{left} =	12.1250 in	r _y =	10.4631 in



Made By KMW
Checked By ADK

Date 1/18/2012
Date 2/16/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L66-L67

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x, gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5031	330.8057	330.8260	
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5031	208.1357	210.7472	
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.1844	502.9900	503.0104	
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.1844	342.1506	344.7621	
3	Plate	19.5000	13.3750	260.8125	1098.5000	1.3406	35.0460	1133.5460	
4	Plate	8.8125	26.5625	234.0820	0.1033	11.8469	1236.8243	1236.9276	
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.5281	949.7966	949.8493	
Total		42.42		624.26	1103.92		3605.75	4709.67	
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x, loss}	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	
1	0.0625	26.0000	-1.6250	13.3750	-21.7344	-91.5417	1.3940	-3.1578	-94.6995
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.63	-21.73	-91.54			-3.16	-94.70



Made By KMW
Checked By ADK

Date 1/18/2012
Date 2/16/2012

Job No. P402110046
Sheet No.

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.7156 in	S _{top} =	391.35 in ³	y-bar =	14.7690 in	S _{top} =	385.19 in ³
I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³	I _x =	4614.97 in ⁴	S _{bott.} =	312.48 in ³
C _{top} =	12.0344 in	A =	42.4219 in ²	C _{top} =	11.9810 in	A =	40.7969 in ²
C _{bottom} =	14.7156 in	r _x =	10.5366 in	C _{bottom} =	14.7690 in	r _x =	10.6358 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	9.7500	0.1875	1.8281	0.1143	11.9375	1389.4131	1389.5273	
3 (Right)	Plate	9.7500	24.0625	234.6094	0.1143	11.9375	1389.4131	1389.5273	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.3750	7.5938	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.8750	46.9688	6.7500	8.7500	172.2656	179.0156	
Total		42.42		514.37	425.99		4218.24	4644.23	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	26.0000	0.0625	-1.6250	0.0313	-0.0508	-0.0005	12.5755	-256.9811	-256.9817
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.63		-0.05	0.00		-256.98	-256.98

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	383.03 in ³	x-bar =	12.6067 in	S _{right} =	376.80 in ³
I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³	I _y =	4387.25 in ⁴	S _{left} =	348.01 in ³
C _{right} =	12.1250 in	A =	42.4219 in ²	C _{right} =	11.6433 in	A =	40.7969 in ²
C _{left} =	12.1250 in	r _y =	10.4631 in	C _{left} =	12.6067 in	r _y =	10.3701 in



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3750$ in

Bottom Angles:
 $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3750$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member L67-L68

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.0000	26.3125	78.9375	0.0352	12.0632	436.5636	436.5988
	Vertical Leg	2.7188	24.3125	66.0996	2.9772	10.0632	275.3233	278.3005
2	Horizontal Leg	3.0000	0.6875	2.0625	0.0352	13.5618	551.7658	551.8010
	Vertical Leg	2.7188	2.6875	7.3066	2.9772	11.5618	363.4284	366.4056
3	Plate	22.7500	13.5000	307.1250	1281.5833	0.7493	12.7724	1294.3557
4	Plate	8.8125	26.6875	235.1836	0.1033	12.4382	1363.3753	1363.4786
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	13.9993	1175.8795	1176.0045
Total		49.00		698.21	1287.84		4179.11	5466.94
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	14.2493	in	S _{top} =	433.00	in ³	y-bar =	14.2493	in	S _{top} =	433.00	in ³
I _x =	5466.94	in ⁴	S _{bott.} =	383.66	in ³	I _x =	5466.94	in ⁴	S _{bott.} =	383.66	in ³
C _{top} =	12.6257	in	A =	49.0000	in ²	C _{top} =	12.6257	in	A =	49.0000	in ²
C _{bottom} =	14.2493	in	r _x =	10.5627	in	C _{bottom} =	14.2493	in	r _x =	10.5627	in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.5000	2.4375	3.6563	2.0000	9.7500	142.5938	144.5938	
	Vertical Leg	1.3594	0.6250	0.8496	0.0159	11.5625	181.7368	181.7527	
1 (Right)	Horizontal Leg	1.5000	21.9375	32.9063	2.0000	9.7500	142.5938	144.5938	
	Vertical Leg	1.3594	23.7500	32.2852	0.0159	11.5625	181.7368	181.7527	
2 (Left)	Horizontal Leg	1.5000	2.4375	3.6563	2.0000	9.7500	142.5938	144.5938	
	Vertical Leg	1.3594	0.6250	0.8496	0.0159	11.5625	181.7368	181.7527	
2 (Right)	Horizontal Leg	1.5000	21.9375	32.9063	2.0000	9.7500	142.5938	144.5938	
	Vertical Leg	1.3594	23.7500	32.2852	0.0159	11.5625	181.7368	181.7527	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.4375	10.3125	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.9375	62.8125	9.0000	8.7500	229.6875	238.6875	
Total		49.00		597.19	431.99		5015.66	5447.64	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.1875	in	S _{right} =	446.99	in ³	x-bar =	12.1875	in	S _{right} =	446.99	in ³
I _y =	5447.64	in ⁴	S _{left} =	446.99	in ³	I _y =	5447.64	in ⁴	S _{left} =	446.99	in ³
C _{right} =	12.1875	in	A =	49.0000	in ²	C _{right} =	12.1875	in	A =	49.0000	in ²
C _{left} =	12.1875	in	r _y =	10.5440	in	C _{left} =	12.1875	in	r _y =	10.5440	in



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3750$ in

Top Cover Plate:

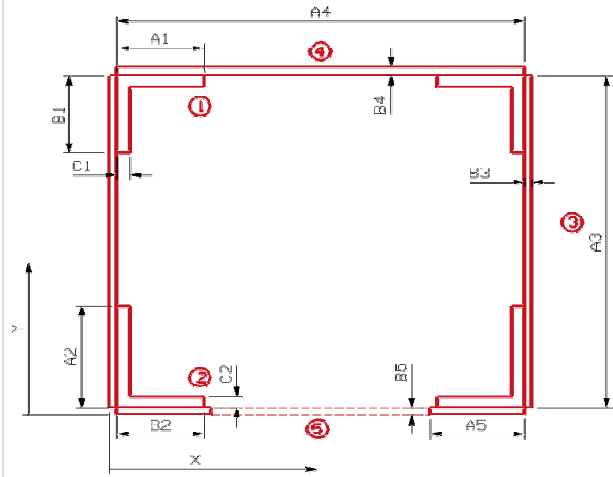
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member L68-L69

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.0000	26.3125	78.9375	0.0352	12.0632	436.5636	436.5988
	Vertical Leg	2.7188	24.3125	66.0996	2.9772	10.0632	275.3233	278.3005
2	Horizontal Leg	3.0000	0.6875	2.0625	0.0352	13.5618	551.7658	551.8010
	Vertical Leg	2.7188	2.6875	7.3066	2.9772	11.5618	363.4284	366.4056
3	Plate	22.7500	13.5000	307.1250	1281.5833	0.7493	12.7724	1294.3557
4	Plate	8.8125	26.6875	235.1836	0.1033	12.4382	1363.3753	1363.4786
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	13.9993	1175.8795	1176.0045
Total		49.00		698.21	1287.84		4179.11	5466.94
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	14.2493	in	S _{top} =	433.00	in ³	y-bar =	14.2493	in	S _{top} =	433.00	in ³
I _x =	5466.94	in ⁴	S _{bott.} =	383.66	in ³	I _x =	5466.94	in ⁴	S _{bott.} =	383.66	in ³
C _{top} =	12.6257	in	A =	49.0000	in ²	C _{top} =	12.6257	in	A =	49.0000	in ²
C _{bottom} =	14.2493	in	r _x =	10.5627	in	C _{bottom} =	14.2493	in	r _x =	10.5627	in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.5000	2.4375	3.6563	2.0000	9.7500	142.5938	144.5938	
	Vertical Leg	1.3594	0.6250	0.8496	0.0159	11.5625	181.7368	181.7527	
1 (Right)	Horizontal Leg	1.5000	21.9375	32.9063	2.0000	9.7500	142.5938	144.5938	
	Vertical Leg	1.3594	23.7500	32.2852	0.0159	11.5625	181.7368	181.7527	
2 (Left)	Horizontal Leg	1.5000	2.4375	3.6563	2.0000	9.7500	142.5938	144.5938	
	Vertical Leg	1.3594	0.6250	0.8496	0.0159	11.5625	181.7368	181.7527	
2 (Right)	Horizontal Leg	1.5000	21.9375	32.9063	2.0000	9.7500	142.5938	144.5938	
	Vertical Leg	1.3594	23.7500	32.2852	0.0159	11.5625	181.7368	181.7527	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.4375	10.3125	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.9375	62.8125	9.0000	8.7500	229.6875	238.6875	
Total		49.00		597.19	431.99		5015.66	5447.64	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.1875	in	S _{right} =	446.99	in ³	x-bar =	12.1875	in	S _{right} =	446.99	in ³
I _y =	5447.64	in ⁴	S _{left} =	446.99	in ³	I _y =	5447.64	in ⁴	S _{left} =	446.99	in ³
C _{right} =	12.1875	in	A =	49.0000	in ²	C _{right} =	12.1875	in	A =	49.0000	in ²
C _{left} =	12.1875	in	r _y =	10.5440	in	C _{left} =	12.1875	in	r _y =	10.5440	in



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

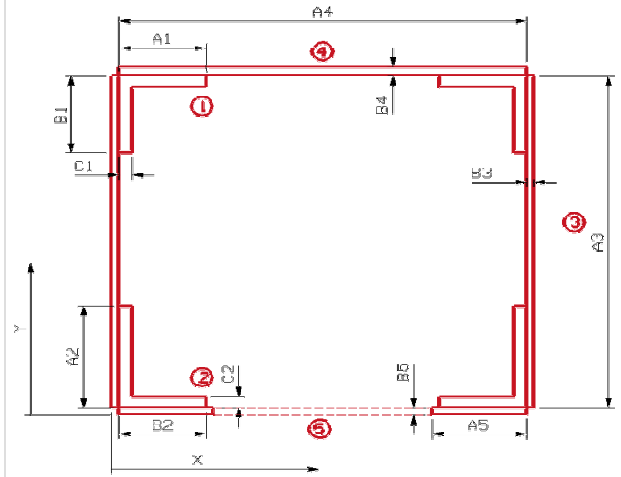
Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:
 $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L69-L70

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5031	330.8057	330.8260
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5031	208.1357	210.7472
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.1844	502.9900	503.0104
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.1844	342.1506	344.7621
3	Plate	19.5000	13.3750	260.8125	1098.5000	1.3406	35.0460	1133.5460
4	Plate	8.8125	26.5625	234.0820	0.1033	11.8469	1236.8243	1236.9276
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.5281	949.7966	949.8493
Total		42.42		624.26	1103.92		3605.75	4709.67
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.7156 in	S _{top} =	391.35 in ³	y-bar =	14.7156 in	S _{top} =	391.35 in ³
I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³	I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³
C _{top} =	12.0344 in	A =	42.4219 in ²	C _{top} =	12.0344 in	A =	42.4219 in ²
C _{bottom} =	14.7156 in	r _x =	10.5366 in	C _{bottom} =	14.7156 in	r _x =	10.5366 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	9.7500	0.1875	1.8281	0.1143	11.9375	1389.4131	1389.5273	
3 (Right)	Plate	9.7500	24.0625	234.6094	0.1143	11.9375	1389.4131	1389.5273	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.3750	7.5938	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.8750	46.9688	6.7500	8.7500	172.2656	179.0156	
Total		42.42		514.37	425.99		4218.24	4644.23	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	383.03 in ³	x-bar =	12.1250 in	S _{right} =	383.03 in ³
I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³	I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³
C _{right} =	12.1250 in	A =	42.4219 in ²	C _{right} =	12.1250 in	A =	42.4219 in ²
C _{left} =	12.1250 in	r _y =	10.4631 in	C _{left} =	12.1250 in	r _y =	10.4631 in



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

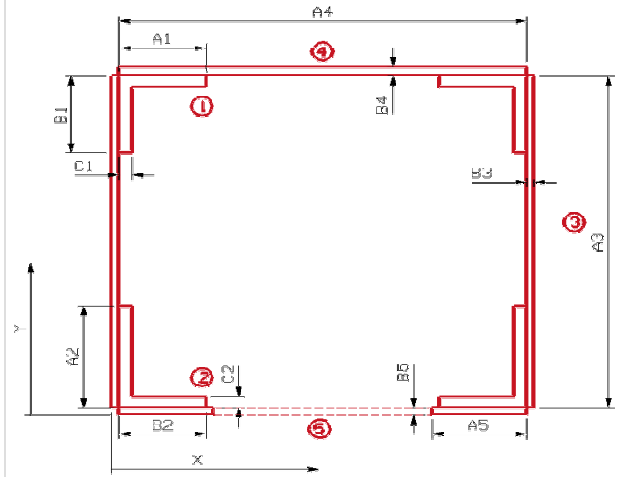
Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:
 $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L70-L71

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5031	330.8057	330.8260
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5031	208.1357	210.7472
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.1844	502.9900	503.0104
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.1844	342.1506	344.7621
3	Plate	19.5000	13.3750	260.8125	1098.5000	1.3406	35.0460	1133.5460
4	Plate	8.8125	26.5625	234.0820	0.1033	11.8469	1236.8243	1236.9276
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.5281	949.7966	949.8493
Total		42.42		624.26	1103.92		3605.75	4709.67
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.7156 in	S _{top} =	391.35 in ³	y-bar =	14.7156 in	S _{top} =	391.35 in ³
I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³	I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³
C _{top} =	12.0344 in	A =	42.4219 in ²	C _{top} =	12.0344 in	A =	42.4219 in ²
C _{bottom} =	14.7156 in	r _x =	10.5366 in	C _{bottom} =	14.7156 in	r _x =	10.5366 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	9.7500	0.1875	1.8281	0.1143	11.9375	1389.4131	1389.5273	
3 (Right)	Plate	9.7500	24.0625	234.6094	0.1143	11.9375	1389.4131	1389.5273	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.3750	7.5938	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.8750	46.9688	6.7500	8.7500	172.2656	179.0156	
Total		42.42		514.37	425.99		4218.24	4644.23	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	383.03 in ³	x-bar =	12.1250 in	S _{right} =	383.03 in ³
I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³	I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³
C _{right} =	12.1250 in	A =	42.4219 in ²	C _{right} =	12.1250 in	A =	42.4219 in ²
C _{left} =	12.1250 in	r _y =	10.4631 in	C _{left} =	12.1250 in	r _y =	10.4631 in



Made By KMW
Checked By ADK

Date 2/3/2012
Date 2/16/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

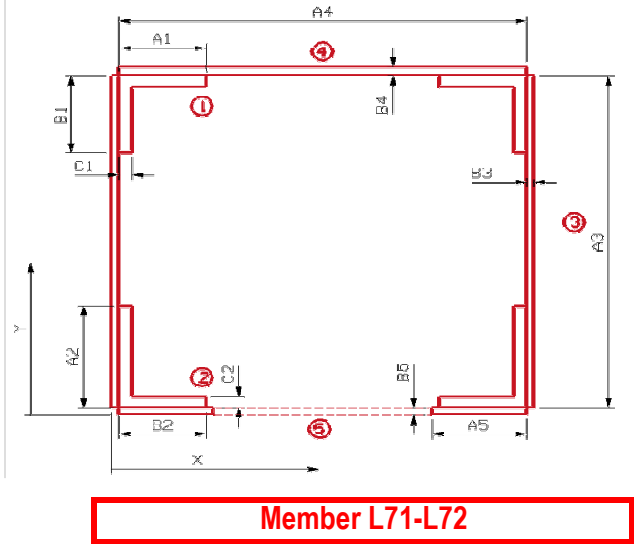
Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_f = 0.3125$ in

Bottom Angles:
 $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3125$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x, gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5985	336.3153	336.3356
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5985	212.3354	214.9469
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.0890	496.2470	496.2674
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.0890	336.8139	339.4254
3	Plate	22.7500	13.3750	304.2813	1281.5833	1.2452	35.2750	1316.8583
4	Plate	8.8125	26.5625	234.0820	0.1033	11.9423	1256.8236	1256.9269
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.4327	937.3641	937.4168
Total		45.67		667.73	1287.00		3611.17	4898.18
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.1875	5.0000	-0.9375	23.8750	-22.3828	-1.9531	7.7569	-56.4083
2	0.1875	5.0000	-0.9375	2.8750	-2.6953	-1.9531	13.2431	-164.4196
3	0.3125	3.6875	-1.1523	2.2188	-2.5568	-1.3058	13.8994	-222.6249
4	0.3125	3.6875	-1.1523	2.2188	-2.5568	-1.3058	13.8994	-222.6249
5	4.0000	0.2500	-1.0000	0.5000	-0.5000	-0.0052	15.6181	-243.9264
6	4.0000	0.2500	-1.0000	0.5000	-0.5000	-0.0052	15.6181	-243.9264
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-6.18	-31.19	-6.53		-1153.93	-1160.46



Made By KMW
Checked By ADK

Date 2/3/2012
Date 2/16/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.6202 in	S _{top} =	403.81 in ³	y-bar =	16.1181 in	S _{top} =	351.56 in ³
I _x =	4898.18 in ⁴	S _{bottom} =	335.03 in ³	I _x =	3737.72 in ⁴	S _{bottom} =	231.90 in ³
C _{top} =	12.1298 in	A =	45.6719 in ²	C _{top} =	10.6319 in	A =	39.4922 in ²
C _{bottom} =	14.6202 in	r _x =	10.3560 in	C _{bottom} =	16.1181 in	r _x =	9.7285 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.4375	7.7344	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.9375	47.1094	6.7500	8.7500	172.2656	179.0156	
Total		45.67		556.63	426.13		4698.37	5124.50	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	5.0000	0.1875	-0.9375	24.2813	-22.7637	-0.0027	12.6679	-150.4468	-150.4495
2	5.0000	0.1875	-0.9375	24.2813	-22.7637	-0.0027	12.6679	-150.4468	-150.4495
3	3.6875	0.3125	-1.1523	0.5938	-0.6842	-0.0094	11.0196	-139.9301	-139.9394
4	3.6875	0.3125	-1.1523	23.7813	-27.4042	-0.0094	12.1679	-170.6144	-170.6238
5	0.2500	4.0000	-1.0000	2.4375	-2.4375	-1.3333	9.1758	-84.1956	-85.5289
6	0.2500	4.0000	-1.0000	21.9375	-21.9375	-1.3333	10.3242	-106.5888	-107.9221
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-6.18		-97.99	-2.69		-802.22	-804.91

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	420.47 in ³	x-bar =	11.6133 in	S _{right} =	338.48 in ³
I _y =	5124.50 in ⁴	S _{left} =	420.47 in ³	I _y =	4319.59 in ⁴	S _{left} =	371.95 in ³
C _{right} =	12.1875 in	A =	45.6719 in ²	C _{right} =	12.7617 in	A =	39.4922 in ²
C _{left} =	12.1875 in	r _y =	10.5926 in	C _{left} =	11.6133 in	r _y =	10.4584 in



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.4375$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.4375$ in

Top Cover Plate:

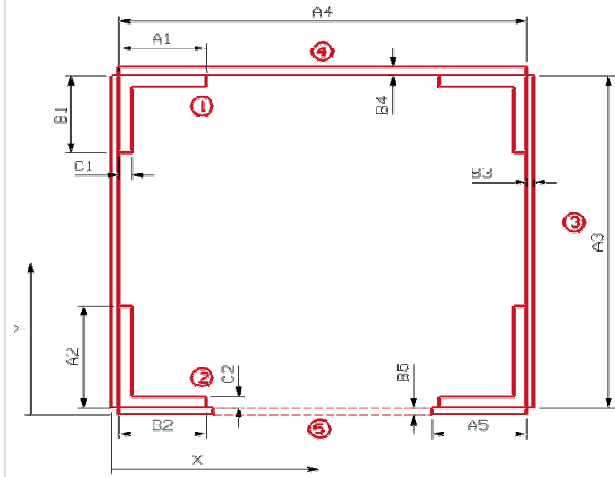
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member L72-L73

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.2500	26.2813	137.9766	0.0837	12.1487	774.8582	774.9420
	Vertical Leg	6.6172	22.2813	147.4392	31.5372	8.1487	439.3950	470.9321
2	Horizontal Leg	5.2500	0.7188	3.7734	0.0837	13.4138	944.6261	944.7098
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	9.4138	586.4069	617.9441
3	Plate	19.5000	13.5000	263.2500	1098.5000	0.6325	7.8012	1106.3012
4	Plate	8.8125	26.6875	235.1836	0.1033	12.5550	1389.0962	1389.1995
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	13.8825	1156.3434	1156.4684
Total		58.05		820.35	1161.97		5298.53	6460.50
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	14.1325	in	S _{top} =	507.00	in ³	y-bar =	14.1325	in	S _{top} =	507.00	in ³
I _x =	6460.50	in ⁴	S _{bott.} =	457.14	in ³	I _x =	6460.50	in ⁴	S _{bott.} =	457.14	in ³
C _{top} =	12.7425	in	A =	58.0469	in ²	C _{top} =	12.7425	in	A =	58.0469	in ²
C _{bottom} =	14.1325	in	r _x =	10.5498	in	C _{bottom} =	14.1325	in	r _x =	10.5498	in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.3750	8.8594	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.5938	1.9645	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	20.8750	54.7969	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.6563	78.2689	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.3750	8.8594	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.5938	1.9645	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	20.8750	54.7969	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.6563	78.2689	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	9.7500	0.1875	1.8281	0.1143	11.9375	1389.4131	1389.5273	
3 (Right)	Plate	9.7500	24.0625	234.6094	0.1143	11.9375	1389.4131	1389.5273	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.3750	10.1250	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.8750	62.6250	9.0000	8.7500	229.6875	238.6875	
Total		58.05		703.82	455.50		5801.88	6257.38	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.1250	in	S _{right} =	516.07	in ³	x-bar =	12.1250	in	S _{right} =	516.07	in ³
I _y =	6257.38	in ⁴	S _{left} =	516.07	in ³	I _y =	6257.38	in ⁴	S _{left} =	516.07	in ³
C _{right} =	12.1250	in	A =	58.0469	in ²	C _{right} =	12.1250	in	A =	58.0469	in ²
C _{left} =	12.1250	in	r _y =	10.3826	in	C _{left} =	12.1250	in	r _y =	10.3826	in



Made By KMW
Checked By ADK

Date 2/3/2012
Date 2/16/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.5000$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member L73-L74

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	6.0000	26.2500	157.5000	0.1250	12.1813	890.3086	890.4336
	Vertical Leg	7.5000	22.2500	166.8750	35.1563	8.1813	502.0060	537.1623
2	Horizontal Leg	6.0000	0.7500	4.5000	0.1250	13.3187	1064.3220	1064.4470
	Vertical Leg	7.5000	4.7500	35.6250	35.1563	9.3187	651.2823	686.4385
3	Plate	22.7500	13.5000	307.1250	1281.5833	0.5687	7.3571	1288.9404
4	Plate	8.8125	26.6875	235.1836	0.1033	12.6188	1403.2570	1403.3603
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	13.8187	1145.7341	1145.8591
Total		64.56		908.31	1352.37		5664.27	7016.64
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.1563	2.5000	-0.3906	25.2500	-9.8633	-0.2035	11.4113	-50.8667
2	0.1563	2.5000	-0.3906	25.2500	-9.8633	-0.2035	11.4113	-50.8667
3	2.5000	0.0938	-0.2344	26.5000	-6.2109	-0.0002	12.6613	-37.5725
4	2.5000	0.0938	-0.2344	26.5000	-6.2109	-0.0002	12.6613	-37.5725
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.25	-32.15	-0.41		-176.88	-177.29



Made By KMW
Checked By ADK

Date 2/3/2012
Date 2/16/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.0687 in	S _{top} =	547.90 in ³	y-bar =	13.8387 in	S _{top} =	524.64 in ³
I _x =	7016.64 in ⁴	S _{bott.} =	498.74 in ³	I _x =	6839.36 in ⁴	S _{bott.} =	494.22 in ³
C _{top} =	12.8063 in	A =	64.5625 in ²	C _{top} =	13.0363 in	A =	63.3125 in ²
C _{bottom} =	14.0687 in	r _x =	10.4250 in	C _{bottom} =	13.8387 in	r _x =	10.3935 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.0000	3.4375	10.3125	9.0000	8.7500	229.6875	238.6875	
	Vertical Leg	3.7500	0.6875	2.5781	0.0781	11.5000	495.9375	496.0156	
1 (Right)	Horizontal Leg	3.0000	20.9375	62.8125	9.0000	8.7500	229.6875	238.6875	
	Vertical Leg	3.7500	23.6875	88.8281	0.0781	11.5000	495.9375	496.0156	
2 (Left)	Horizontal Leg	3.0000	3.4375	10.3125	9.0000	8.7500	229.6875	238.6875	
	Vertical Leg	3.7500	0.6875	2.5781	0.0781	11.5000	495.9375	496.0156	
2 (Right)	Horizontal Leg	3.0000	20.9375	62.8125	9.0000	8.7500	229.6875	238.6875	
	Vertical Leg	3.7500	23.6875	88.8281	0.0781	11.5000	495.9375	496.0156	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.4375	10.3125	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.9375	62.8125	9.0000	8.7500	229.6875	238.6875	
Total		64.56		786.86	460.23		6620.83	7081.07	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	2.5000	0.1563	-0.3906	0.4375	-0.1709	-0.0008	11.7500	-53.9307	-53.9315
2	2.5000	0.1563	-0.3906	23.9375	-9.3506	-0.0008	11.7500	-53.9307	-53.9315
3	0.0938	2.5000	-0.2344	1.6875	-0.3955	-0.1221	10.5000	-25.8398	-25.9619
4	0.0938	2.5000	-0.2344	22.6875	-5.3174	-0.1221	10.5000	-25.8398	-25.9619
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.25		-15.23	-0.25		-159.54	-159.79

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	581.01 in ³	x-bar =	12.1875 in	S _{right} =	567.90 in ³
I _y =	7081.07 in ⁴	S _{left} =	581.01 in ³	I _y =	6921.28 in ⁴	S _{left} =	567.90 in ³
C _{right} =	12.1875 in	A =	64.5625 in ²	C _{right} =	12.1875 in	A =	63.3125 in ²
C _{left} =	12.1875 in	r _y =	10.4727 in	C _{left} =	12.1875 in	r _y =	10.4556 in



Made By KMW
Checked By ADK

Date 2/3/2012
Date 2/16/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

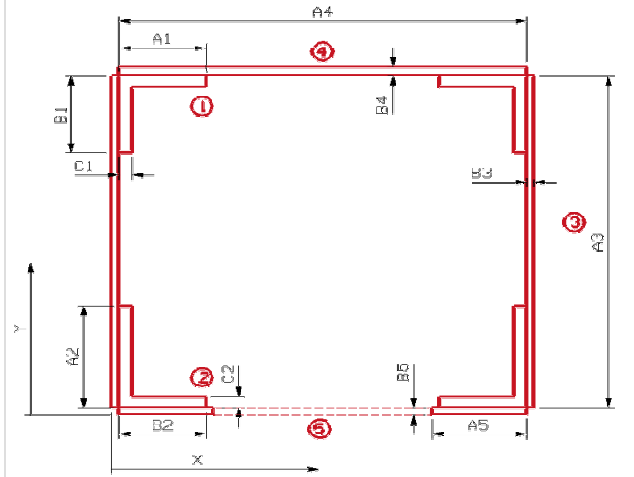
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.4375$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.4375$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:
 $A_3 = b = 30.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member L74-L75

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.2500	30.2813	158.9766	0.0837	14.1278	1047.8762	1047.9599
	Vertical Leg	6.6172	26.2813	173.9080	31.5372	10.1278	678.7438	710.2810
2	Horizontal Leg	5.2500	0.7188	3.7734	0.0837	15.4347	1250.7031	1250.7869
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	11.4347	865.2090	896.7462
3	Plate	26.2500	15.5000	406.8750	1968.7500	0.6534	11.2078	1979.9578
4	Plate	8.8125	30.6875	270.4336	0.1033	14.5341	1861.5469	1861.6501
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	15.9034	1517.5134	1517.6384
Total		64.80		1046.69	2032.22		7232.80	9265.02
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	2.5000	0.0625	-0.1563	30.5000	-4.7656	-0.0001	14.3111	-32.0014
2	2.5000	0.0625	-0.1563	30.5000	-4.7656	-0.0001	14.3111	-32.0014
3	0.0938	2.5000	-0.2344	1.7500	-0.4102	-0.1221	14.4389	-48.8626
4	0.0938	2.5000	-0.2344	1.7500	-0.4102	-0.1221	14.4389	-48.8626
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.78	-10.35	-0.24		-161.73	-161.97



Made By KMW
Checked By ADK

Date 2/3/2012
Date 2/16/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.1534 in	S _{top} =	629.35 in ³	y-bar =	16.1889 in	S _{top} =	619.84 in ³
I _x =	9265.02 in ⁴	S _{bott.} =	573.56 in ³	I _x =	9103.05 in ⁴	S _{bott.} =	562.30 in ³
C _{top} =	14.7216 in	A =	64.7969 in ²	C _{top} =	14.6861 in	A =	64.0156 in ²
C _{bottom} =	16.1534 in	r _x =	11.9577 in	C _{bottom} =	16.1889 in	r _x =	11.9248 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.4375	9.0234	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	20.9375	54.9609	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.4375	9.0234	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	20.9375	54.9609	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	13.1250	0.2188	2.8711	0.2094	11.9688	1880.1691	1880.3784	
3 (Right)	Plate	13.1250	24.1563	317.0508	0.2094	11.9688	1880.1691	1880.3784	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.4375	10.3125	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.9375	62.8125	9.0000	8.7500	229.6875	238.6875	
Total		64.80		789.71	455.69		6783.39	7239.08	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0625	2.5000	-0.1563	1.6875	-0.2637	-0.0814	10.5000	-17.2266	-17.3079
2	0.0625	2.5000	-0.1563	22.6875	-3.5449	-0.0814	10.5000	-17.2266	-17.3079
3	2.5000	0.0938	-0.2344	0.4375	-0.1025	-0.0002	11.7500	-32.3584	-32.3586
4	2.5000	0.0938	-0.2344	23.9375	-5.6104	-0.0002	11.7500	-32.3584	-32.3586
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.78		-9.52	-0.16		-99.17	-99.33

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	593.98 in ³	x-bar =	12.1875 in	S _{right} =	585.83 in ³
I _y =	7239.08 in ⁴	S _{left} =	593.98 in ³	I _y =	7139.75 in ⁴	S _{left} =	585.83 in ³
C _{right} =	12.1875 in	A =	64.7969 in ²	C _{right} =	12.1875 in	A =	64.0156 in ²
C _{left} =	12.1875 in	r _y =	10.5697 in	C _{left} =	12.1875 in	r _y =	10.5608 in



Made By KMW
Checked By ADK

Date 2/3/2012
Date 2/16/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

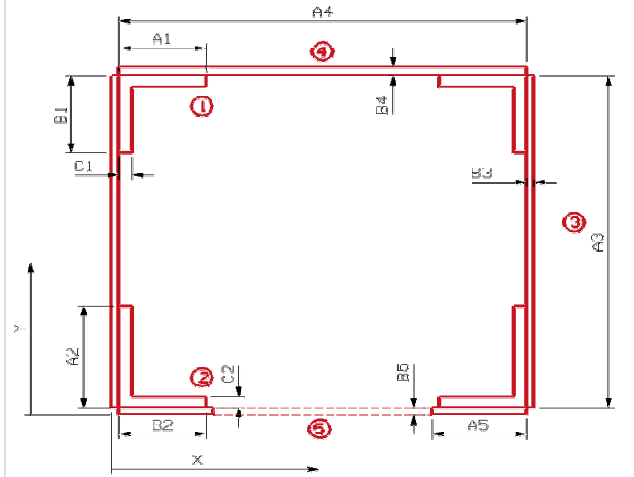
Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.4375$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.4375$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:
 $A_3 = b = 30.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member L75-L76

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	3.5000	30.2813	105.9844	0.0558	14.0455	690.4667	690.5225	
	Vertical Leg	6.6172	26.2813	173.9080	31.5372	10.0455	667.7547	699.2919	
2	Horizontal Leg	3.5000	0.7188	2.5156	0.0558	15.5170	842.7200	842.7758	
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	11.5170	877.7116	909.2488	
3	Plate	22.5000	15.5000	348.7500	1687.5000	0.7357	12.1797	1699.6797	
4	Plate	8.8125	30.6875	270.4336	0.1033	14.4518	1840.5189	1840.6222	
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	15.9857	1533.2643	1533.3893	
Total		57.55		934.32	1750.91		6464.62	8215.53	
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	
1	0.0625	30.0000	-1.8750	15.5000	-29.0625	-140.6250	0.7870	-1.1614	-141.7864
2	0.0625	30.0000	-1.8750	15.5000	-29.0625	-140.6250	0.7870	-1.1614	-141.7864
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-3.75	-58.13	-281.25		-2.32	-283.57	



Made By KMW
Checked By ADK

Date 2/3/2012
Date 2/16/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.2357 in	S _{top} =	561.20 in ³	y-bar =	16.2870 in	S _{top} =	543.73 in ³
I _x =	8215.53 in ⁴	S _{bottom} =	506.01 in ³	I _x =	7931.96 in ⁴	S _{bottom} =	487.01 in ³
C _{top} =	14.6393 in	A =	57.5469 in ²	C _{top} =	14.5880 in	A =	53.7969 in ²
C _{bottom} =	16.2357 in	r _x =	11.9483 in	C _{bottom} =	16.2870 in	r _x =	12.1426 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.7500	2.3750	4.1563	2.3333	9.7500	166.3594	168.6927	
	Vertical Leg	3.3086	0.5938	1.9645	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	1.7500	21.8750	38.2813	2.3333	9.7500	166.3594	168.6927	
	Vertical Leg	3.3086	23.6563	78.2689	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	1.7500	2.3750	4.1563	2.3333	9.7500	166.3594	168.6927	
	Vertical Leg	3.3086	0.5938	1.9645	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	1.7500	21.8750	38.2813	2.3333	9.7500	166.3594	168.6927	
	Vertical Leg	3.3086	23.6563	78.2689	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	11.2500	0.1875	2.1094	0.1318	11.9375	1603.1689	1603.3008	
3 (Right)	Plate	11.2500	24.0625	270.7031	0.1318	11.9375	1603.1689	1603.3008	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.3750	10.1250	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.8750	62.6250	9.0000	8.7500	229.6875	238.6875	
Total		57.55		697.76	433.37		6090.92	6524.29	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	30.0000	0.0625	-1.8750	0.0313	-0.0586	-0.0006	12.0938	-274.2352	-274.2358
2	30.0000	0.0625	-1.8750	24.2188	-45.4102	-0.0006	12.0938	-274.2352	-274.2358
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-3.75		-45.47	0.00		-548.47	-548.47

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	538.09 in ³	x-bar =	12.1250 in	S _{right} =	492.85 in ³
I _y =	6524.29 in ⁴	S _{left} =	538.09 in ³	I _y =	5975.82 in ⁴	S _{left} =	492.85 in ³
C _{right} =	12.1250 in	A =	57.5469 in ²	C _{right} =	12.1250 in	A =	53.7969 in ²
C _{left} =	12.1250 in	r _y =	10.6477 in	C _{left} =	12.1250 in	r _y =	10.5395 in



Made By KMW
Checked By ADK

Date 2/3/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

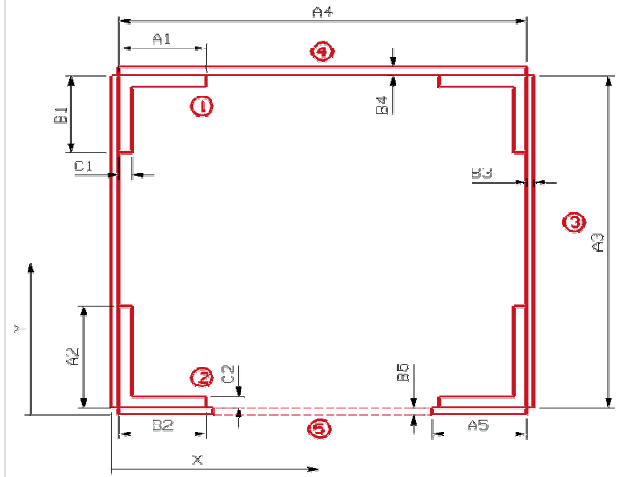
Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.4375$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.4375$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:
 $A_3 = b = 30.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member L76-L77

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	3.5000	30.2813	105.9844	0.0558	14.0455	690.4667	690.5225	
	Vertical Leg	6.6172	26.2813	173.9080	31.5372	10.0455	667.7547	699.2919	
2	Horizontal Leg	3.5000	0.7188	2.5156	0.0558	15.5170	842.7200	842.7758	
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	11.5170	877.7116	909.2488	
3	Plate	22.5000	15.5000	348.7500	1687.5000	0.7357	12.1797	1699.6797	
4	Plate	8.8125	30.6875	270.4336	0.1033	14.4518	1840.5189	1840.6222	
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	15.9857	1533.2643	1533.3893	
Total		57.55		934.32	1750.91		6464.62	8215.53	
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	
1	0.1875	20.0000	-3.7500	10.5000	-39.3750	-125.0000	6.1356	-141.1693	-266.1693
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-3.75	-39.38	-125.00		-141.17	-266.17	



Made By KMW
Checked By ADK

Date 2/3/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.2357 in	S _{top} =	561.20 in ³	y-bar =	16.6356 in	S _{top} =	558.26 in ³
I _x =	8215.53 in ⁴	S _{bott.} =	506.01 in ³	I _x =	7949.36 in ⁴	S _{bott.} =	477.85 in ³
C _{top} =	14.6393 in	A =	57.5469 in ²	C _{top} =	14.2394 in	A =	53.7969 in ²
C _{bottom} =	16.2357 in	r _x =	11.9483 in	C _{bottom} =	16.6356 in	r _x =	12.1559 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.7500	2.3750	4.1563	2.3333	9.7500	166.3594	168.6927	
	Vertical Leg	3.3086	0.5938	1.9645	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	1.7500	21.8750	38.2813	2.3333	9.7500	166.3594	168.6927	
	Vertical Leg	3.3086	23.6563	78.2689	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	1.7500	2.3750	4.1563	2.3333	9.7500	166.3594	168.6927	
	Vertical Leg	3.3086	0.5938	1.9645	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	1.7500	21.8750	38.2813	2.3333	9.7500	166.3594	168.6927	
	Vertical Leg	3.3086	23.6563	78.2689	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	11.2500	0.1875	2.1094	0.1318	11.9375	1603.1689	1603.3008	
3 (Right)	Plate	11.2500	24.0625	270.7031	0.1318	11.9375	1603.1689	1603.3008	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.3750	10.1250	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.8750	62.6250	9.0000	8.7500	229.6875	238.6875	
Total		57.55		697.76	433.37		6090.92	6524.29	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	20.0000	0.1875	-3.7500	24.1563	-90.5859	-0.0110	12.8699	-621.1295	-621.1405
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-3.75		-90.59	-0.01		-621.13	-621.14

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	538.09 in ³	x-bar =	11.2863 in	S _{right} =	455.36 in ³
I _y =	6524.29 in ⁴	S _{left} =	538.09 in ³	I _y =	5903.15 in ⁴	S _{left} =	523.03 in ³
C _{right} =	12.1250 in	A =	57.5469 in ²	C _{right} =	12.9637 in	A =	53.7969 in ²
C _{left} =	12.1250 in	r _y =	10.6477 in	C _{left} =	11.2863 in	r _y =	10.4752 in



Made By KMW
Checked By ADK

Date 2/3/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

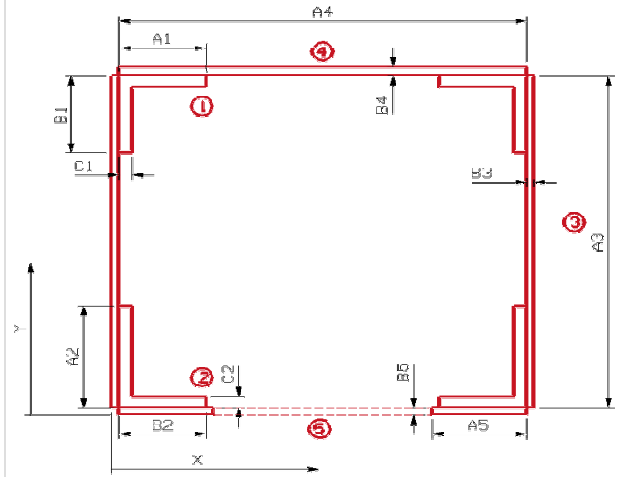
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.4375$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_f = 0.4375$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:
 $A_3 = b = 30.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member L77-L78

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.2500	30.2813	158.9766	0.0837	14.1278	1047.8762	1047.9599
	Vertical Leg	6.6172	26.2813	173.9080	31.5372	10.1278	678.7438	710.2810
2	Horizontal Leg	5.2500	0.7188	3.7734	0.0837	15.4347	1250.7031	1250.7869
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	11.4347	865.2090	896.7462
3	Plate	26.2500	15.5000	406.8750	1968.7500	0.6534	11.2078	1979.9578
4	Plate	8.8125	30.6875	270.4336	0.1033	14.5341	1861.5469	1861.6501
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	15.9034	1517.5134	1517.6384
Total		64.80		1046.69	2032.22		7232.80	9265.02
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.1250	2.5000	-0.3125	1.7500	-0.5469	-0.1628	14.4163	-64.9466
2	0.1250	2.5000	-0.3125	1.7500	-0.5469	-0.1628	14.4163	-64.9466
3	0.1250	2.5000	-0.3125	29.2500	-9.1406	-0.1628	13.0837	-53.4949
4	0.1250	2.5000	-0.3125	29.2500	-9.1406	-0.1628	13.0837	-53.4949
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.25	-19.38	-0.65		-236.88	-237.53



Made By KMW
Checked By ADK

Date 2/3/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.1534 in	S _{top} =	629.35 in ³	y-bar =	16.1663 in	S _{top} =	613.75 in ³
I _x =	9265.02 in ⁴	S _{bott.} =	573.56 in ³	I _x =	9027.49 in ⁴	S _{bott.} =	558.41 in ³
C _{top} =	14.7216 in	A =	64.7969 in ²	C _{top} =	14.7087 in	A =	63.5469 in ²
C _{bottom} =	16.1534 in	r _x =	11.9577 in	C _{bottom} =	16.1663 in	r _x =	11.9189 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.4375	9.0234	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	20.9375	54.9609	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.4375	9.0234	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	20.9375	54.9609	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	13.1250	0.2188	2.8711	0.2094	11.9688	1880.1691	1880.3784	
3 (Right)	Plate	13.1250	24.1563	317.0508	0.2094	11.9688	1880.1691	1880.3784	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.4375	10.3125	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.9375	62.8125	9.0000	8.7500	229.6875	238.6875	
Total		64.80		789.71	455.69		6783.39	7239.08	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	2.5000	0.1250	-0.3125	0.4375	-0.1367	-0.0004	11.7500	-43.1445	-43.1449
2	2.5000	0.1250	-0.3125	23.9375	-7.4805	-0.0004	11.7500	-43.1445	-43.1449
3	2.5000	0.1250	-0.3125	0.4375	-0.1367	-0.0004	11.7500	-43.1445	-43.1449
4	2.5000	0.1250	-0.3125	23.9375	-7.4805	-0.0004	11.7500	-43.1445	-43.1449
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.25		-15.23	0.00		-172.58	-172.58

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	593.98 in ³	x-bar =	12.1875 in	S _{right} =	579.82 in ³
I _y =	7239.08 in ⁴	S _{left} =	593.98 in ³	I _y =	7066.50 in ⁴	S _{left} =	579.82 in ³
C _{right} =	12.1875 in	A =	64.7969 in ²	C _{right} =	12.1875 in	A =	63.5469 in ²
C _{left} =	12.1875 in	r _y =	10.5697 in	C _{left} =	12.1875 in	r _y =	10.5452 in



Made By KMW
Checked By ADK

Date 2/3/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

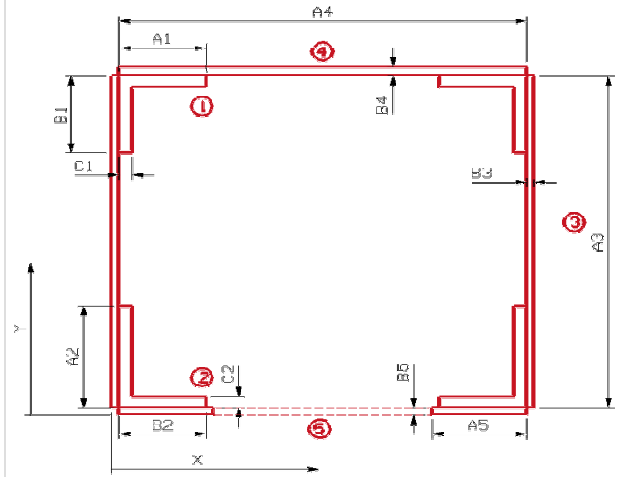
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6875$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6875$ in

Top Cover Plate:
 $A_4 = b = 22.0000$ in
 $B_4 = t = 0.4375$ in

Web Plate:
 $A_3 = b = 30.0000$ in
 $B_3 = t = 0.8750$ in

Perforated Cover Plate
 $A_5 = b = 5.2500$ in
 $B_5 = t = 0.5625$ in



Member L78-L79

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	8.2500	30.2188	249.3047	0.3250	14.1189	1644.5893	1644.9143	
	Vertical Leg	10.0547	26.2188	263.6213	44.8042	10.1189	1029.5269	1074.3311	
2	Horizontal Leg	8.2500	0.9063	7.4766	0.3250	15.1936	1904.4679	1904.7929	
	Vertical Leg	10.0547	4.9063	49.3308	44.8042	11.1936	1259.8124	1304.6166	
3	Plate	52.5000	15.5625	817.0313	3937.5000	0.5373	15.1575	3952.6575	
4	Plate	9.6250	30.7813	296.2695	0.1535	14.6814	2074.6145	2074.7680	
5	Perforated Plate	5.9063	0.2813	1.6611	0.1557	15.8186	1477.9043	1478.0600	
Total		104.64		1684.70	4028.07		9406.07	13434.14	
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	
1	0.1250	4.0000	-0.5000	28.5625	-14.2813	-0.6667	12.4985	-78.1057	-78.7723
2	0.2500	10.0000	-2.5000	21.5625	-53.9063	-20.8333	5.4985	-75.5825	-96.4158
3	0.2500	5.0000	-1.2500	3.0625	-3.8281	-2.6042	13.0015	-211.3003	-213.9044
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-4.25	-72.02	-24.10		-364.99	-389.09	



Made By KMW
Checked By ADK

Date 2/3/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.0998 in	S _{top} =	901.61 in ³	y-bar =	16.0640 in	S _{top} =	873.40 in ³
I _x =	13434.14 in ⁴	S _{bott.} =	834.43 in ³	I _x =	13045.05 in ⁴	S _{bott.} =	812.06 in ³
C _{top} =	14.9002 in	A =	104.6406 in ²	C _{top} =	14.9360 in	A =	100.3906 in ²
C _{bottom} =	16.0998 in	r _x =	11.3306 in	C _{bottom} =	16.0640 in	r _x =	11.3992 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	3.8750	15.9844	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.2188	6.1271	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	19.8750	81.9844	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.5313	113.2723	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	3.8750	15.9844	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.2188	6.1271	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	19.8750	81.9844	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.5313	113.2723	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	26.2500	0.4375	11.4844	1.6748	11.4375	3433.9307	3435.6055	
3 (Right)	Plate	26.2500	23.3125	611.9531	1.6748	11.4375	3433.9307	3435.6055	
4	Plate	9.6250	11.8750	114.2969	388.2083	0.0000	0.0000	388.2083	
5 (Left)	Perforated Plate	2.9531	3.5000	10.3359	6.7830	8.3750	207.1340	213.9170	
5 (Right)	Perforated Plate	2.9531	20.2500	59.8008	6.7830	8.3750	207.1340	213.9170	
Total		104.64		1242.61	455.42		10621.66	11077.08	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	4.0000	0.1250	-0.5000	23.6875	-11.8438	-0.0007	12.3102	-75.7710	-75.7717
2	10.0000	0.2500	-2.5000	23.6250	-59.0625	-0.0130	12.2477	-375.0180	-375.0311
3	5.0000	0.2500	-1.2500	23.6250	-29.5313	-0.0065	12.2477	-187.5090	-187.5155
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-4.25		-100.44	-0.02		-638.30	-638.32

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	11.8750 in	S _{right} =	932.81 in ³	x-bar =	11.3773 in	S _{right} =	843.69 in ³
I _y =	11077.08 in ⁴	S _{left} =	932.81 in ³	I _y =	10438.76 in ⁴	S _{left} =	917.51 in ³
C _{right} =	11.8750 in	A =	104.6406 in ²	C _{right} =	12.3727 in	A =	100.3906 in ²
C _{left} =	11.8750 in	r _y =	10.2887 in	C _{left} =	11.3773 in	r _y =	10.1971 in



Made By KMW
Checked By ADK

Date 2/3/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

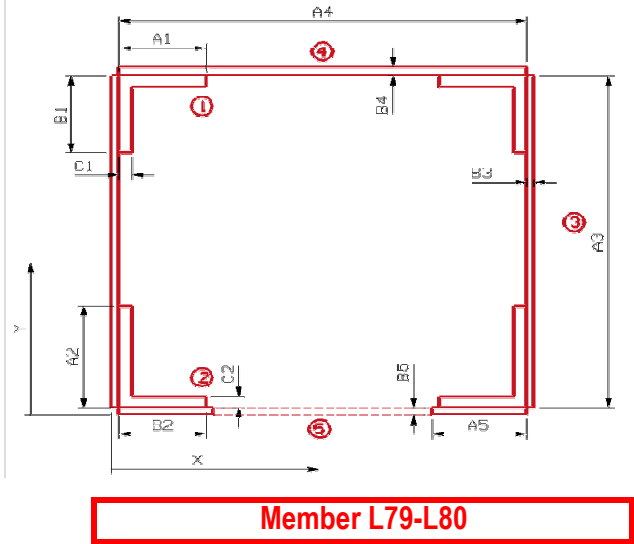
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6250$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6250$ in

Top Cover Plate:
 $A_4 = b = 22.0000$ in
 $B_4 = t = 0.5000$ in

Web Plates:**
 $A_3 = b = 30.0000$ in
 $B_3 = t = 1.4375$ in

Perforated Cover Plate
 $A_5 = b = 5.2500$ in
 $B_5 = t = 0.6250$ in



**There are 2 web plates, thickness shown is total of both

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	7.5000	30.3125	227.3438	0.2441	14.1974	1511.7532	1511.9974
	Vertical Leg	9.2188	26.3125	242.5684	41.7845	10.1974	958.6360	1000.4205
2	Horizontal Leg	7.5000	0.9375	7.0313	0.2441	15.1776	1727.6891	1727.9332
	Vertical Leg	9.2188	4.9375	45.5176	41.7845	11.1776	1151.7723	1193.5567
3	Plate	86.2500	15.6250	1347.6563	6468.7500	0.4901	20.7143	6489.4643
4	Plate	11.0000	30.8750	339.6250	0.2292	14.7599	2396.4118	2396.6410
5	Perforated Plate	6.5625	0.3125	2.0508	0.2136	15.8026	1638.7949	1639.0085
Total		137.25		2211.79	6553.25		9405.77	15959.02
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.1250	15.0000	-1.8750	28.6250	-53.6719	-35.1563	13.3808	-370.8685
2	22.0000	0.2500	-5.5000	31.0000	-170.5000	-0.0286	15.7558	-1365.3822
3	4.0000	0.1250	-0.5000	30.8125	-15.4063	-0.0007	15.5683	-121.1871
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-7.88	-239.58	-35.19		-1822.25	-1857.44



Made By KMW
Checked By ADK

Date 2/3/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.1151 in	S _{top} =	1063.23 in ³	y-bar =	15.2442 in	S _{top} =	887.96 in ³
I _x =	15959.02 in ⁴	S _{bottom} =	990.32 in ³	I _x =	14101.58 in ⁴	S _{bottom} =	925.05 in ³
C _{top} =	15.0099 in	A =	137.2500 in ²	C _{top} =	15.8808 in	A =	129.3750 in ²
C _{bottom} =	16.1151 in	r _x =	10.7832 in	C _{bottom} =	15.2442 in	r _x =	10.4402 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.7500	4.4375	16.6406	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.7500	8.0664	0.1500	10.6875	526.4951	526.6451	
1 (Right)	Horizontal Leg	3.7500	20.4375	76.6406	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	23.1250	106.5918	0.1500	10.6875	526.4951	526.6451	
2 (Left)	Horizontal Leg	3.7500	4.4375	16.6406	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.7500	8.0664	0.1500	10.6875	526.4951	526.6451	
2 (Right)	Horizontal Leg	3.7500	20.4375	76.6406	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	23.1250	106.5918	0.1500	10.6875	526.4951	526.6451	
3 (Left)	Plate	43.1250	0.7188	30.9961	7.4261	11.7188	5922.3175	5929.7437	
3 (Right)	Plate	43.1250	24.1563	1041.7383	7.4261	11.7188	5922.3175	5929.7437	
4	Plate	11.0000	12.4375	136.8125	443.6667	0.0000	0.0000	443.6667	
5 (Left)	Perforated Plate	3.2813	4.0625	13.3301	7.5366	8.3750	230.1489	237.6855	
5 (Right)	Perforated Plate	3.2813	20.8125	68.2910	7.5366	8.3750	230.1489	237.6855	
Total		137.25		1707.05	519.19		15370.91	15890.11	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	15.0000	0.1250	-1.8750	0.0625	-0.1172	-0.0024	12.5543	-295.5218	-295.5243
2	0.2500	22.0000	-5.5000	12.4375	-68.4063	-221.8333	0.1793	-0.1769	-222.0102
3	0.1250	4.0000	-0.5000	12.4375	-6.2188	-0.6667	0.1793	-0.0161	-0.6827
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-7.88		-74.74	-222.50		-295.71	-518.22

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.4375 in	S _{right} =	1277.60 in ³	x-bar =	12.6168 in	S _{right} =	1254.01 in ³
I _y =	15890.11 in ⁴	S _{left} =	1277.60 in ³	I _y =	15371.89 in ⁴	S _{left} =	1218.36 in ³
C _{right} =	12.4375 in	A =	137.2500 in ²	C _{right} =	12.2582 in	A =	129.3750 in ²
C _{left} =	12.4375 in	r _y =	10.7599 in	C _{left} =	12.6168 in	r _y =	10.9003 in



Made By KMW
Checked By ADK

Date 2/3/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_l = 0.6875$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_l = 0.6875$ in

Top Cover Plate: PL

$A_6 = b = 22.0000$ in
 $B_6 = t = 0.6250$ in

Side Plate 1: PL

$A_3 = b = 14.0000$ in
 $B_3 = t = 0.6875$ in

Web Plate 1: PL

$A_4 = b = 30.0000$ in
 $B_4 = t = 0.7500$ in

Side Plate 2: PL**

$A_8 = b = 0.0000$ in
 $B_8 = t = 0.0000$ in

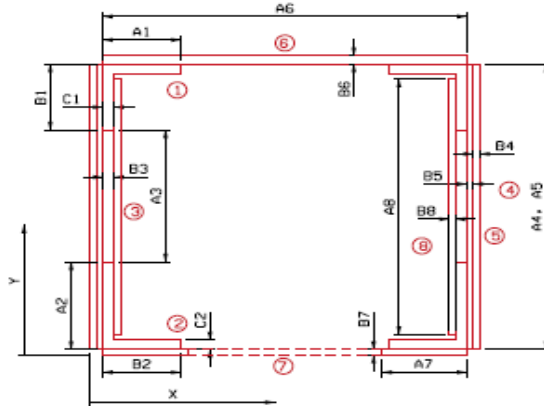
Web Plate 2: PL

$A_5 = b = 30.0000$ in
 $B_5 = t = 0.7500$ in

Perforated Bottom Cover Plate: PL

$A_7 = b = 5.2500$ in
 $B_7 = t = 0.7500$ in

**No interior side plate



Member L80-L81

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg		8.2500	30.4063	250.8516	0.3250	14.1221	1645.3184	1645.6433
	Vertical Leg		10.0547	26.4063	265.5066	44.8042	10.1221	1030.1637	1074.9680
2	Horizontal Leg		8.2500	1.0938	9.0234	0.3250	15.1904	1903.6835	1904.0085
	Vertical Leg		10.0547	5.0938	51.2161	44.8042	11.1904	1259.1081	1303.9124
3	Plate		19.2500	15.7500	303.1875	314.4167	0.5342	5.4932	319.9099
4	Plate		45.0000	15.7500	708.7500	3375.0000	0.5342	12.8412	3387.8412
5	Plate		45.0000	15.7500	708.7500	3375.0000	0.5342	12.8412	3387.8412
6	Plate		13.7500	31.0625	427.1094	0.4476	14.7783	3002.9780	3003.4256
7	Perforated Plate		7.8750	0.3750	2.9531	0.3691	15.9092	1993.1812	1993.5504
8	Plate		0.0000	15.7500	0.0000	0.0000	0.5342	0.0000	0.0000
Total			167.48		2727.35	7155.49		10865.61	18021.10
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	5.0000	0.2500	-1.2500	31.2500	-39.0625	-0.0065	15.0783	-284.1956	-284.2021
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.25		-39.06	-0.01		-284.20	-284.20



Made By KMW
Checked By ADK

Date 2/3/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.2842 in	$S_{top} = 1194.18 \text{ in}^3$			y-bar = 16.1717 in	$S_{top} = 1166.64 \text{ in}^3$		
$I_x = 18021.10 \text{ in}^4$	$S_{bottom} = 1106.66 \text{ in}^3$			$I_x = 17736.90 \text{ in}^4$	$S_{bottom} = 1096.79 \text{ in}^3$		
$C_{top} = 15.0908 \text{ in}$	$A = 167.4844 \text{ in}^2$			$C_{top} = 15.2033 \text{ in}$	$A = 166.2344 \text{ in}^2$		
$C_{bottom} = 16.2842 \text{ in}$	$r_x = 10.3730 \text{ in}$			$C_{bottom} = 16.1717 \text{ in}$	$r_x = 10.3295 \text{ in}$		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I_o	d	Ad^2	$I_{y, gross}$	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	4.5000	18.5625	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.8438	9.2692	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	20.5000	84.5625	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	23.1563	116.4144	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	4.5000	18.5625	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.8438	9.2692	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	20.5000	84.5625	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	23.1563	116.4144	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	9.6250	1.8438	17.7461	0.3791	10.6563	1092.9733	1093.3524	
3 (Right)	Plate	9.6250	23.1563	222.8789	0.3791	10.6563	1092.9733	1093.3524	
4 (Left)	Plate	22.5000	0.3750	8.4375	1.0547	12.1250	3307.8516	3308.9063	
4 (Right)	Plate	22.5000	24.6250	554.0625	1.0547	12.1250	3307.8516	3308.9063	
5 (Left)	Plate	22.5000	1.1250	25.3125	1.0547	11.3750	2911.2891	2912.3438	
5 (Right)	Plate	22.5000	23.8750	537.1875	1.0547	11.3750	2911.2891	2912.3438	
6	Plate	13.7500	12.5000	171.8750	554.5833	0.0000	0.0000	554.5833	
7 (Left)	Perforated Plate	3.9375	4.1250	16.2422	9.0439	8.3750	276.1787	285.2227	
7 (Right)	Perforated Plate	3.9375	20.8750	82.1953	9.0439	8.3750	276.1787	285.2227	
8 (Left)	Plate	0.0000	2.1875	0.0000	0.0000	10.3125	0.0000	0.0000	
8 (Right)	Plate	0.0000	22.8125	0.0000	0.0000	10.3125	0.0000	0.0000	
Total		167.48		2093.55	615.37		18516.12	19144.06	
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.2500	5.0000	-1.2500	4.0000	-5.0000	-2.6042	8.5639	-91.6758	-94.2800
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.25		-5.00	-2.60		-91.68	-94.28

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 12.5000 in	$S_{right} = 1531.52 \text{ in}^3$			x-bar = 12.5639 in	$S_{right} = 1531.81 \text{ in}^3$		
$I_y = 19144.06 \text{ in}^4$	$S_{left} = 1531.52 \text{ in}^3$			$I_y = 19049.78 \text{ in}^4$	$S_{left} = 1516.23 \text{ in}^3$		
$C_{right} = 12.5000 \text{ in}$	$A = 167.4844 \text{ in}^2$			$C_{right} = 12.4361 \text{ in}$	$A = 166.2344 \text{ in}^2$		
$C_{left} = 12.5000 \text{ in}$	$r_y = 10.6913 \text{ in}$			$C_{left} = 12.5639 \text{ in}$	$r_y = 10.7049 \text{ in}$		



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_l = 0.6875$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_l = 0.6875$ in

Top Cover Plate: PL

$A_6 = b = 22.0000$ in
 $B_6 = t = 0.5625$ in

Side Plate 1: PL

$A_3 = b = 14.0000$ in
 $B_3 = t = 0.6875$ in

Web Plate 1: PL

$A_4 = b = 30.0000$ in
 $B_4 = t = 0.7500$ in

Side Plate 2: PL

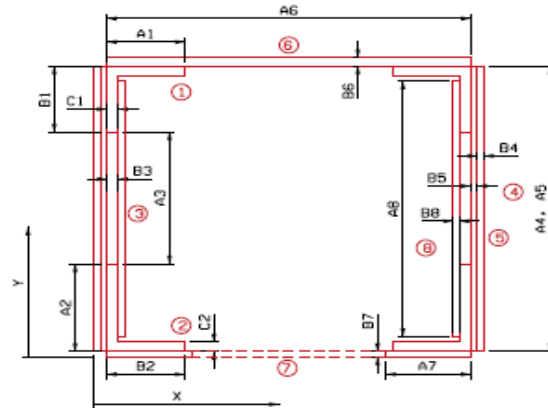
$A_8 = b = 28.0000$ in
 $B_8 = t = 0.3750$ in

Web Plate 2: PL

$A_5 = b = 30.0000$ in
 $B_5 = t = 0.6875$ in

Perforated Bottom Cover Plate: PL

$A_7 = b = 5.2500$ in
 $B_7 = t = 0.6875$ in



Member L81-L82

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg		8.2500	30.3438	250.3359	0.3250	14.2275	1669.9682	1670.2931
	Vertical Leg		10.0547	26.3438	264.8782	44.8042	10.2275	1051.7281	1096.5323
2	Horizontal Leg		8.2500	1.0313	8.5078	0.3250	15.0850	1877.3591	1877.6841
	Vertical Leg		10.0547	5.0313	50.5876	44.8042	11.0850	1235.5028	1280.3071
3	Plate		19.2500	15.6875	301.9844	314.4167	0.4288	3.5395	317.9561
4	Plate		45.0000	15.6875	705.9375	3375.0000	0.4288	8.2741	3383.2741
5	Plate		41.2500	15.6875	647.1094	3093.7500	0.4288	7.5846	3101.3346
6	Plate		12.3750	30.9688	383.2383	0.3263	14.8525	2729.8671	2730.1934
7	Perforated Plate		7.2188	0.3438	2.4814	0.2843	15.7725	1795.8321	1796.1164
8	Plate		21.0000	15.6875	329.4375	1372.0000	0.4288	3.8612	1375.8612
Total			182.70		2944.50	8246.04		10383.52	18629.55
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.1163 in	$S_{top} = 1231.00 \text{ in}^3$			y-bar = 16.1163 in	$S_{top} = 1231.00 \text{ in}^3$		
$I_x = 18629.55 \text{ in}^4$	$S_{bott.} = 1155.94 \text{ in}^3$			$I_x = 18629.55 \text{ in}^4$	$S_{bott.} = 1155.94 \text{ in}^3$		
$C_{top} = 15.1337 \text{ in}$	$A = 182.7031 \text{ in}^2$			$C_{top} = 15.1337 \text{ in}$	$A = 182.7031 \text{ in}^2$		
$C_{bottom} = 16.1163 \text{ in}$	$r_x = 10.0978 \text{ in}$			$C_{bottom} = 16.1163 \text{ in}$	$r_x = 10.0978 \text{ in}$		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I_o	d	Ad^2	$I_{y, gross}$	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	4.4375	18.3047	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.7813	8.9550	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	20.4375	84.3047	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	23.0938	116.1002	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	4.4375	18.3047	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.7813	8.9550	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	20.4375	84.3047	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	23.0938	116.1002	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	9.6250	1.7813	17.1445	0.3791	10.6563	1092.9733	1093.3524	
3 (Right)	Plate	9.6250	23.0938	222.2773	0.3791	10.6563	1092.9733	1093.3524	
4 (Left)	Plate	22.5000	0.3750	8.4375	1.0547	12.0625	3273.8379	3274.8926	
4 (Right)	Plate	22.5000	24.5000	551.2500	1.0547	12.0625	3273.8379	3274.8926	
5 (Left)	Plate	20.6250	1.0938	22.5586	0.8124	11.3438	2654.0387	2654.8511	
5 (Right)	Plate	20.6250	23.7813	490.4883	0.8124	11.3438	2654.0387	2654.8511	
6	Plate	12.3750	12.4375	153.9141	499.1250	0.0000	0.0000	499.1250	
7 (Left)	Perforated Plate	3.6094	4.0625	14.6631	8.2903	8.3750	253.1638	261.4541	
7 (Right)	Perforated Plate	3.6094	20.8125	75.1201	8.2903	8.3750	253.1638	261.4541	
8 (Left)	Plate	10.5000	2.3125	24.2813	0.1230	10.1250	1076.4141	1076.5371	
8 (Right)	Plate	10.5000	22.5625	236.9063	0.1230	10.1250	1076.4141	1076.5371	
Total		182.70		2272.37	558.16		20040.39	20611.12	
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 12.4375 in	$S_{right} = 1657.18 \text{ in}^3$			x-bar = 12.4375 in	$S_{right} = 1657.18 \text{ in}^3$		
$I_y = 20611.12 \text{ in}^4$	$S_{left} = 1657.18 \text{ in}^3$			$I_y = 20611.12 \text{ in}^4$	$S_{left} = 1657.18 \text{ in}^3$		
$C_{right} = 12.4375 \text{ in}$	$A = 182.7031 \text{ in}^2$			$C_{right} = 12.4375 \text{ in}$	$A = 182.7031 \text{ in}^2$		
$C_{left} = 12.4375 \text{ in}$	$r_y = 10.6213 \text{ in}$			$C_{left} = 12.4375 \text{ in}$	$r_y = 10.6213 \text{ in}$		



Made By KMW
Checked By ADK

Date 2/3/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_l = 0.7500$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_l = 0.7500$ in

Top Cover Plate: PL

$A_6 = b = 22.0000$ in
 $B_6 = t = 0.6250$ in

Side Plate 1: PL

$A_3 = b = 14.0000$ in
 $B_3 = t = 0.7500$ in

Web Plate 1: PL

$A_4 = b = 30.0000$ in
 $B_4 = t = 0.8125$ in

Side Plate 2: PL**

$A_8 = b = 0.0000$ in
 $B_8 = t = 0.0000$ in

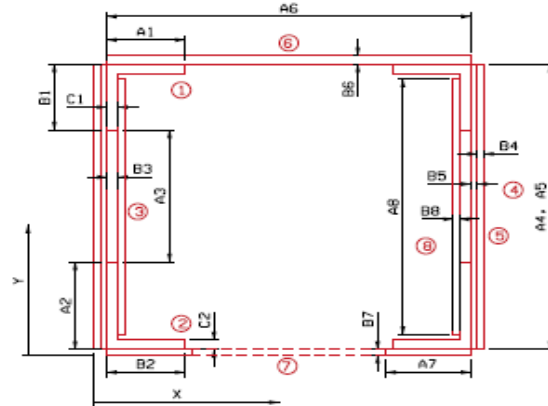
Web Plate 2: PL

$A_5 = b = 30.0000$ in
 $B_5 = t = 0.7500$ in

Perforated Bottom Cover Plate: PL

$A_7 = b = 5.2500$ in
 $B_7 = t = 0.7500$ in

**No interior side plate



Member L82-L83

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	9.0000	30.3750	273.3750	0.4219	14.1170	1793.6112	1794.0330
	Vertical Leg	10.8750	26.3750	286.8281	47.6348	10.1170	1113.0998	1160.7346
2	Horizontal Leg	9.0000	1.1250	10.1250	0.4219	15.1330	2061.0649	2061.4868
	Vertical Leg	10.8750	5.1250	55.7344	47.6348	11.1330	1347.8838	1395.5186
3	Plate	21.0000	15.7500	330.7500	343.0000	0.5080	5.4190	348.4190
4	Plate	48.7500	15.7500	767.8125	3656.2500	0.5080	12.5798	3668.8298
5	Plate	45.0000	15.7500	708.7500	3375.0000	0.5080	11.6122	3386.6122
6	Plate	13.7500	31.0625	427.1094	0.4476	14.8045	3013.6381	3014.0857
7	Perforated Plate	7.8750	0.3750	2.9531	0.3691	15.8830	1986.6199	1986.9890
8	Plate	0.0000	15.7500	0.0000	0.0000	0.5080	0.0000	0.0000
Total		176.13		2863.44	7471.18		11345.53	18816.71
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	6.0000	0.2500	-1.5000	31.2500	-46.8750	-0.0078	15.1208	-342.9576
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.50	-46.88	-0.01		-342.96	-342.97



Made By KMW
Checked By ADK

Date 2/3/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.2580 in	$S_{top} = 1244.74 \text{ in}^3$			y-bar = 16.1292 in	$S_{top} = 1211.73 \text{ in}^3$		
$I_x = 18816.71 \text{ in}^4$	$S_{bott.} = 1157.38 \text{ in}^3$			$I_x = 18473.74 \text{ in}^4$	$S_{bott.} = 1145.36 \text{ in}^3$		
$C_{top} = 15.1170 \text{ in}$	$A = 176.1250 \text{ in}^2$			$C_{top} = 15.2458 \text{ in}$	$A = 174.6250 \text{ in}^2$		
$C_{bottom} = 16.2580 \text{ in}$	$r_x = 10.3362 \text{ in}$			$C_{bottom} = 16.1292 \text{ in}$	$r_x = 10.2855 \text{ in}$		

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I_o	d	Ad^2	$I_{y, gross}$
Element	Description		(in ⁴)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1 (Left)	Horizontal Leg		4.5000	4.5625	20.5313	13.5000	8.0000	288.0000	301.5000
	Vertical Leg		5.4375	1.9375	10.5352	0.2549	10.6250	613.8428	614.0977
1 (Right)	Horizontal Leg		4.5000	20.5625	92.5313	13.5000	8.0000	288.0000	301.5000
	Vertical Leg		5.4375	23.1875	126.0820	0.2549	10.6250	613.8428	614.0977
2 (Left)	Horizontal Leg		4.5000	4.5625	20.5313	13.5000	8.0000	288.0000	301.5000
	Vertical Leg		5.4375	1.9375	10.5352	0.2549	10.6250	613.8428	614.0977
2 (Right)	Horizontal Leg		4.5000	20.5625	92.5313	13.5000	8.0000	288.0000	301.5000
	Vertical Leg		5.4375	23.1875	126.0820	0.2549	10.6250	613.8428	614.0977
3 (Left)	Plate		10.5000	1.9375	20.3438	0.4922	10.6250	1185.3516	1185.8438
3 (Right)	Plate		10.5000	23.1875	243.4688	0.4922	10.6250	1185.3516	1185.8438
4 (Left)	Plate		24.3750	0.4063	9.9023	1.3409	12.1563	3602.0013	3603.3423
4 (Right)	Plate		24.3750	24.7188	602.5195	1.3409	12.1563	3602.0013	3603.3423
5 (Left)	Plate		22.5000	1.1875	26.7188	1.0547	11.3750	2911.2891	2912.3438
5 (Right)	Plate		22.5000	23.9375	538.5938	1.0547	11.3750	2911.2891	2912.3438
6	Plate		13.7500	12.5625	172.7344	554.5833	0.0000	0.0000	554.5833
7 (Left)	Perforated Plate		3.9375	4.1875	16.4883	9.0439	8.3750	276.1787	285.2227
7 (Right)	Perforated Plate		3.9375	20.9375	82.4414	9.0439	8.3750	276.1787	285.2227
8 (Left)	Plate		0.0000	2.3125	0.0000	0.0000	10.2500	0.0000	0.0000
8 (Right)	Plate		0.0000	22.8125	0.0000	0.0000	10.2500	0.0000	0.0000
Total			176.13		2212.57	619.71		19557.01	20190.48
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y, loss}$
Loss #	b (in)	h (in)	(in ⁴)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.2500	6.0000	-1.5000	20.5625	-30.8438	-4.5000	8.0687	-97.6563	-102.1563
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.50		-30.84	-4.50		-97.66	-102.16

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 12.5625 in	$S_{right} = 1607.20 \text{ in}^3$			x-bar = 12.4938 in	$S_{right} = 1590.37 \text{ in}^3$		
$I_y = 20190.48 \text{ in}^4$	$S_{left} = 1607.20 \text{ in}^3$			$I_y = 20088.32 \text{ in}^4$	$S_{left} = 1607.87 \text{ in}^3$		
$C_{right} = 12.5625 \text{ in}$	$A = 176.1250 \text{ in}^2$			$C_{right} = 12.6312 \text{ in}$	$A = 174.6250 \text{ in}^2$		
$C_{left} = 12.5625 \text{ in}$	$r_y = 10.7069 \text{ in}$			$C_{left} = 12.4938 \text{ in}$	$r_y = 10.7255 \text{ in}$		



Made By KMW
Checked By ADK

Date 2/3/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

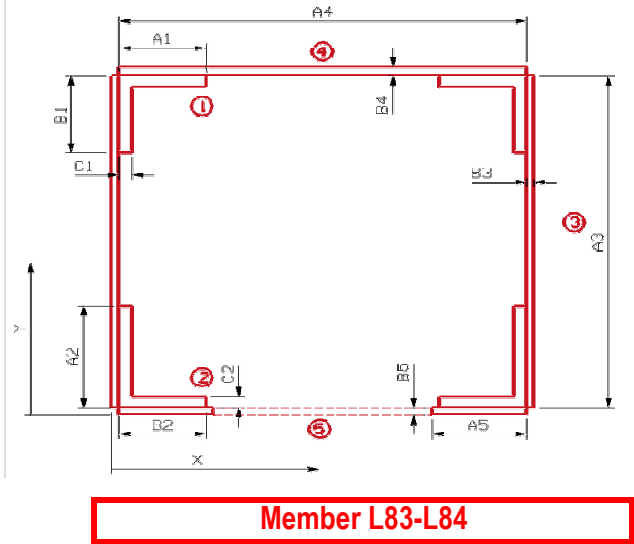
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.6250$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_f = 0.6250$ in

Top Cover Plate:
 $A_4 = b = 22.0000$ in
 $B_4 = t = 0.5000$ in

Web Plates:**
 $A_3 = b = 30.0000$ in
 $B_3 = t = 1.4375$ in

Perforated Cover Plate
 $A_5 = b = 5.2500$ in
 $B_5 = t = 0.6250$ in



**There are 2 web plates, thickness shown is total of both

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	7.5000	30.3125	227.3438	0.2441	14.1974	1511.7532	1511.9974
	Vertical Leg	9.2188	26.3125	242.5684	41.7845	10.1974	958.6360	1000.4205
2	Horizontal Leg	7.5000	0.9375	7.0313	0.2441	15.1776	1727.6891	1727.9332
	Vertical Leg	9.2188	4.9375	45.5176	41.7845	11.1776	1151.7723	1193.5567
3	Plate	86.2500	15.6250	1347.6563	6468.7500	0.4901	20.7143	6489.4643
4	Plate	11.0000	30.8750	339.6250	0.2292	14.7599	2396.4118	2396.6410
5	Perforated Plate	6.5625	0.3125	2.0508	0.2136	15.8026	1638.7949	1639.0085
Total		137.25		2211.79	6553.25		9405.77	15959.02
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	7.3333	0.1250	-0.9167	31.0625	-28.4740	-0.0012	14.9631	-205.2365
2	7.3333	0.1250	-0.9167	31.0625	-28.4740	-0.0012	14.9631	-205.2365
3	0.2500	6.0000	-1.5000	3.6250	-5.4375	-4.5000	12.4744	-237.9160
4	0.1250	5.0000	-0.6250	9.1250	-5.7031	-1.3021	6.9744	-31.7035
5	0.2500	6.0000	-1.5000	14.6250	-21.9375	-4.5000	1.4744	-3.2608
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-5.46	-90.03	-10.30		-677.55	-687.86



Made By KMW
Checked By ADK

Date 2/3/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.1151 in	S _{top} =	1063.23 in ³	y-bar =	16.0994 in	S _{top} =	1016.34 in ³
I _x =	15959.02 in ⁴	S _{bott.} =	990.32 in ³	I _x =	15271.17 in ⁴	S _{bott.} =	948.55 in ³
C _{top} =	15.0099 in	A =	137.2500 in ²	C _{top} =	15.0256 in	A =	131.7917 in ²
C _{bottom} =	16.1151 in	r _x =	10.7832 in	C _{bottom} =	16.0994 in	r _x =	10.7645 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.7500	4.4375	16.6406	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.7500	8.0664	0.1500	10.6875	526.4951	526.6451	
1 (Right)	Horizontal Leg	3.7500	20.4375	76.6406	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	23.1250	106.5918	0.1500	10.6875	526.4951	526.6451	
2 (Left)	Horizontal Leg	3.7500	4.4375	16.6406	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.7500	8.0664	0.1500	10.6875	526.4951	526.6451	
2 (Right)	Horizontal Leg	3.7500	20.4375	76.6406	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	23.1250	106.5918	0.1500	10.6875	526.4951	526.6451	
3 (Left)	Plate	43.1250	0.7188	30.9961	7.4261	11.7188	5922.3175	5929.7437	
3 (Right)	Plate	43.1250	24.1563	1041.7383	7.4261	11.7188	5922.3175	5929.7437	
4	Plate	11.0000	12.4375	136.8125	443.6667	0.0000	0.0000	443.6667	
5 (Left)	Perforated Plate	3.2813	4.0625	13.3301	7.5366	8.3750	230.1489	237.6855	
5 (Right)	Perforated Plate	3.2813	20.8125	68.2910	7.5366	8.3750	230.1489	237.6855	
Total		137.25		1707.05	519.19		15370.91	15890.11	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1250	7.3333	-0.9167	5.1042	-4.6788	-4.1080	6.9944	-44.8445	-48.9525
2	0.1250	7.3333	-0.9167	19.7708	-18.1233	-4.1080	7.6723	-53.9587	-58.0667
3	6.0000	0.2500	-1.5000	24.7500	-37.1250	-0.0078	12.6515	-240.0891	-240.0969
4	5.0000	0.1250	-0.6250	24.8125	-15.5078	-0.0008	12.7140	-101.0280	-101.0288
5	6.0000	0.2500	-1.5000	24.7500	-37.1250	-0.0078	12.6515	-240.0891	-240.0969
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-5.46		-112.56	-8.23		-680.01	-688.24

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.4375 in	S _{right} =	1277.60 in ³	x-bar =	12.0985 in	S _{right} =	1189.83 in ³
I _y =	15890.11 in ⁴	S _{left} =	1277.60 in ³	I _y =	15201.86 in ⁴	S _{left} =	1256.50 in ³
C _{right} =	12.4375 in	A =	137.2500 in ²	C _{right} =	12.7765 in	A =	131.7917 in ²
C _{left} =	12.4375 in	r _y =	10.7599 in	C _{left} =	12.0985 in	r _y =	10.7400 in



Made By KMW
Checked By ADK

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

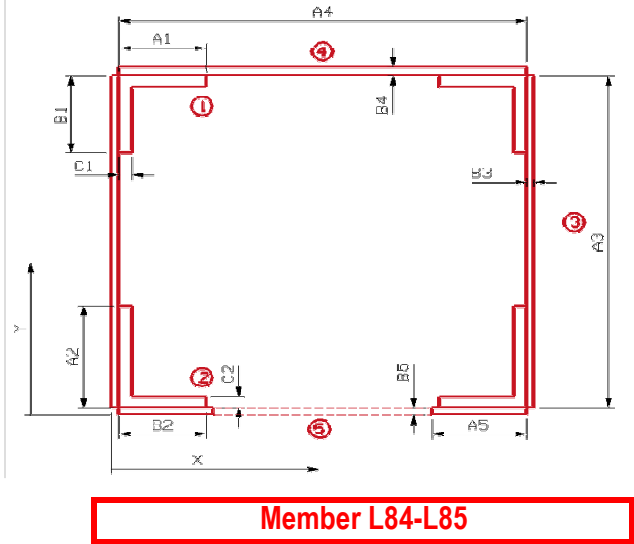
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6250$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6250$ in

Top Cover Plate:
 $A_4 = b = 22.0000$ in
 $B_4 = t = 0.5000$ in

Web Plates:**
 $A_3 = b = 30.0000$ in
 $B_3 = t = 1.3125$ in

Perforated Cover Plate
 $A_5 = b = 5.2500$ in
 $B_5 = t = 0.6250$ in



**There are 2 web plates, thickness shown is total of both

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	7.5000	30.3125	227.3438	0.2441	14.1691	1505.7266	1505.9707	
	Vertical Leg	9.2188	26.3125	242.5684	41.7845	10.1691	953.3174	995.1019	
2	Horizontal Leg	7.5000	0.9375	7.0313	0.2441	15.2059	1734.1443	1734.3884	
	Vertical Leg	9.2188	4.9375	45.5176	41.7845	11.2059	1157.6176	1199.4021	
3	Plate	78.7500	15.6250	1230.4688	5906.2500	0.5184	21.1627	5927.4127	
4	Plate	11.0000	30.8750	339.6250	0.2292	14.7316	2387.2221	2387.4513	
5	Perforated Plate	6.5625	0.3125	2.0508	0.2136	15.8309	1644.6756	1644.8892	
Total		129.75		2094.61	5990.75		9403.87	15394.62	
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	
1	0.1875	9.0000	-1.6875	26.1250	-44.0859	-11.3906	9.8920	-165.1238	-176.5144
2	0.0625	9.0000	-0.5625	17.1250	-9.6328	-3.7969	0.8920	-0.4475	-4.2444
3	0.2500	12.0000	-3.0000	6.6250	-19.8750	-36.0000	9.6080	-276.9425	-312.9425
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-5.25	-73.59	-51.19		-442.51	-493.70	



Made By KMW
Checked By ADK

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.1434 in	S _{top} =	1027.57 in ³	y-bar =	16.2330 in	S _{top} =	1000.60 in ³
I _x =	15394.62 in ⁴	S _{bottom} =	953.62 in ³	I _x =	14900.91 in ⁴	S _{bottom} =	917.94 in ³
C _{top} =	14.9816 in	A =	129.7500 in ²	C _{top} =	14.8920 in	A =	124.5000 in ²
C _{bottom} =	16.1434 in	r _x =	10.8926 in	C _{bottom} =	16.2330 in	r _x =	10.9401 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.7500	4.3125	16.1719	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.6250	7.4902	0.1500	10.6875	526.4951	526.6451	
1 (Right)	Horizontal Leg	3.7500	20.3125	76.1719	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	23.0000	106.0156	0.1500	10.6875	526.4951	526.6451	
2 (Left)	Horizontal Leg	3.7500	4.3125	16.1719	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.6250	7.4902	0.1500	10.6875	526.4951	526.6451	
2 (Right)	Horizontal Leg	3.7500	20.3125	76.1719	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	23.0000	106.0156	0.1500	10.6875	526.4951	526.6451	
3 (Left)	Plate	39.3750	0.6563	25.8398	5.6525	11.6563	5349.8090	5355.4614	
3 (Right)	Plate	39.3750	23.9688	943.7695	5.6525	11.6563	5349.8090	5355.4614	
4	Plate	11.0000	12.3125	135.4375	443.6667	0.0000	0.0000	443.6667	
5 (Left)	Perforated Plate	3.2813	3.9375	12.9199	7.5366	8.3750	230.1489	237.6855	
5 (Right)	Perforated Plate	3.2813	20.6875	67.8809	7.5366	8.3750	230.1489	237.6855	
Total		129.75		1597.55	515.65		14225.90	14741.54	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	9.0000	0.1875	-1.6875	0.0938	-0.1582	-0.0049	12.7335	-273.6159	-273.6208
2	9.0000	0.0625	-0.5625	0.0313	-0.0176	-0.0002	12.7960	-92.1028	-92.1030
3	12.0000	0.2500	-3.0000	0.1250	-0.3750	-0.0156	12.7023	-484.0436	-484.0592
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-5.25		-0.55	-0.02		-849.76	-849.78

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3125 in	S _{right} =	1197.28 in ³	x-bar =	12.8273 in	S _{right} =	1177.49 in ³
I _y =	14741.54 in ⁴	S _{left} =	1197.28 in ³	I _y =	13891.76 in ⁴	S _{left} =	1082.99 in ³
C _{right} =	12.3125 in	A =	129.7500 in ²	C _{right} =	11.7977 in	A =	124.5000 in ²
C _{left} =	12.3125 in	r _y =	10.6590 in	C _{left} =	12.8273 in	r _y =	10.5632 in



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.6250$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_f = 0.6250$ in

Top Cover Plate:

$A_4 = b = 22.0000$ in
 $B_4 = t = 0.5000$ in

Web Plates**:

$A_3 = b = 30.0000$ in
 $B_3 = t = 1.3750$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.6250$ in



Member L85-L86

**There are 2 web plates, thickness shown is total of both

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	7.5000	30.3125	227.3438	0.2441	14.1837	1508.8231	1509.0672
	Vertical Leg	9.2188	26.3125	242.5684	41.7845	10.1837	956.0496	997.8340
2	Horizontal Leg	7.5000	0.9375	7.0313	0.2441	15.1913	1730.8245	1731.0687
	Vertical Leg	9.2188	4.9375	45.5176	41.7845	11.1913	1154.6110	1196.3954
3	Plate	82.5000	15.6250	1289.0625	6187.5000	0.5038	20.9424	6208.4424
4	Plate	11.0000	30.8750	339.6250	0.2292	14.7462	2391.9438	2392.1730
5	Perforated Plate	6.5625	0.3125	2.0508	0.2136	15.8163	1641.6513	1641.8650
Total		133.50		2153.20	6272.00		9404.85	15676.85
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.1288 in	S _{top} =	1045.39 in ³	y-bar =	16.1288 in	S _{top} =	1045.39 in ³
I _x =	15676.85 in ⁴	S _{bott.} =	971.98 in ³	I _x =	15676.85 in ⁴	S _{bott.} =	971.98 in ³
C _{top} =	14.9962 in	A =	133.5000 in ²	C _{top} =	14.9962 in	A =	133.5000 in ²
C _{bottom} =	16.1288 in	r _x =	10.8365 in	C _{bottom} =	16.1288 in	r _x =	10.8365 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.7500	4.3750	16.4063	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.6875	7.7783	0.1500	10.6875	526.4951	526.6451	
1 (Right)	Horizontal Leg	3.7500	20.3750	76.4063	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	23.0625	106.3037	0.1500	10.6875	526.4951	526.6451	
2 (Left)	Horizontal Leg	3.7500	4.3750	16.4063	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.6875	7.7783	0.1500	10.6875	526.4951	526.6451	
2 (Right)	Horizontal Leg	3.7500	20.3750	76.4063	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	23.0625	106.3037	0.1500	10.6875	526.4951	526.6451	
3 (Left)	Plate	41.2500	0.6875	28.3594	6.4990	11.6875	5634.6533	5641.1523	
3 (Right)	Plate	41.2500	24.0625	992.5781	6.4990	11.6875	5634.6533	5641.1523	
4	Plate	11.0000	12.3750	136.1250	443.6667	0.0000	0.0000	443.6667	
5 (Left)	Perforated Plate	3.2813	4.0000	13.1250	7.5366	8.3750	230.1489	237.6855	
5 (Right)	Perforated Plate	3.2813	20.7500	68.0859	7.5366	8.3750	230.1489	237.6855	
Total		133.50		1652.06	517.34		14795.58	15312.92	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3750 in	S _{right} =	1237.41 in ³	x-bar =	12.3750 in	S _{right} =	1237.41 in ³
I _y =	15312.92 in ⁴	S _{left} =	1237.41 in ³	I _y =	15312.92 in ⁴	S _{left} =	1237.41 in ³
C _{right} =	12.3750 in	A =	133.5000 in ²	C _{right} =	12.3750 in	A =	133.5000 in ²
C _{left} =	12.3750 in	r _y =	10.7100 in	C _{left} =	12.3750 in	r _y =	10.7100 in



Made By KMW
Checked By ADK

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

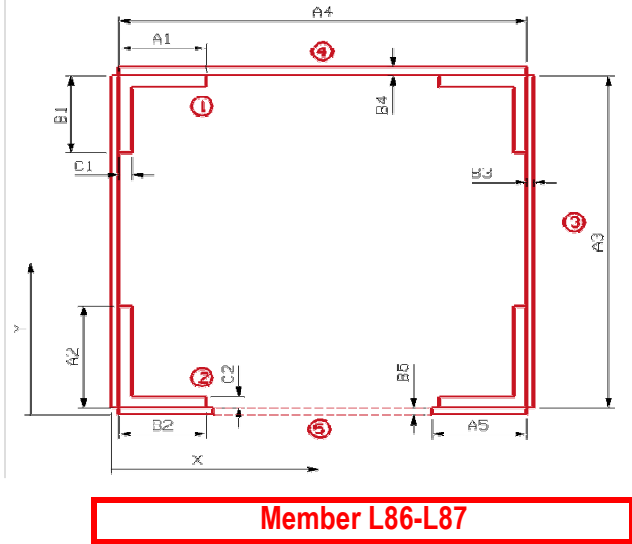
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6875$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6875$ in

Top Cover Plate:
 $A_4 = b = 22.0000$ in
 $B_4 = t = 0.5625$ in

Web Plates:**
 $A_3 = b = 30.0000$ in
 $B_3 = t = 1.4375$ in

Perforated Cover Plate
 $A_5 = b = 5.2500$ in
 $B_5 = t = 0.6875$ in



**There are 2 web plates, thickness shown is total of both

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	8.2500	30.3438	250.3359	0.3250	14.1063	1641.6474	1641.9724
	Vertical Leg	10.0547	26.3438	264.8782	44.8042	10.1063	1026.9577	1071.7619
2	Horizontal Leg	8.2500	1.0313	8.5078	0.3250	15.2062	1907.6365	1907.9614
	Vertical Leg	10.0547	5.0313	50.5876	44.8042	11.2062	1262.6579	1307.4621
3	Plate	86.2500	15.6875	1353.0469	6468.7500	0.5500	26.0863	6494.8363
4	Plate	12.3750	30.9688	383.2383	0.3263	14.7313	2685.5119	2685.8382
5	Perforated Plate	7.2188	0.3438	2.4814	0.2843	15.8937	1823.5274	1823.8117
Total		142.45		2313.08	6559.62		10374.02	16933.64
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	4.0000	0.2500	-1.0000	31.1250	-31.1250	-0.0052	14.9928	-224.7838
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.00	-31.13	-0.01		-224.78	-224.79



Made By KMW
Checked By ADK

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.2375 in	$S_{top} = 1127.97 \text{ in}^3$			y-bar = 16.1322 in	$S_{top} = 1105.24 \text{ in}^3$		
$I_x = 16933.64 \text{ in}^4$	$S_{bott.} = 1042.88 \text{ in}^3$			$I_x = 16708.85 \text{ in}^4$	$S_{bott.} = 1035.75 \text{ in}^3$		
$C_{top} = 15.0125 \text{ in}$	$A = 142.4531 \text{ in}^2$			$C_{top} = 15.1178 \text{ in}$	$A = 141.4531 \text{ in}^2$		
$C_{bottom} = 16.2375 \text{ in}$	$r_x = 10.9028 \text{ in}$			$C_{bottom} = 16.1322 \text{ in}$	$r_x = 10.8684 \text{ in}$		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I_o	d	Ad^2	$I_{y,gross}$	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	4.4375	18.3047	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.7813	8.9550	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	20.4375	84.3047	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	23.0938	116.1002	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	4.4375	18.3047	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.7813	8.9550	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	20.4375	84.3047	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	23.0938	116.1002	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	43.1250	0.7188	30.9961	7.4261	11.7188	5922.3175	5929.7437	
3 (Right)	Plate	43.1250	24.1563	1041.7383	7.4261	11.7188	5922.3175	5929.7437	
4	Plate	12.3750	12.4375	153.9141	499.1250	0.0000	0.0000	499.1250	
5 (Left)	Perforated Plate	3.6094	4.0625	14.6631	8.2903	8.3750	253.1638	261.4541	
5 (Right)	Perforated Plate	3.6094	20.8125	75.1201	8.2903	8.3750	253.1638	261.4541	
Total		142.45		1771.76	580.85		15690.50	16271.35	
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.2500	4.0000	-1.0000	3.4375	-3.4375	-1.3333	9.0636	-82.1493	-83.4826
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.00		-3.44	-1.33		-82.15	-83.48

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 12.4375 in	$S_{right} = 1308.25 \text{ in}^3$			x-bar = 12.5011 in	$S_{right} = 1308.23 \text{ in}^3$		
$I_y = 16271.35 \text{ in}^4$	$S_{left} = 1308.25 \text{ in}^3$			$I_y = 16187.86 \text{ in}^4$	$S_{left} = 1294.91 \text{ in}^3$		
$C_{right} = 12.4375 \text{ in}$	$A = 142.4531 \text{ in}^2$			$C_{right} = 12.3739 \text{ in}$	$A = 141.4531 \text{ in}^2$		
$C_{left} = 12.4375 \text{ in}$	$r_y = 10.6875 \text{ in}$			$C_{left} = 12.5011 \text{ in}$	$r_y = 10.6977 \text{ in}$		



Made By KMW
Checked By ADK

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

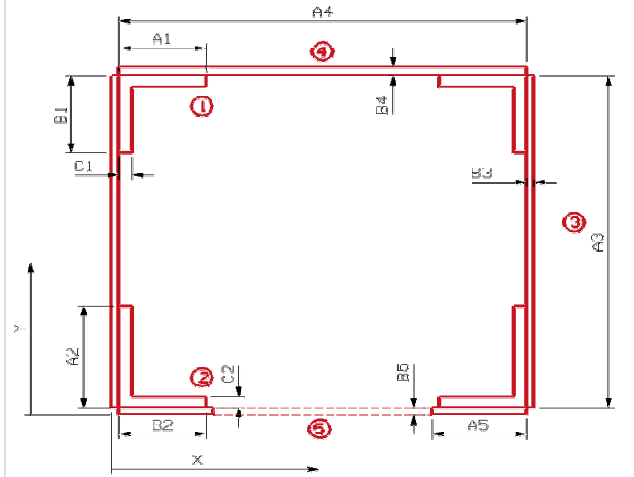
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.7500$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.7500$ in

Top Cover Plate:
 $A_4 = b = 22.0000$ in
 $B_4 = t = 0.6250$ in

Web Plates:**
 $A_3 = b = 30.0000$ in
 $B_3 = t = 1.5000$ in

Perforated Cover Plate
 $A_5 = b = 5.2500$ in
 $B_5 = t = 0.7500$ in



Member L87-L88

**There are 2 web plates, thickness shown is total of both

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	9.0000	30.3750	273.3750	0.4219	14.0340	1772.5682	1772.9901	
	Vertical Leg	10.8750	26.3750	286.8281	47.6348	10.0340	1094.8987	1142.5335	
2	Horizontal Leg	9.0000	1.1250	10.1250	0.4219	15.2160	2083.7510	2084.1729	
	Vertical Leg	10.8750	5.1250	55.7344	47.6348	11.2160	1368.0703	1415.7050	
3	Plate	90.0000	15.7500	1417.5000	6750.0000	0.5910	31.4396	6781.4396	
4	Plate	13.7500	31.0625	427.1094	0.4476	14.7215	2979.9189	2980.3664	
5	Perforated Plate	7.8750	0.3750	2.9531	0.3691	15.9660	2007.4513	2007.8204	
Total		151.38		2473.63	6846.93		11338.10	18185.03	
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	
1	0.1250	18.0000	-2.2500	9.7500	-21.9375	-60.7500	6.6905	-100.7159	-161.4659
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.25	-21.94	-60.75		-100.72	-161.47	



Made By KMW
Checked By ADK

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.3410 in	S _{top} =	1209.60 in ³	y-bar =	16.4405 in	S _{top} =	1206.84 in ³
I _x =	18185.03 in ⁴	S _{bott.} =	1112.84 in ³	I _x =	18023.56 in ⁴	S _{bott.} =	1096.29 in ³
C _{top} =	15.0340 in	A =	151.3750 in ²	C _{top} =	14.9345 in	A =	149.1250 in ²
C _{bottom} =	16.3410 in	r _x =	10.9605 in	C _{bottom} =	16.4405 in	r _x =	10.9937 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.5000	4.5000	20.2500	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	1.8750	10.1953	0.2549	10.6250	613.8428	614.0977	
1 (Right)	Horizontal Leg	4.5000	20.5000	92.2500	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	23.1250	125.7422	0.2549	10.6250	613.8428	614.0977	
2 (Left)	Horizontal Leg	4.5000	4.5000	20.2500	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	1.8750	10.1953	0.2549	10.6250	613.8428	614.0977	
2 (Right)	Horizontal Leg	4.5000	20.5000	92.2500	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	23.1250	125.7422	0.2549	10.6250	613.8428	614.0977	
3 (Left)	Plate	45.0000	0.7500	33.7500	8.4375	11.7500	6212.8125	6221.2500	
3 (Right)	Plate	45.0000	24.2500	1091.2500	8.4375	11.7500	6212.8125	6221.2500	
4	Plate	13.7500	12.5000	171.8750	554.5833	0.0000	0.0000	554.5833	
5 (Left)	Perforated Plate	3.9375	4.1250	16.2422	9.0439	8.3750	276.1787	285.2227	
5 (Right)	Perforated Plate	3.9375	20.8750	82.1953	9.0439	8.3750	276.1787	285.2227	
Total		151.38		1892.19	644.57		16585.35	17229.92	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	18.0000	0.1250	-2.2500	0.0625	-0.1406	-0.0029	12.6252	-358.6378	-358.6408
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.25		-0.14	0.00		-358.64	-358.64

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.5000 in	S _{right} =	1378.39 in ³	x-bar =	12.6877 in	S _{right} =	1370.27 in ³
I _y =	17229.92 in ⁴	S _{left} =	1378.39 in ³	I _y =	16871.28 in ⁴	S _{left} =	1329.74 in ³
C _{right} =	12.5000 in	A =	151.3750 in ²	C _{right} =	12.3123 in	A =	149.1250 in ²
C _{left} =	12.5000 in	r _y =	10.6688 in	C _{left} =	12.6877 in	r _y =	10.6365 in



Made By KMW
Checked By DWC

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_l = 0.7500$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_l = 0.7500$ in

Top Cover Plate: PL

$A_6 = b = 22.0000$ in
 $B_6 = t = 0.6250$ in

Side Plate 1: PL

$A_3 = b = 14.0000$ in
 $B_3 = t = 0.7500$ in

Web Plate 1: PL

$A_4 = b = 30.0000$ in
 $B_4 = t = 0.7500$ in

Side Plate 2: PL**

$A_8 = b = 0.0000$ in
 $B_8 = t = 0.0000$ in

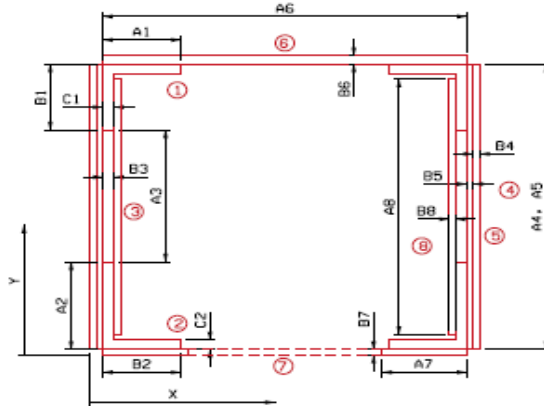
Web Plate 2: PL

$A_5 = b = 30.0000$ in
 $B_5 = t = 0.7500$ in

Perforated Bottom Cover Plate: PL

$A_7 = b = 5.2500$ in
 $B_7 = t = 0.7500$ in

**No interior side plate



Member L88-L89

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	9.0000	30.3750	273.3750	0.4219	14.1060	1790.8041	1791.2260
	Vertical Leg	10.8750	26.3750	286.8281	47.6348	10.1060	1110.6694	1158.3041
2	Horizontal Leg	9.0000	1.1250	10.1250	0.4219	15.1440	2064.0763	2064.4982
	Vertical Leg	10.8750	5.1250	55.7344	47.6348	11.1440	1350.5611	1398.1959
3	Plate	21.0000	15.7500	330.7500	343.0000	0.5190	5.6574	348.6574
4	Plate	45.0000	15.7500	708.7500	3375.0000	0.5190	12.1229	3387.1229
5	Plate	45.0000	15.7500	708.7500	3375.0000	0.5190	12.1229	3387.1229
6	Plate	13.7500	31.0625	427.1094	0.4476	14.7935	3009.1406	3009.5882
7	Perforated Plate	7.8750	0.3750	2.9531	0.3691	15.8940	1989.3854	1989.7545
8	Plate	0.0000	15.7500	0.0000	0.0000	0.5190	0.0000	0.0000
Total		172.38		2804.38	7189.93		11344.54	18534.47
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.1875	18.0000	-3.3750	15.7500	-53.1563	-91.1250	0.5294	-0.9459
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-3.38		-53.16	-91.13		-0.95
								-92.07



Made By KMW
Checked By DWC

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.2690 in	S _{top} = 1226.96 in ³			y-bar = 16.2794 in	S _{top} = 1221.71 in ³		
I _x = 18534.47 in ⁴	S _{bottom} = 1139.25 in ³			I _x = 18442.40 in ⁴	S _{bottom} = 1132.87 in ³		
C _{top} = 15.1060 in	A = 172.3750 in ²			C _{top} = 15.0956 in	A = 169.0000 in ²		
C _{bottom} = 16.2690 in	r _x = 10.3694 in			C _{bottom} = 16.2794 in	r _x = 10.4464 in		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1 (Left)	Horizontal Leg	4.5000	4.5000	20.2500	13.5000	8.0000	288.0000	301.5000
	Vertical Leg	5.4375	1.8750	10.1953	0.2549	10.6250	613.8428	614.0977
1 (Right)	Horizontal Leg	4.5000	20.5000	92.2500	13.5000	8.0000	288.0000	301.5000
	Vertical Leg	5.4375	23.1250	125.7422	0.2549	10.6250	613.8428	614.0977
2 (Left)	Horizontal Leg	4.5000	4.5000	20.2500	13.5000	8.0000	288.0000	301.5000
	Vertical Leg	5.4375	1.8750	10.1953	0.2549	10.6250	613.8428	614.0977
2 (Right)	Horizontal Leg	4.5000	20.5000	92.2500	13.5000	8.0000	288.0000	301.5000
	Vertical Leg	5.4375	23.1250	125.7422	0.2549	10.6250	613.8428	614.0977
3 (Left)	Plate	10.5000	1.8750	19.6875	0.4922	10.6250	1185.3516	1185.8438
3 (Right)	Plate	10.5000	23.1250	242.8125	0.4922	10.6250	1185.3516	1185.8438
4 (Left)	Plate	22.5000	0.3750	8.4375	1.0547	12.1250	3307.8516	3308.9063
4 (Right)	Plate	22.5000	24.6250	554.0625	1.0547	12.1250	3307.8516	3308.9063
5 (Left)	Plate	22.5000	1.1250	25.3125	1.0547	11.3750	2911.2891	2912.3438
5 (Right)	Plate	22.5000	23.8750	537.1875	1.0547	11.3750	2911.2891	2912.3438
6	Plate	13.7500	12.5000	171.8750	554.5833	0.0000	0.0000	554.5833
7 (Left)	Perforated Plate	3.9375	4.1250	16.2422	9.0439	8.3750	276.1787	285.2227
7 (Right)	Perforated Plate	3.9375	20.8750	82.1953	9.0439	8.3750	276.1787	285.2227
8 (Left)	Plate	0.0000	2.2500	0.0000	0.0000	10.2500	0.0000	0.0000
8 (Right)	Plate	0.0000	22.7500	0.0000	0.0000	10.2500	0.0000	0.0000
Total		172.38		2154.69	619.14		18968.71	19601.61
Section Losses		A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	18.0000	0.1875	-3.3750	0.0938	-0.3164	-0.0099	12.6540	-540.4182
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-3.38	-0.32	-0.01		-540.42	-540.43

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 12.5000 in	S _{right} = 1568.13 in ³			x-bar = 12.7478 in	S _{right} = 1555.73 in ³		
I _y = 19601.61 in ⁴	S _{left} = 1568.13 in ³			I _y = 19061.18 in ⁴	S _{left} = 1495.26 in ³		
C _{right} = 12.5000 in	A = 172.3750 in ²			C _{right} = 12.2522 in	A = 169.0000 in ²		
C _{left} = 12.5000 in	r _y = 10.6637 in			C _{left} = 12.7478 in	r _y = 10.6202 in		



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_l = 0.7500$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_l = 0.7500$ in

Top Cover Plate: PL

$A_6 = b = 22.0000$ in
 $B_6 = t = 0.6250$ in

Side Plate 1: PL

$A_3 = b = 14.0000$ in
 $B_3 = t = 0.7500$ in

Web Plate 1: PL

$A_4 = b = 30.0000$ in
 $B_4 = t = 0.7500$ in

Side Plate 2: PL

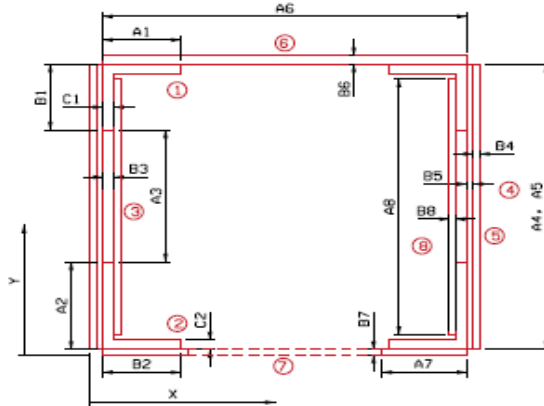
$A_8 = b = 28.0000$ in
 $B_8 = t = 0.3750$ in

Web Plate 2: PL

$A_5 = b = 30.0000$ in
 $B_5 = t = 0.7500$ in

Perforated Bottom Cover Plate: PL

$A_7 = b = 5.2500$ in
 $B_7 = t = 0.7500$ in



Member L89-L90

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg		9.0000	30.3750	273.3750	0.4219	14.1623	1805.1444	1805.5663
	Vertical Leg		10.8750	26.3750	286.8281	47.6348	10.1623	1123.0934	1170.7282
2	Horizontal Leg		9.0000	1.1250	10.1250	0.4219	15.0877	2048.7400	2049.1619
	Vertical Leg		10.8750	5.1250	55.7344	47.6348	11.0877	1336.9336	1384.5683
3	Plate		21.0000	15.7500	330.7500	343.0000	0.4627	4.4953	347.4953
4	Plate		45.0000	15.7500	708.7500	3375.0000	0.4627	9.6328	3384.6328
5	Plate		45.0000	15.7500	708.7500	3375.0000	0.4627	9.6328	3384.6328
6	Plate		13.7500	31.0625	427.1094	0.4476	14.8498	3032.1151	3032.5627
7	Perforated Plate		7.8750	0.3750	2.9531	0.3691	15.8377	1975.3003	1975.6694
8	Plate		21.0000	15.7500	330.7500	1372.0000	0.4627	4.4953	1376.4953
Total			193.38		3135.13	8561.93		11349.58	19911.51
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.2127 in	$S_{top} = 1313.22 \text{ in}^3$			y-bar = 16.2127 in	$S_{top} = 1313.22 \text{ in}^3$		
$I_x = 19911.51 \text{ in}^4$	$S_{bottom} = 1228.15 \text{ in}^3$			$I_x = 19911.51 \text{ in}^4$	$S_{bottom} = 1228.15 \text{ in}^3$		
$C_{top} = 15.1623 \text{ in}$	$A = 193.3750 \text{ in}^2$			$C_{top} = 15.1623 \text{ in}$	$A = 193.3750 \text{ in}^2$		
$C_{bottom} = 16.2127 \text{ in}$	$r_x = 10.1473 \text{ in}$			$C_{bottom} = 16.2127 \text{ in}$	$r_x = 10.1473 \text{ in}$		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I_o	d	Ad^2	$I_{y, gross}$	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.5000	4.5000	20.2500	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	1.8750	10.1953	0.2549	10.6250	613.8428	614.0977	
1 (Right)	Horizontal Leg	4.5000	20.5000	92.2500	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	23.1250	125.7422	0.2549	10.6250	613.8428	614.0977	
2 (Left)	Horizontal Leg	4.5000	4.5000	20.2500	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	1.8750	10.1953	0.2549	10.6250	613.8428	614.0977	
2 (Right)	Horizontal Leg	4.5000	20.5000	92.2500	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	23.1250	125.7422	0.2549	10.6250	613.8428	614.0977	
3 (Left)	Plate	10.5000	1.8750	19.6875	0.4922	10.6250	1185.3516	1185.8438	
3 (Right)	Plate	10.5000	23.1250	242.8125	0.4922	10.6250	1185.3516	1185.8438	
4 (Left)	Plate	22.5000	0.3750	8.4375	1.0547	12.1250	3307.8516	3308.9063	
4 (Right)	Plate	22.5000	24.6250	554.0625	1.0547	12.1250	3307.8516	3308.9063	
5 (Left)	Plate	22.5000	1.1250	25.3125	1.0547	11.3750	2911.2891	2912.3438	
5 (Right)	Plate	22.5000	23.8750	537.1875	1.0547	11.3750	2911.2891	2912.3438	
6	Plate	13.7500	12.5000	171.8750	554.5833	0.0000	0.0000	554.5833	
7 (Left)	Perforated Plate	3.9375	4.1250	16.2422	9.0439	8.3750	276.1787	285.2227	
7 (Right)	Perforated Plate	3.9375	20.8750	82.1953	9.0439	8.3750	276.1787	285.2227	
8 (Left)	Plate	10.5000	2.4375	25.5938	0.1230	10.0625	1063.1660	1063.2891	
8 (Right)	Plate	10.5000	22.5625	236.9063	0.1230	10.0625	1063.1660	1063.2891	
Total		193.38		2417.19	619.39		21095.04	21728.18	
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 12.5000 in	$S_{right} = 1738.25 \text{ in}^3$			x-bar = 12.5000 in	$S_{right} = 1738.25 \text{ in}^3$		
$I_y = 21728.18 \text{ in}^4$	$S_{left} = 1738.25 \text{ in}^3$			$I_y = 21728.18 \text{ in}^4$	$S_{left} = 1738.25 \text{ in}^3$		
$C_{right} = 12.5000 \text{ in}$	$A = 193.3750 \text{ in}^2$			$C_{right} = 12.5000 \text{ in}$	$A = 193.3750 \text{ in}^2$		
$C_{left} = 12.5000 \text{ in}$	$r_y = 10.6001 \text{ in}$			$C_{left} = 12.5000 \text{ in}$	$r_y = 10.6001 \text{ in}$		



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_l = 0.6875$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_l = 0.6875$ in

Top Cover Plate: PL

$A_6 = b = 22.0000$ in
 $B_6 = t = 0.6250$ in

Side Plate 1: PL

$A_3 = b = 14.0000$ in
 $B_3 = t = 0.6875$ in

Web Plate 1: PL

$A_4 = b = 30.0000$ in
 $B_4 = t = 0.7500$ in

Side Plate 2: PL **

$A_8 = b = 28.0000$ in
 $B_8 = t = 1.3750$ in

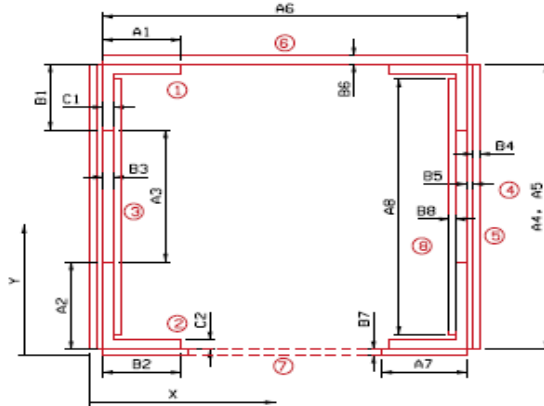
Web Plate 2: PL

$A_5 = b = 30.0000$ in
 $B_5 = t = 0.7500$ in

Perforated Bottom Cover Plate: PL

$A_7 = b = 5.2500$ in
 $B_7 = t = 0.7500$ in

**2 inside side plates, so thickness shown is the total thickness for both



Member L90-L91

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	8.2500	30.4063	250.8516	0.3250	14.2903	1684.7549	1685.0798
	Vertical Leg	10.0547	26.4063	265.5066	44.8042	10.2903	1064.6939	1109.4981
2	Horizontal Leg	8.2500	1.0938	9.0234	0.3250	15.0222	1861.7483	1862.0732
	Vertical Leg	10.0547	5.0938	51.2161	44.8042	11.0222	1221.5326	1266.3368
3	Plate	19.2500	15.7500	303.1875	314.4167	0.3659	2.5779	316.9946
4	Plate	45.0000	15.7500	708.7500	3375.0000	0.3659	6.0263	3381.0263
5	Plate	45.0000	15.7500	708.7500	3375.0000	0.3659	6.0263	3381.0263
6	Plate	13.7500	31.0625	427.1094	0.4476	14.9466	3071.7417	3072.1893
7	Perforated Plate	7.8750	0.3750	2.9531	0.3691	15.7409	1951.2476	1951.6167
8	Plate	77.0000	15.7500	1212.7500	5030.6667	0.3659	10.3117	5040.9784
Total		244.48		3940.10	12186.16		10880.66	23066.82
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.1159 in	$S_{top} = 1511.68 \text{ in}^3$			y-bar = 16.1159 in	$S_{top} = 1511.68 \text{ in}^3$		
$I_x = 23066.82 \text{ in}^4$	$S_{bottom} = 1431.30 \text{ in}^3$			$I_x = 23066.82 \text{ in}^4$	$S_{bottom} = 1431.30 \text{ in}^3$		
$C_{top} = 15.2591 \text{ in}$	$A = 244.4844 \text{ in}^2$			$C_{top} = 15.2591 \text{ in}$	$A = 244.4844 \text{ in}^2$		
$C_{bottom} = 16.1159 \text{ in}$	$r_x = 9.7133 \text{ in}$			$C_{bottom} = 16.1159 \text{ in}$	$r_x = 9.7133 \text{ in}$		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I_o	d	Ad^2	$I_{y, gross}$	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	4.5000	18.5625	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.8438	9.2692	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	20.5000	84.5625	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	23.1563	116.4144	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	4.5000	18.5625	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.8438	9.2692	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	20.5000	84.5625	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	23.1563	116.4144	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	9.6250	1.8438	17.7461	0.3791	10.6563	1092.9733	1093.3524	
3 (Right)	Plate	9.6250	23.1563	222.8789	0.3791	10.6563	1092.9733	1093.3524	
4 (Left)	Plate	22.5000	0.3750	8.4375	1.0547	12.1250	3307.8516	3308.9063	
4 (Right)	Plate	22.5000	24.6250	554.0625	1.0547	12.1250	3307.8516	3308.9063	
5 (Left)	Plate	22.5000	1.1250	25.3125	1.0547	11.3750	2911.2891	2912.3438	
5 (Right)	Plate	22.5000	23.8750	537.1875	1.0547	11.3750	2911.2891	2912.3438	
6	Plate	13.7500	12.5000	171.8750	554.5833	0.0000	0.0000	554.5833	
7 (Left)	Perforated Plate	3.9375	4.1250	16.2422	9.0439	8.3750	276.1787	285.2227	
7 (Right)	Perforated Plate	3.9375	20.8750	82.1953	9.0439	8.3750	276.1787	285.2227	
8 (Left)	Plate	38.5000	2.8750	110.6875	6.0658	9.6250	3566.6641	3572.7298	
8 (Right)	Plate	38.5000	22.1250	851.8125	6.0658	9.6250	3566.6641	3572.7298	
Total		244.48		3056.05	627.50		25649.45	26289.52	
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 12.5000 in	$S_{right} = 2103.16 \text{ in}^3$			x-bar = 12.5000 in	$S_{right} = 2103.16 \text{ in}^3$		
$I_y = 26289.52 \text{ in}^4$	$S_{left} = 2103.16 \text{ in}^3$			$I_y = 26289.52 \text{ in}^4$	$S_{left} = 2103.16 \text{ in}^3$		
$C_{right} = 12.5000 \text{ in}$	$A = 244.4844 \text{ in}^2$			$C_{right} = 12.5000 \text{ in}$	$A = 244.4844 \text{ in}^2$		
$C_{left} = 12.5000 \text{ in}$	$r_y = 10.3697 \text{ in}$			$C_{left} = 12.5000 \text{ in}$	$r_y = 10.3697 \text{ in}$		



Made By KMW
Checked By DWC

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_l = 0.6875$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_l = 0.6875$ in

Top Cover Plate: PL

$A_6 = b = 22.0000$ in
 $B_6 = t = 0.6250$ in

Side Plate 1: PL

$A_3 = b = 14.0000$ in
 $B_3 = t = 0.6875$ in

Web Plate 1: PL

$A_4 = b = 30.0000$ in
 $B_4 = t = 0.7500$ in

Side Plate 2: PL

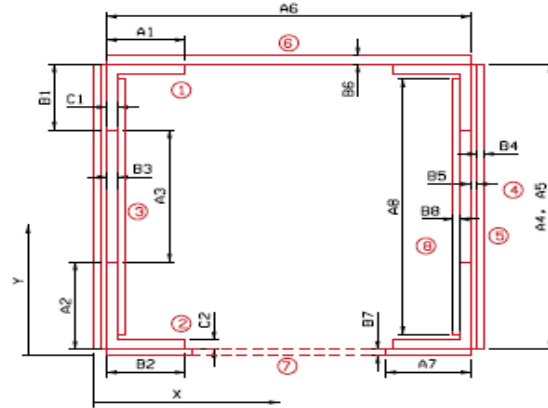
$A_8 = b = 28.0000$ in
 $B_8 = t = 0.6250$ in

Web Plate 2: PL

$A_5 = b = 30.0000$ in
 $B_5 = t = 0.7500$ in

Perforated Bottom Cover Plate: PL

$A_7 = b = 5.2500$ in
 $B_7 = t = 0.7500$ in



Member L91-L92

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	8.2500	30.4063	250.8516	0.3250	14.2144	1666.9044	1667.2294
	Vertical Leg	10.0547	26.4063	265.5066	44.8042	10.2144	1049.0444	1093.8486
2	Horizontal Leg	8.2500	1.0938	9.0234	0.3250	15.0981	1880.6104	1880.9354
	Vertical Leg	10.0547	5.0938	51.2161	44.8042	11.0981	1238.4151	1283.2193
3	Plate	19.2500	15.7500	303.1875	314.4167	0.4419	3.7583	318.1750
4	Plate	45.0000	15.7500	708.7500	3375.0000	0.4419	8.7856	3383.7856
5	Plate	45.0000	15.7500	708.7500	3375.0000	0.4419	8.7856	3383.7856
6	Plate	13.7500	31.0625	427.1094	0.4476	14.8706	3040.6211	3041.0687
7	Perforated Plate	7.8750	0.3750	2.9531	0.3691	15.8169	1970.1116	1970.4808
8	Plate	35.0000	15.7500	551.2500	2286.6667	0.4419	6.8333	2293.4999
Total		202.48		3278.60	9442.16		10873.87	20316.03
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	3.0000	0.0625	-0.1875	31.3438	-5.8770	-0.0001	15.1376	-42.9652
2	0.0625	8.0000	-0.5000	4.7500	-2.3750	-2.6667	11.4561	-65.6214
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.69		-8.25			-108.59
					-2.67			-111.25



Made By KMW
Checked By DWC

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.1919 in	$S_{top} = 1338.06 \text{ in}^3$			y-bar = 16.2061 in	$S_{top} = 1331.99 \text{ in}^3$		
$I_x = 20316.03 \text{ in}^4$	$S_{bottom} = 1254.71 \text{ in}^3$			$I_x = 20204.77 \text{ in}^4$	$S_{bottom} = 1246.74 \text{ in}^3$		
$C_{top} = 15.1831 \text{ in}$	$A = 202.4844 \text{ in}^2$			$C_{top} = 15.1689 \text{ in}$	$A = 201.7969 \text{ in}^2$		
$C_{bottom} = 16.1919 \text{ in}$	$r_x = 10.0167 \text{ in}$			$C_{bottom} = 16.2061 \text{ in}$	$r_x = 10.0062 \text{ in}$		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I_o	d	Ad^2	$I_{y, gross}$	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	4.5000	18.5625	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.8438	9.2692	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	20.5000	84.5625	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	23.1563	116.4144	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	4.5000	18.5625	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.8438	9.2692	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	20.5000	84.5625	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	23.1563	116.4144	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	9.6250	1.8438	17.7461	0.3791	10.6563	1092.9733	1093.3524	
3 (Right)	Plate	9.6250	23.1563	222.8789	0.3791	10.6563	1092.9733	1093.3524	
4 (Left)	Plate	22.5000	0.3750	8.4375	1.0547	12.1250	3307.8516	3308.9063	
4 (Right)	Plate	22.5000	24.6250	554.0625	1.0547	12.1250	3307.8516	3308.9063	
5 (Left)	Plate	22.5000	1.1250	25.3125	1.0547	11.3750	2911.2891	2912.3438	
5 (Right)	Plate	22.5000	23.8750	537.1875	1.0547	11.3750	2911.2891	2912.3438	
6	Plate	13.7500	12.5000	171.8750	554.5833	0.0000	0.0000	554.5833	
7 (Left)	Perforated Plate	3.9375	4.1250	16.2422	9.0439	8.3750	276.1787	285.2227	
7 (Right)	Perforated Plate	3.9375	20.8750	82.1953	9.0439	8.3750	276.1787	285.2227	
8 (Left)	Plate	17.5000	2.5000	43.7500	0.5697	10.0000	1750.0000	1750.5697	
8 (Right)	Plate	17.5000	22.5000	393.7500	0.5697	10.0000	1750.0000	1750.5697	
Total		202.48		2531.05	616.51		22016.12	22645.20	
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0625	3.0000	-0.1875	3.0000	-0.5625	-0.1406	9.4779	-16.8434	-16.9840
2	8.0000	0.0625	-0.5000	24.9688	-12.4844	-0.0002	12.4908	-78.0103	-78.0104
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.69		-13.05	-0.14		-94.85	-94.99

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 12.5000 in	$S_{right} = 1811.62 \text{ in}^3$			x-bar = 12.4779 in	$S_{right} = 1800.84 \text{ in}^3$		
$I_y = 22645.20 \text{ in}^4$	$S_{left} = 1811.62 \text{ in}^3$			$I_y = 22550.20 \text{ in}^4$	$S_{left} = 1807.21 \text{ in}^3$		
$C_{right} = 12.5000 \text{ in}$	$A = 202.4844 \text{ in}^2$			$C_{right} = 12.5221 \text{ in}$	$A = 201.7969 \text{ in}^2$		
$C_{left} = 12.5000 \text{ in}$	$r_y = 10.5753 \text{ in}$			$C_{left} = 12.4779 \text{ in}$	$r_y = 10.5710 \text{ in}$		



Made By KMW
Checked By DWC

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

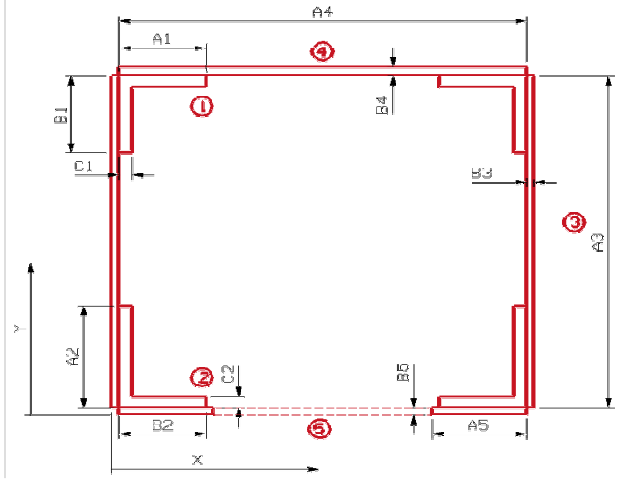
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.7500$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.7500$ in

Top Cover Plate:
 $A_4 = b = 22.0000$ in
 $B_4 = t = 0.6250$ in

Web Plates:**
 $A_3 = b = 30.0000$ in
 $B_3 = t = 1.5000$ in

Perforated Cover Plate
 $A_5 = b = 5.2500$ in
 $B_5 = t = 0.7500$ in



Member L92-L93

**There are 2 web plates, thickness shown is total of both

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	9.0000	30.3750	273.3750	0.4219	14.0340	1772.5682	1772.9901	
	Vertical Leg	10.8750	26.3750	286.8281	47.6348	10.0340	1094.8987	1142.5335	
2	Horizontal Leg	9.0000	1.1250	10.1250	0.4219	15.2160	2083.7510	2084.1729	
	Vertical Leg	10.8750	5.1250	55.7344	47.6348	11.2160	1368.0703	1415.7050	
3	Plate	90.0000	15.7500	1417.5000	6750.0000	0.5910	31.4396	6781.4396	
4	Plate	13.7500	31.0625	427.1094	0.4476	14.7215	2979.9189	2980.3664	
5	Perforated Plate	7.8750	0.3750	2.9531	0.3691	15.9660	2007.4513	2007.8204	
Total		151.38		2473.63	6846.93		11338.10	18185.03	
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	
1	0.0625	8.0000	-0.5000	4.7500	-2.3750	-2.6667	11.6295	-67.6221	-70.2888
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.50	-2.38	-2.67		-67.62	-70.29	



Made By KMW
Checked By DWC

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.3410 in	S _{top} =	1209.60 in ³	y-bar =	16.3795 in	S _{top} =	1208.01 in ³
I _x =	18185.03 in ⁴	S _{bott.} =	1112.84 in ³	I _x =	18114.74 in ⁴	S _{bott.} =	1105.94 in ³
C _{top} =	15.0340 in	A =	151.3750 in ²	C _{top} =	14.9955 in	A =	150.8750 in ²
C _{bottom} =	16.3410 in	r _x =	10.9605 in	C _{bottom} =	16.3795 in	r _x =	10.9574 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.5000	4.5000	20.2500	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	1.8750	10.1953	0.2549	10.6250	613.8428	614.0977	
1 (Right)	Horizontal Leg	4.5000	20.5000	92.2500	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	23.1250	125.7422	0.2549	10.6250	613.8428	614.0977	
2 (Left)	Horizontal Leg	4.5000	4.5000	20.2500	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	1.8750	10.1953	0.2549	10.6250	613.8428	614.0977	
2 (Right)	Horizontal Leg	4.5000	20.5000	92.2500	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	23.1250	125.7422	0.2549	10.6250	613.8428	614.0977	
3 (Left)	Plate	45.0000	0.7500	33.7500	8.4375	11.7500	6212.8125	6221.2500	
3 (Right)	Plate	45.0000	24.2500	1091.2500	8.4375	11.7500	6212.8125	6221.2500	
4	Plate	13.7500	12.5000	171.8750	554.5833	0.0000	0.0000	554.5833	
5 (Left)	Perforated Plate	3.9375	4.1250	16.2422	9.0439	8.3750	276.1787	285.2227	
5 (Right)	Perforated Plate	3.9375	20.8750	82.1953	9.0439	8.3750	276.1787	285.2227	
Total		151.38		1892.19	644.57		16585.35	17229.92	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	8.0000	0.0625	-0.5000	24.9688	-12.4844	-0.0002	12.5101	-78.2509	-78.2511
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.50		-12.48	0.00		-78.25	-78.25

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.5000 in	S _{right} =	1378.39 in ³	x-bar =	12.4587 in	S _{right} =	1367.61 in ³
I _y =	17229.92 in ⁴	S _{left} =	1378.39 in ³	I _y =	17151.67 in ⁴	S _{left} =	1376.68 in ³
C _{right} =	12.5000 in	A =	151.3750 in ²	C _{right} =	12.5413 in	A =	150.8750 in ²
C _{left} =	12.5000 in	r _y =	10.6688 in	C _{left} =	12.4587 in	r _y =	10.6621 in



Made By KMW
Checked By DWC

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

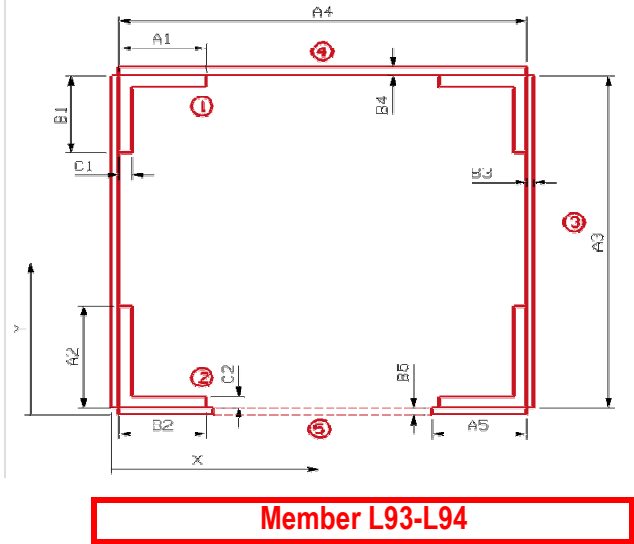
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.6250$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_f = 0.6250$ in

Top Cover Plate:
 $A_4 = b = 22.0000$ in
 $B_4 = t = 0.5000$ in

Web Plates:**
 $A_3 = b = 30.0000$ in
 $B_3 = t = 1.3750$ in

Perforated Cover Plate
 $A_5 = b = 5.2500$ in
 $B_5 = t = 0.6250$ in



**There are 2 web plates, thickness shown is total of both

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	7.5000	30.3125	227.3438	0.2441	14.1837	1508.8231	1509.0672	
	Vertical Leg	9.2188	26.3125	242.5684	41.7845	10.1837	956.0496	997.8340	
2	Horizontal Leg	7.5000	0.9375	7.0313	0.2441	15.1913	1730.8245	1731.0687	
	Vertical Leg	9.2188	4.9375	45.5176	41.7845	11.1913	1154.6110	1196.3954	
3	Plate	82.5000	15.6250	1289.0625	6187.5000	0.5038	20.9424	6208.4424	
4	Plate	11.0000	30.8750	339.6250	0.2292	14.7462	2391.9438	2392.1730	
5	Perforated Plate	6.5625	0.3125	2.0508	0.2136	15.8163	1641.6513	1641.8650	
Total		133.50		2153.20	6272.00		9404.85	15676.85	
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	
1	0.1875	6.0000	-1.1250	9.6250	-10.8281	-3.3750	6.6087	-49.1343	-52.5093
2	0.1250	6.0000	-0.7500	17.6250	-13.2188	-2.2500	1.3913	-1.4518	-3.7018
3	0.0625	16.0000	-1.0000	8.6250	-8.6250	-21.3333	7.6087	-57.8923	-79.2257
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.88		-32.67		-26.96		-108.48



Made By KMW
Checked By DWC

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.1288 in	S _{top} =	1045.39 in ³	y-bar =	16.2337 in	S _{top} =	1043.66 in ³
I _x =	15676.85 in ⁴	S _{bott.} =	971.98 in ³	I _x =	15541.41 in ⁴	S _{bott.} =	957.35 in ³
C _{top} =	14.9962 in	A =	133.5000 in ²	C _{top} =	14.8913 in	A =	130.6250 in ²
C _{bottom} =	16.1288 in	r _x =	10.8365 in	C _{bottom} =	16.2337 in	r _x =	10.9077 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.7500	4.3750	16.4063	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.6875	7.7783	0.1500	10.6875	526.4951	526.6451	
1 (Right)	Horizontal Leg	3.7500	20.3750	76.4063	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	23.0625	106.3037	0.1500	10.6875	526.4951	526.6451	
2 (Left)	Horizontal Leg	3.7500	4.3750	16.4063	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.6875	7.7783	0.1500	10.6875	526.4951	526.6451	
2 (Right)	Horizontal Leg	3.7500	20.3750	76.4063	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	23.0625	106.3037	0.1500	10.6875	526.4951	526.6451	
3 (Left)	Plate	41.2500	0.6875	28.3594	6.4990	11.6875	5634.6533	5641.1523	
3 (Right)	Plate	41.2500	24.0625	992.5781	6.4990	11.6875	5634.6533	5641.1523	
4	Plate	11.0000	12.3750	136.1250	443.6667	0.0000	0.0000	443.6667	
5 (Left)	Perforated Plate	3.2813	4.0000	13.1250	7.5366	8.3750	230.1489	237.6855	
5 (Right)	Perforated Plate	3.2813	20.7500	68.0859	7.5366	8.3750	230.1489	237.6855	
Total		133.50		1652.06	517.34		14795.58	15312.92	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	6.0000	0.1875	-1.1250	0.0938	-0.1055	-0.0033	12.2218	-168.0448	-168.0481
2	6.0000	0.1250	-0.7500	24.6875	-18.5156	-0.0010	12.3719	-114.7983	-114.7993
3	16.0000	0.0625	-1.0000	24.7188	-24.7188	-0.0003	12.4032	-153.8386	-153.8389
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.88		-43.34	0.00		-436.68	-436.69

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3750 in	S _{right} =	1237.41 in ³	x-bar =	12.3156 in	S _{right} =	1196.38 in ³
I _y =	15312.92 in ⁴	S _{left} =	1237.41 in ³	I _y =	14876.24 in ⁴	S _{left} =	1207.92 in ³
C _{right} =	12.3750 in	A =	133.5000 in ²	C _{right} =	12.4344 in	A =	130.6250 in ²
C _{left} =	12.3750 in	r _y =	10.7100 in	C _{left} =	12.3156 in	r _y =	10.6717 in



Made By KMW
Checked By DWC

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

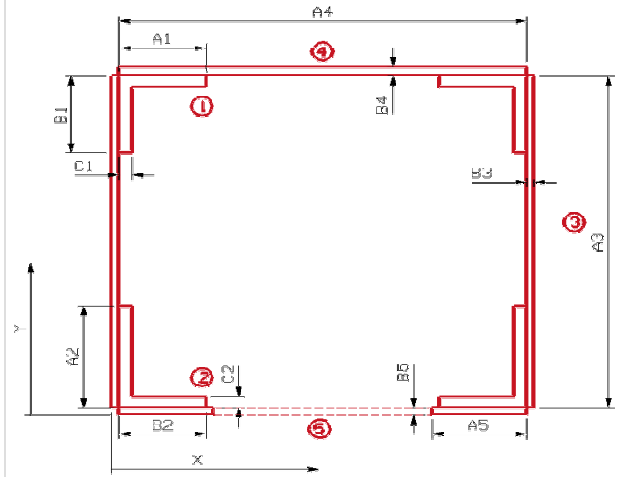
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.6250$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_f = 0.6250$ in

Top Cover Plate:
 $A_4 = b = 22.0000$ in
 $B_4 = t = 0.5000$ in

Web Plate:
 $A_3 = b = 30.0000$ in
 $B_3 = t = 0.8125$ in

Perforated Cover Plate
 $A_5 = b = 5.2500$ in
 $B_5 = t = 0.6250$ in



Member L94-L95

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	7.5000	30.3125	227.3438	0.2441	14.0132	1472.7727	1473.0168	
	Vertical Leg	9.2188	26.3125	242.5684	41.7845	10.0132	924.3098	966.0943	
2	Horizontal Leg	7.5000	0.9375	7.0313	0.2441	15.3618	1769.8874	1770.1316	
	Vertical Leg	9.2188	4.9375	45.5176	41.7845	11.3618	1190.0537	1231.8381	
3	Plate	48.7500	15.6250	761.7188	3656.2500	0.6743	22.1659	3678.4159	
4	Plate	11.0000	30.8750	339.6250	0.2292	14.5757	2336.9604	2337.1896	
5	Perforated Plate	6.5625	0.3125	2.0508	0.2136	15.9868	1677.2298	1677.4434	
Total		99.75		1625.86	3740.75		9393.38	13134.13	
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	
1	0.2500	18.0000	-4.5000	15.6250	-70.3125	-121.5000	0.5337	-1.2818	-122.7818
2	2.0000	0.1250	-0.2500	31.0625	-7.7656	-0.0003	14.9038	-55.5307	-55.5310
3	0.1250	12.0000	-1.5000	24.6250	-36.9375	-18.0000	8.4663	-107.5170	-125.5170
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-6.25	-115.02	-139.50		-164.33	-303.83	



Made By KMW
Checked By DWC

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.2993 in	S _{top} =	885.90 in ³	y-bar =	16.1587 in	S _{top} =	857.28 in ³
I _x =	13134.13 in ⁴	S _{bott.} =	805.81 in ³	I _x =	12830.30 in ⁴	S _{bott.} =	794.02 in ³
C _{top} =	14.8257 in	A =	99.7500 in ²	C _{top} =	14.9663 in	A =	93.5000 in ²
C _{bottom} =	16.2993 in	r _x =	11.4748 in	C _{bottom} =	16.1587 in	r _x =	11.7142 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.7500	3.8125	14.2969	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.1250	5.1855	0.1500	10.6875	526.4951	526.6451	
1 (Right)	Horizontal Leg	3.7500	19.8125	74.2969	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	22.5000	103.7109	0.1500	10.6875	526.4951	526.6451	
2 (Left)	Horizontal Leg	3.7500	3.8125	14.2969	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.1250	5.1855	0.1500	10.6875	526.4951	526.6451	
2 (Right)	Horizontal Leg	3.7500	19.8125	74.2969	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	22.5000	103.7109	0.1500	10.6875	526.4951	526.6451	
3 (Left)	Plate	24.3750	0.4063	9.9023	1.3409	11.4063	3171.2494	3172.5903	
3 (Right)	Plate	24.3750	23.2188	565.9570	1.3409	11.4063	3171.2494	3172.5903	
4	Plate	11.0000	11.8125	129.9375	443.6667	0.0000	0.0000	443.6667	
5 (Left)	Perforated Plate	3.2813	3.4375	11.2793	7.5366	8.3750	230.1489	237.6855	
5 (Right)	Perforated Plate	3.2813	20.1875	66.2402	7.5366	8.3750	230.1489	237.6855	
Total		99.75		1178.30	507.02		9868.78	10375.80	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	18.0000	0.2500	-4.5000	0.1250	-0.5625	-0.0234	12.0749	-656.1108	-656.1342
2	0.1250	2.0000	-0.2500	6.8125	-1.7031	-0.0833	5.3874	-7.2559	-7.3393
3	12.0000	0.1250	-1.5000	23.5625	-35.3438	-0.0020	11.3626	-193.6642	-193.6661
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-6.25		-37.61	-0.11		-857.03	-857.14

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	11.8125 in	S _{right} =	878.37 in ³	x-bar =	12.1999 in	S _{right} =	833.13 in ³
I _y =	10375.80 in ⁴	S _{left} =	878.37 in ³	I _y =	9518.66 in ⁴	S _{left} =	780.23 in ³
C _{right} =	11.8125 in	A =	99.7500 in ²	C _{right} =	11.4251 in	A =	93.5000 in ²
C _{left} =	11.8125 in	r _y =	10.1989 in	C _{left} =	12.1999 in	r _y =	10.0898 in



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

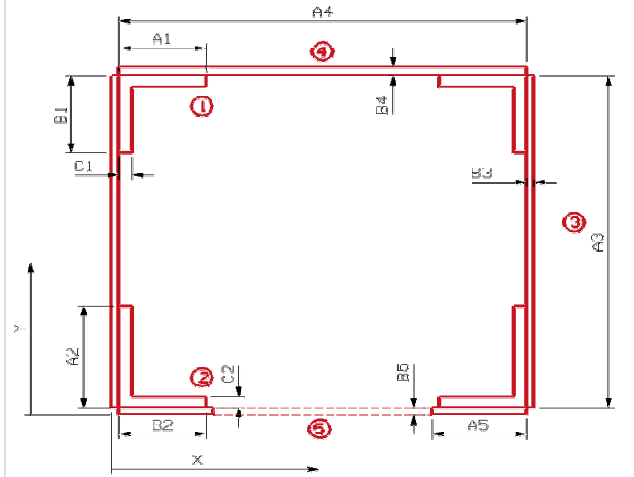
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.4375$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_f = 0.4375$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:
 $A_3 = b = 30.0000$ in
 $B_3 = t = 0.6250$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member L95-L96

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.2500	30.2813	158.9766	0.0837	14.2245	1062.2646	1062.3484
	Vertical Leg	6.6172	26.2813	173.9080	31.5372	10.2245	691.7621	723.2993
2	Horizontal Leg	5.2500	0.7188	3.7734	0.0837	15.3380	1235.0864	1235.1701
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	11.3380	850.6425	882.1797
3	Plate	37.5000	15.5000	581.2500	2812.5000	0.5568	11.6243	2824.1243
4	Plate	8.8125	30.6875	270.4336	0.1033	14.6307	1886.3910	1886.4943
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	15.8068	1499.1219	1499.2469
Total		76.05		1221.07	2875.97		7236.89	10112.86
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.0568 in	S _{top} =	682.46 in ³	y-bar =	16.0568 in	S _{top} =	682.46 in ³
I _x =	10112.86 in ⁴	S _{bott.} =	629.82 in ³	I _x =	10112.86 in ⁴	S _{bott.} =	629.82 in ³
C _{top} =	14.8182 in	A =	76.0469 in ²	C _{top} =	14.8182 in	A =	76.0469 in ²
C _{bottom} =	16.0568 in	r _x =	11.5318 in	C _{bottom} =	16.0568 in	r _x =	11.5318 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.6250	9.5156	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.8438	2.7916	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	21.1250	55.4531	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.9063	79.0961	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.6250	9.5156	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.8438	2.7916	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	21.1250	55.4531	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.9063	79.0961	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	18.7500	0.3125	5.8594	0.6104	12.0625	2728.1982	2728.8086	
3 (Right)	Plate	18.7500	24.4375	458.2031	0.6104	12.0625	2728.1982	2728.8086	
4	Plate	8.8125	12.3750	109.0547	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.6250	10.8750	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	21.1250	63.3750	9.0000	8.7500	229.6875	238.6875	
Total		76.05		941.08	456.49		8479.45	8935.94	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3750 in	S _{right} =	722.10 in ³	x-bar =	12.3750 in	S _{right} =	722.10 in ³
I _y =	8935.94 in ⁴	S _{left} =	722.10 in ³	I _y =	8935.94 in ⁴	S _{left} =	722.10 in ³
C _{right} =	12.3750 in	A =	76.0469 in ²	C _{right} =	12.3750 in	A =	76.0469 in ²
C _{left} =	12.3750 in	r _y =	10.8400 in	C _{left} =	12.3750 in	r _y =	10.8400 in



Made By CTG
Checked By NRF

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

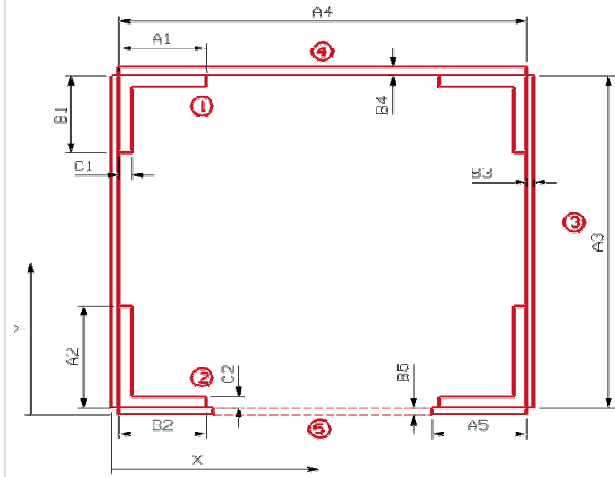
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 30.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L96-L97

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	30.2188	75.5469	0.0203	13.4018	449.0206	449.0409
	Vertical Leg	2.3047	28.2188	65.0354	2.6115	11.4018	299.6118	302.2233
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	16.2857	663.0601	663.0804
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	14.2857	470.3435	472.9550
3	Plate	22.5000	15.3750	345.9375	1687.5000	1.4420	46.7825	1734.2825
4	Plate	8.8125	30.5625	269.3320	0.1033	13.7455	1665.0349	1665.1382
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	16.6295	1244.4238	1244.4765
Total		45.42		763.86	1692.92		4838.28	6531.20
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.8170 in	S _{top} =	468.76 in ³	y-bar =	16.8170 in	S _{top} =	468.76 in ³
I _x =	6531.20 in ⁴	S _{bott.} =	388.37 in ³	I _x =	6531.20 in ⁴	S _{bott.} =	388.37 in ³
C _{top} =	13.9330 in	A =	45.4219 in ²	C _{top} =	13.9330 in	A =	45.4219 in ²
C _{bottom} =	16.8170 in	r _x =	11.9912 in	C _{bottom} =	16.8170 in	r _x =	11.9912 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	11.2500	0.1875	2.1094	0.1318	11.9375	1603.1689	1603.3008	
3 (Right)	Plate	11.2500	24.0625	270.7031	0.1318	11.9375	1603.1689	1603.3008	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.3750	7.5938	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.8750	46.9688	6.7500	8.7500	172.2656	179.0156	
Total		45.42		550.74	426.03		4645.75	5071.78	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	418.29 in ³	x-bar =	12.1250 in	S _{right} =	418.29 in ³
I _y =	5071.78 in ⁴	S _{left} =	418.29 in ³	I _y =	5071.78 in ⁴	S _{left} =	418.29 in ³
C _{right} =	12.1250 in	A =	45.4219 in ²	C _{right} =	12.1250 in	A =	45.4219 in ²
C _{left} =	12.1250 in	r _y =	10.5669 in	C _{left} =	12.1250 in	r _y =	10.5669 in



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_f = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3125$ in

Top Cover Plate:

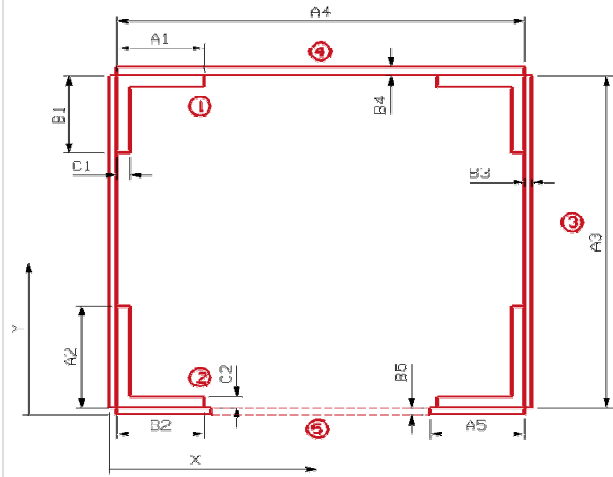
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 30.0000$ in
 $B_3 = t = 0.5000$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	30.2188	75.5469	0.0203	13.6062	462.8183	462.8387
	Vertical Leg	2.3047	28.2188	65.0354	2.6115	11.6062	310.4477	313.0592
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	16.0813	646.5245	646.5449
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	14.0813	456.9836	459.5951
3	Plate	30.0000	15.3750	461.2500	2250.0000	1.2376	45.9496	2295.9496
4	Plate	8.8125	30.5625	269.3320	0.1033	13.9499	1714.9100	1715.0133
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	16.4251	1214.0275	1214.0803
Total		52.92		879.17	2255.42		4851.66	7107.08
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.6126 in	S _{top} =	502.71 in ³	y-bar =	16.6126 in	S _{top} =	502.71 in ³
I _x =	7107.08 in ⁴	S _{bottom} =	427.81 in ³	I _x =	7107.08 in ⁴	S _{bottom} =	427.81 in ³
C _{top} =	14.1374 in	A =	52.9219 in ²	C _{top} =	14.1374 in	A =	52.9219 in ²
C _{bottom} =	16.6126 in	r _x =	11.5885 in	C _{bottom} =	16.6126 in	r _x =	11.5885 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.5000	3.1250	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.6563	0.7562	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	22.0000	27.5000	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.8438	27.4762	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.5000	3.1250	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.6563	0.7562	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	22.0000	27.5000	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.8438	27.4762	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	15.0000	0.2500	3.7500	0.3125	12.0000	2160.0000	2160.3125	
3 (Right)	Plate	15.0000	24.2500	363.7500	0.3125	12.0000	2160.0000	2160.3125	
4	Plate	8.8125	12.2500	107.9531	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.5000	7.8750	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	21.0000	47.2500	6.7500	8.7500	172.2656	179.0156	
Total		52.92		648.29	426.39		5759.41	6185.80	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2500 in	S _{right} =	504.96 in ³	x-bar =	12.2500 in	S _{right} =	504.96 in ³
I _y =	6185.80 in ⁴	S _{left} =	504.96 in ³	I _y =	6185.80 in ⁴	S _{left} =	504.96 in ³
C _{right} =	12.2500 in	A =	52.9219 in ²	C _{right} =	12.2500 in	A =	52.9219 in ²
C _{left} =	12.2500 in	r _y =	10.8114 in	C _{left} =	12.2500 in	r _y =	10.8114 in



Made By KMW
 Checked By DWC

Date 2/6/2012
 Date 2/24/2012

Job No. P402110046
 Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.5000$ in

Top Cover Plate:

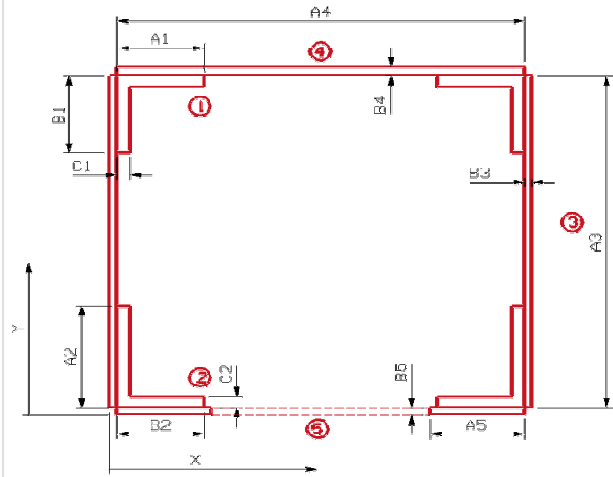
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.4375$ in

Web Plate:

$A_3 = b = 30.0000$ in
 $B_3 = t = 0.6875$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5625$ in



Member L98-L99

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	6.0000	30.3125	181.8750	0.1250	14.1248	1197.0569	1197.1819	
	Vertical Leg	7.5000	26.3125	197.3438	35.1563	10.1248	768.8341	803.9904	
2	Horizontal Leg	6.0000	0.8125	4.8750	0.1250	15.3752	1418.3839	1418.5089	
	Vertical Leg	7.5000	4.8125	36.0938	35.1563	11.3752	970.4668	1005.6231	
3	Plate	41.2500	15.5625	641.9531	3093.7500	0.6252	16.1245	3109.8745	
4	Plate	10.2813	30.7813	316.4697	0.1640	14.5935	2189.6100	2189.7740	
5	Perforated Plate	6.7500	0.2813	1.8984	0.1780	15.9065	1707.8560	1708.0340	
Total		85.28		1380.51	3164.65		8268.33	11432.99	
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	
1	0.1250	16.0000	-2.0000	22.5625	-45.1250	-42.6667	6.5279	-85.2262	-127.8929
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.00	-45.13	-42.67		-85.23	-127.89	



Made By KMW
Checked By DWC

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.1877 in	S _{top} =	771.86 in ³	y-bar =	16.0346 in	S _{top} =	755.42 in ³
I _x =	11432.99 in ⁴	S _{bott.} =	706.28 in ³	I _x =	11305.09 in ⁴	S _{bott.} =	705.04 in ³
C _{top} =	14.8123 in	A =	85.2813 in ²	C _{top} =	14.9654 in	A =	83.2813 in ²
C _{bottom} =	16.1877 in	r _x =	11.5785 in	C _{bottom} =	16.0346 in	r _x =	11.6510 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.0000	3.6875	11.0625	9.0000	8.7500	229.6875	238.6875	
	Vertical Leg	3.7500	0.9375	3.5156	0.0781	11.5000	495.9375	496.0156	
1 (Right)	Horizontal Leg	3.0000	21.1875	63.5625	9.0000	8.7500	229.6875	238.6875	
	Vertical Leg	3.7500	23.9375	89.7656	0.0781	11.5000	495.9375	496.0156	
2 (Left)	Horizontal Leg	3.0000	3.6875	11.0625	9.0000	8.7500	229.6875	238.6875	
	Vertical Leg	3.7500	0.9375	3.5156	0.0781	11.5000	495.9375	496.0156	
2 (Right)	Horizontal Leg	3.0000	21.1875	63.5625	9.0000	8.7500	229.6875	238.6875	
	Vertical Leg	3.7500	23.9375	89.7656	0.0781	11.5000	495.9375	496.0156	
3 (Left)	Plate	20.6250	0.3438	7.0898	0.8124	12.0938	3016.5875	3017.3999	
3 (Right)	Plate	20.6250	24.5313	505.9570	0.8124	12.0938	3016.5875	3017.3999	
4	Plate	10.2813	12.4375	127.8730	473.1517	0.0000	0.0000	473.1517	
5 (Left)	Perforated Plate	3.3750	3.6875	12.4453	10.1250	8.7500	258.3984	268.5234	
5 (Right)	Perforated Plate	3.3750	21.1875	71.5078	10.1250	8.7500	258.3984	268.5234	
Total		85.28		1060.69	531.34		9452.47	9983.81	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	16.0000	0.1250	-2.0000	24.8125	-49.6250	-0.0026	12.6722	-321.1686	-321.1712
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.00		-49.63	0.00		-321.17	-321.17

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.4375 in	S _{right} =	802.72 in ³	x-bar =	12.1403 in	S _{right} =	758.77 in ³
I _y =	9983.81 in ⁴	S _{left} =	802.72 in ³	I _y =	9662.64 in ⁴	S _{left} =	795.91 in ³
C _{right} =	12.4375 in	A =	85.2813 in ²	C _{right} =	12.7347 in	A =	83.2813 in ²
C _{left} =	12.4375 in	r _y =	10.8199 in	C _{left} =	12.1403 in	r _y =	10.7715 in



Made By KMW
Checked By ADK

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.7500$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.7500$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.6250$ in

Web Plate:
 $A_3 = b = 30.0000$ in
 $B_3 = t = 0.7500$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.7500$ in



Member L99-L100

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	9.0000	30.3750	273.3750	0.4219	13.8271	1720.6866	1721.1085
	Vertical Leg	10.8750	26.3750	286.8281	47.6348	9.8271	1050.2094	1097.8441
2	Horizontal Leg	9.0000	1.1250	10.1250	0.4219	15.4229	2140.8056	2141.2274
	Vertical Leg	10.8750	5.1250	55.7344	47.6348	11.4229	1419.0104	1466.6451
3	Plate	45.0000	15.7500	708.7500	3375.0000	0.7979	28.6524	3403.6524
4	Plate	14.6875	31.0625	456.2305	0.4781	14.5146	3094.2488	3094.7269
5	Perforated Plate	9.0000	0.3750	3.3750	0.4219	16.1729	2354.0778	2354.4997
Total		108.44		1794.42	3472.01		11807.69	15279.70
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	4.0000	0.1250	-0.5000	31.3125	-15.6563	-0.0007	14.8329	-110.0082
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.50	-15.66	0.00		-110.01	-110.01



Made By KMW
Checked By ADK

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.5479 in	S _{top} =	1030.53 in ³	y-bar =	16.4796 in	S _{top} =	1018.41 in ³
I _x =	15279.70 in ⁴	S _{bott.} =	923.36 in ³	I _x =	15169.70 in ⁴	S _{bott.} =	920.52 in ³
C _{top} =	14.8271 in	A =	108.4375 in ²	C _{top} =	14.8954 in	A =	107.9375 in ²
C _{bottom} =	16.5479 in	r _x =	11.8705 in	C _{bottom} =	16.4796 in	r _x =	11.8550 in

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1 (Left)	Horizontal Leg		4.5000	3.7500	16.8750	13.5000	8.7500	344.5313	358.0313
	Vertical Leg		5.4375	1.1250	6.1172	0.2549	11.3750	703.5615	703.8164
1 (Right)	Horizontal Leg		4.5000	21.2500	95.6250	13.5000	8.7500	344.5313	358.0313
	Vertical Leg		5.4375	23.8750	129.8203	0.2549	11.3750	703.5615	703.8164
2 (Left)	Horizontal Leg		4.5000	3.7500	16.8750	13.5000	8.7500	344.5313	358.0313
	Vertical Leg		5.4375	1.1250	6.1172	0.2549	11.3750	703.5615	703.8164
2 (Right)	Horizontal Leg		4.5000	21.2500	95.6250	13.5000	8.7500	344.5313	358.0313
	Vertical Leg		5.4375	23.8750	129.8203	0.2549	11.3750	703.5615	703.8164
3 (Left)	Plate		22.5000	0.3750	8.4375	1.0547	12.1250	3307.8516	3308.9063
3 (Right)	Plate		22.5000	24.6250	554.0625	1.0547	12.1250	3307.8516	3308.9063
4	Plate		14.6875	12.5000	183.5938	675.9310	0.0000	0.0000	675.9310
5 (Left)	Perforated Plate		4.5000	3.7500	16.8750	13.5000	8.7500	344.5313	358.0313
5 (Right)	Perforated Plate		4.5000	21.2500	95.6250	13.5000	8.7500	344.5313	358.0313
Total			108.44		1355.47	760.06		11497.14	12257.20
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1250	4.0000	-0.5000	16.2500	-8.1250	-0.6667	3.7674	-7.0965	-7.7632
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.50		-8.13	-0.67		-7.10	-7.76

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.5000 in	S _{right} =	980.58 in ³	x-bar =	12.4826 in	S _{right} =	978.59 in ³
I _y =	12257.20 in ⁴	S _{left} =	980.58 in ³	I _y =	12249.43 in ⁴	S _{left} =	981.32 in ³
C _{right} =	12.5000 in	A =	108.4375 in ²	C _{right} =	12.5174 in	A =	107.9375 in ²
C _{left} =	12.5000 in	r _y =	10.6318 in	C _{left} =	12.4826 in	r _y =	10.6530 in



Made By CTG
Checked By NRF

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.7500$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.7500$ in

Top Cover Plate:

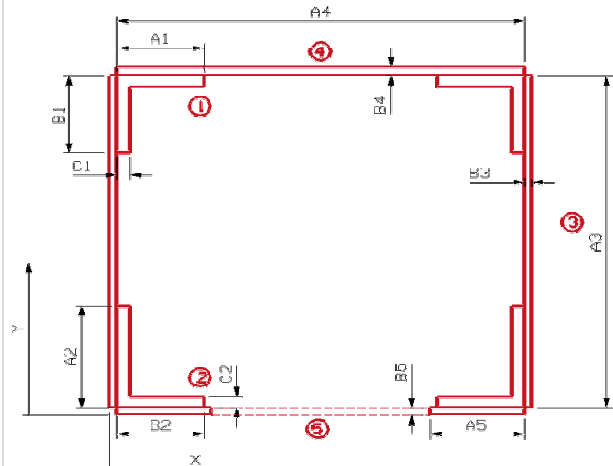
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.6250$ in

Web Plate:

$A_3 = b = 30.0000$ in
 $B_3 = t = 0.7500$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.7500$ in



Member L100-L101

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	9.0000	30.3750	273.3750	0.4219	13.8271	1720.6866	1721.1085
	Vertical Leg	10.8750	26.3750	286.8281	47.6348	9.8271	1050.2094	1097.8441
2	Horizontal Leg	9.0000	1.1250	10.1250	0.4219	15.4229	2140.8056	2141.2274
	Vertical Leg	10.8750	5.1250	55.7344	47.6348	11.4229	1419.0104	1466.6451
3	Plate	45.0000	15.7500	708.7500	3375.0000	0.7979	28.6524	3403.6524
4	Plate	14.6875	31.0625	456.2305	0.4781	14.5146	3094.2488	3094.7269
5	Perforated Plate	9.0000	0.3750	3.3750	0.4219	16.1729	2354.0778	2354.4997
Total		108.44		1794.42	3472.01		11807.69	15279.70
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.5479 in	S _{top} =	1030.53 in ³	y-bar =	16.5479 in	S _{top} =	1030.53 in ³
I _x =	15279.70 in ⁴	S _{bott.} =	923.36 in ³	I _x =	15279.70 in ⁴	S _{bott.} =	923.36 in ³
C _{top} =	14.8271 in	A =	108.4375 in ²	C _{top} =	14.8271 in	A =	108.4375 in ²
C _{bottom} =	16.5479 in	r _x =	11.8705 in	C _{bottom} =	16.5479 in	r _x =	11.8705 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.5000	3.7500	16.8750	13.5000	8.7500	344.5313	358.0313	
	Vertical Leg	5.4375	1.1250	6.1172	0.2549	11.3750	703.5615	703.8164	
1 (Right)	Horizontal Leg	4.5000	21.2500	95.6250	13.5000	8.7500	344.5313	358.0313	
	Vertical Leg	5.4375	23.8750	129.8203	0.2549	11.3750	703.5615	703.8164	
2 (Left)	Horizontal Leg	4.5000	3.7500	16.8750	13.5000	8.7500	344.5313	358.0313	
	Vertical Leg	5.4375	1.1250	6.1172	0.2549	11.3750	703.5615	703.8164	
2 (Right)	Horizontal Leg	4.5000	21.2500	95.6250	13.5000	8.7500	344.5313	358.0313	
	Vertical Leg	5.4375	23.8750	129.8203	0.2549	11.3750	703.5615	703.8164	
3 (Left)	Plate	22.5000	0.3750	8.4375	1.0547	12.1250	3307.8516	3308.9063	
3 (Right)	Plate	22.5000	24.6250	554.0625	1.0547	12.1250	3307.8516	3308.9063	
4	Plate	14.6875	12.5000	183.5938	675.9310	0.0000	0.0000	675.9310	
5 (Left)	Perforated Plate	4.5000	3.7500	16.8750	13.5000	8.7500	344.5313	358.0313	
5 (Right)	Perforated Plate	4.5000	21.2500	95.6250	13.5000	8.7500	344.5313	358.0313	
Total		108.44		1355.47	760.06		11497.14	12257.20	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.5000 in	S _{right} =	980.58 in ³	x-bar =	12.5000 in	S _{right} =	980.58 in ³
I _y =	12257.20 in ⁴	S _{left} =	980.58 in ³	I _y =	12257.20 in ⁴	S _{left} =	980.58 in ³
C _{right} =	12.5000 in	A =	108.4375 in ²	C _{right} =	12.5000 in	A =	108.4375 in ²
C _{left} =	12.5000 in	r _y =	10.6318 in	C _{left} =	12.5000 in	r _y =	10.6318 in



Made By KMW
Checked By ADK

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

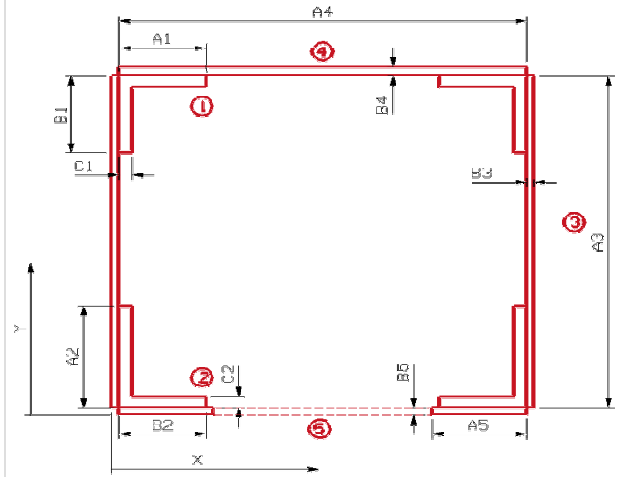
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.5000$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.5000$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.4375$ in

Web Plate:
 $A_3 = b = 30.0000$ in
 $B_3 = t = 0.6875$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.5625$ in



Member L101-L102

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	6.0000	30.3125	181.8750	0.1250	14.1248	1197.0569	1197.1819
	Vertical Leg	7.5000	26.3125	197.3438	35.1563	10.1248	768.8341	803.9904
2	Horizontal Leg	6.0000	0.8125	4.8750	0.1250	15.3752	1418.3839	1418.5089
	Vertical Leg	7.5000	4.8125	36.0938	35.1563	11.3752	970.4668	1005.6231
3	Plate	41.2500	15.5625	641.9531	3093.7500	0.6252	16.1245	3109.8745
4	Plate	10.2813	30.7813	316.4697	0.1640	14.5935	2189.6100	2189.7740
5	Perforated Plate	6.7500	0.2813	1.8984	0.1780	15.9065	1707.8560	1708.0340
Total		85.28		1380.51	3164.65		8268.33	11432.99
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	3.0000	0.2500	-0.7500	30.8750	-23.1563	-0.0039	14.8176	-164.6708
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.75	-23.16	0.00		-164.67	-164.67



Made By KMW
Checked By ADK

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.1877 in	S _{top} =	771.86 in ³	y-bar =	16.0574 in	S _{top} =	754.11 in ³
I _x =	11432.99 in ⁴	S _{bott.} =	706.28 in ³	I _x =	11268.31 in ⁴	S _{bott.} =	701.75 in ³
C _{top} =	14.8123 in	A =	85.2813 in ²	C _{top} =	14.9426 in	A =	84.5313 in ²
C _{bottom} =	16.1877 in	r _x =	11.5785 in	C _{bottom} =	16.0574 in	r _x =	11.5457 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.0000	3.6875	11.0625	9.0000	8.7500	229.6875	238.6875	
	Vertical Leg	3.7500	0.9375	3.5156	0.0781	11.5000	495.9375	496.0156	
1 (Right)	Horizontal Leg	3.0000	21.1875	63.5625	9.0000	8.7500	229.6875	238.6875	
	Vertical Leg	3.7500	23.9375	89.7656	0.0781	11.5000	495.9375	496.0156	
2 (Left)	Horizontal Leg	3.0000	3.6875	11.0625	9.0000	8.7500	229.6875	238.6875	
	Vertical Leg	3.7500	0.9375	3.5156	0.0781	11.5000	495.9375	496.0156	
2 (Right)	Horizontal Leg	3.0000	21.1875	63.5625	9.0000	8.7500	229.6875	238.6875	
	Vertical Leg	3.7500	23.9375	89.7656	0.0781	11.5000	495.9375	496.0156	
3 (Left)	Plate	20.6250	0.3438	7.0898	0.8124	12.0938	3016.5875	3017.3999	
3 (Right)	Plate	20.6250	24.5313	505.9570	0.8124	12.0938	3016.5875	3017.3999	
4	Plate	10.2813	12.4375	127.8730	473.1517	0.0000	0.0000	473.1517	
5 (Left)	Perforated Plate	3.3750	3.6875	12.4453	10.1250	8.7500	258.3984	268.5234	
5 (Right)	Perforated Plate	3.3750	21.1875	71.5078	10.1250	8.7500	258.3984	268.5234	
Total		85.28		1060.69	531.34		9452.47	9983.81	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.2500	3.0000	-0.7500	22.6875	-17.0156	-0.5625	10.3409	-80.2013	-80.7638
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.75		-17.02	-0.56		-80.20	-80.76

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.4375 in	S _{right} =	802.72 in ³	x-bar =	12.3466 in	S _{right} =	790.45 in ³
I _y =	9983.81 in ⁴	S _{left} =	802.72 in ³	I _y =	9903.05 in ⁴	S _{left} =	802.09 in ³
C _{right} =	12.4375 in	A =	85.2813 in ²	C _{right} =	12.5284 in	A =	84.5313 in ²
C _{left} =	12.4375 in	r _y =	10.8199 in	C _{left} =	12.3466 in	r _y =	10.8237 in



Made By KMW
Checked By ADK

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

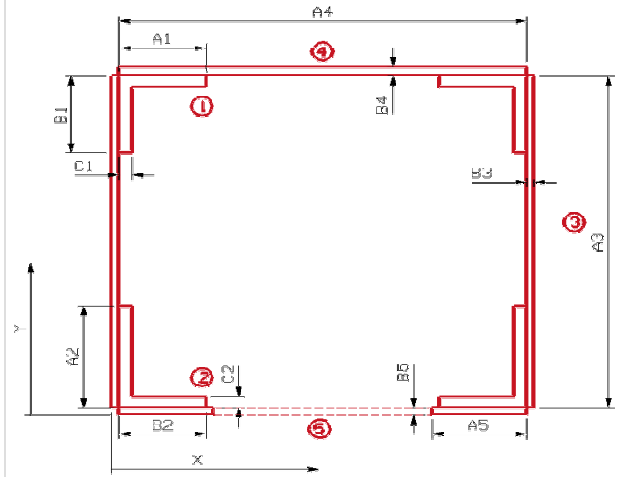
Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:
 $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:
 $A_3 = b = 30.0000$ in
 $B_3 = t = 0.5000$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L102-L103

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	30.2188	75.5469	0.0203	13.6062	462.8183	462.8387
	Vertical Leg	2.3047	28.2188	65.0354	2.6115	11.6062	310.4477	313.0592
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	16.0813	646.5245	646.5449
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	14.0813	456.9836	459.5951
3	Plate	30.0000	15.3750	461.2500	2250.0000	1.2376	45.9496	2295.9496
4	Plate	8.8125	30.5625	269.3320	0.1033	13.9499	1714.9100	1715.0133
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	16.4251	1214.0275	1214.0803
Total		52.92		879.17	2255.42		4851.66	7107.08
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	4.0000	0.1250	-0.5000	30.6875	-15.3438	-0.0007	14.2091	-100.9499
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.50	-15.34	0.00		-100.95	-100.95



Made By KMW
Checked By ADK

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.6126 in	S _{top} =	502.71 in ³	y-bar =	16.4784 in	S _{top} =	490.91 in ³
I _x =	7107.08 in ⁴	S _{bott.} =	427.81 in ³	I _x =	7006.13 in ⁴	S _{bott.} =	425.17 in ³
C _{top} =	14.1374 in	A =	52.9219 in ²	C _{top} =	14.2716 in	A =	52.4219 in ²
C _{bottom} =	16.6126 in	r _x =	11.5885 in	C _{bottom} =	16.4784 in	r _x =	11.5607 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.5000	3.1250	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.6563	0.7562	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	22.0000	27.5000	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.8438	27.4762	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.5000	3.1250	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.6563	0.7562	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	22.0000	27.5000	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.8438	27.4762	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	15.0000	0.2500	3.7500	0.3125	12.0000	2160.0000	2160.3125	
3 (Right)	Plate	15.0000	24.2500	363.7500	0.3125	12.0000	2160.0000	2160.3125	
4	Plate	8.8125	12.2500	107.9531	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.5000	7.8750	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	21.0000	47.2500	6.7500	8.7500	172.2656	179.0156	
Total		52.92		648.29	426.39		5759.41	6185.80	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1250	4.0000	-0.5000	12.2500	-6.1250	-0.6667	0.0000	0.0000	-0.6667
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.50		-6.13	-0.67		0.00	-0.67

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2500 in	S _{right} =	504.96 in ³	x-bar =	12.2500 in	S _{right} =	504.91 in ³
I _y =	6185.80 in ⁴	S _{left} =	504.96 in ³	I _y =	6185.13 in ⁴	S _{left} =	504.91 in ³
C _{right} =	12.2500 in	A =	52.9219 in ²	C _{right} =	12.2500 in	A =	52.4219 in ²
C _{left} =	12.2500 in	r _y =	10.8114 in	C _{left} =	12.2500 in	r _y =	10.8622 in



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

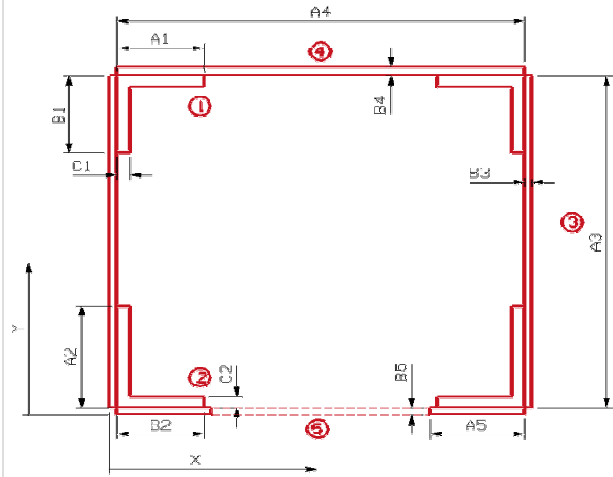
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 30.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L103-L104

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg		2.5000	30.2188	75.5469	0.0203	13.4018	449.0206	449.0409
	Vertical Leg		2.3047	28.2188	65.0354	2.6115	11.4018	299.6118	302.2233
2	Horizontal Leg		2.5000	0.5313	1.3281	0.0203	16.2857	663.0601	663.0804
	Vertical Leg		2.3047	2.5313	5.8337	2.6115	14.2857	470.3435	472.9550
3	Plate		22.5000	15.3750	345.9375	1687.5000	1.4420	46.7825	1734.2825
4	Plate		8.8125	30.5625	269.3320	0.1033	13.7455	1665.0349	1665.1382
5	Perforated Plate		4.5000	0.1875	0.8438	0.0527	16.6295	1244.4238	1244.4765
Total			45.42		763.86	1692.92		4838.28	6531.20
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.8170 in	S _{top} =	468.76 in ³	y-bar =	16.8170 in	S _{top} =	468.76 in ³
I _x =	6531.20 in ⁴	S _{bott.} =	388.37 in ³	I _x =	6531.20 in ⁴	S _{bott.} =	388.37 in ³
C _{top} =	13.9330 in	A =	45.4219 in ²	C _{top} =	13.9330 in	A =	45.4219 in ²
C _{bottom} =	16.8170 in	r _x =	11.9912 in	C _{bottom} =	16.8170 in	r _x =	11.9912 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	11.2500	0.1875	2.1094	0.1318	11.9375	1603.1689	1603.3008	
3 (Right)	Plate	11.2500	24.0625	270.7031	0.1318	11.9375	1603.1689	1603.3008	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.3750	7.5938	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.8750	46.9688	6.7500	8.7500	172.2656	179.0156	
Total		45.42		550.74	426.03		4645.75	5071.78	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	418.29 in ³	x-bar =	12.1250 in	S _{right} =	418.29 in ³
I _y =	5071.78 in ⁴	S _{left} =	418.29 in ³	I _y =	5071.78 in ⁴	S _{left} =	418.29 in ³
C _{right} =	12.1250 in	A =	45.4219 in ²	C _{right} =	12.1250 in	A =	45.4219 in ²
C _{left} =	12.1250 in	r _y =	10.5669 in	C _{left} =	12.1250 in	r _y =	10.5669 in



Made By KMW
Checked By DWC

Date 2/7/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

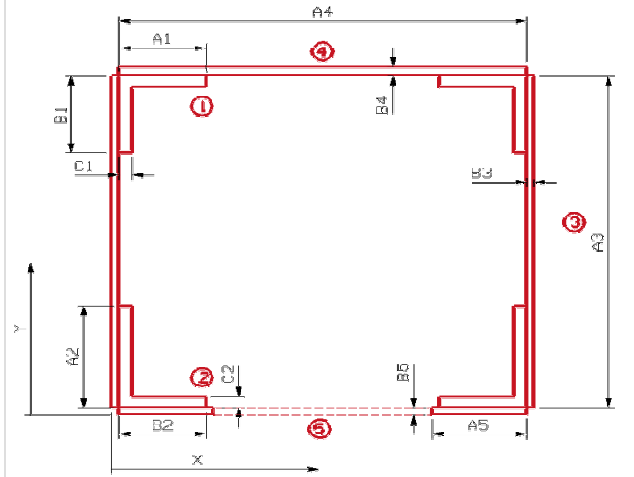
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.4375$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_f = 0.4375$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:
 $A_3 = b = 30.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member L104-L105

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.2500	30.2813	158.9766	0.0837	14.0877	1041.9304	1042.0141
	Vertical Leg	6.6172	26.2813	173.9080	31.5372	10.0877	673.3745	704.9117
2	Horizontal Leg	5.2500	0.7188	3.7734	0.0837	15.4748	1257.2166	1257.3004
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	11.4748	871.2939	902.8311
3	Plate	22.5000	15.5000	348.7500	1687.5000	0.6936	10.8232	1698.3232
4	Plate	8.8125	30.6875	270.4336	0.1033	14.4939	1851.2790	1851.3823
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	15.9436	1525.1832	1525.3082
Total		61.05		988.57	1750.97		7231.10	8982.07
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	23.5000	0.1250	-2.9375	30.8125	-90.5117	-0.0038	15.3579	-692.8575
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.94	-90.51	0.00		-692.86	-692.86



Made By KMW
Checked By DWC

Date 2/7/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.1936 in	S _{top} =	611.80 in ³	y-bar =	15.4546 in	S _{top} =	537.55 in ³
I _x =	8982.07 in ⁴	S _{bott.} =	554.67 in ³	I _x =	8289.21 in ⁴	S _{bott.} =	536.36 in ³
C _{top} =	14.6814 in	A =	61.0469 in ²	C _{top} =	15.4204 in	A =	58.1094 in ²
C _{bottom} =	16.1936 in	r _x =	12.1299 in	C _{bottom} =	15.4546 in	r _x =	11.9436 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.3750	8.8594	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.5938	1.9645	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	20.8750	54.7969	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.6563	78.2689	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.3750	8.8594	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.5938	1.9645	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	20.8750	54.7969	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.6563	78.2689	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	11.2500	0.1875	2.1094	0.1318	11.9375	1603.1689	1603.3008	
3 (Right)	Plate	11.2500	24.0625	270.7031	0.1318	11.9375	1603.1689	1603.3008	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.3750	10.1250	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.8750	62.6250	9.0000	8.7500	229.6875	238.6875	
Total		61.05		740.19	455.53		6229.39	6684.92	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1250	23.5000	-2.9375	12.1250	-35.6172	-135.1862	0.0000	0.0000	-135.1862
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.94		-35.62	-135.19		0.00	-135.19

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	551.33 in ³	x-bar =	12.1250 in	S _{right} =	540.18 in ³
I _y =	6684.92 in ⁴	S _{left} =	551.33 in ³	I _y =	6549.74 in ⁴	S _{left} =	540.18 in ³
C _{right} =	12.1250 in	A =	61.0469 in ²	C _{right} =	12.1250 in	A =	58.1094 in ²
C _{left} =	12.1250 in	r _y =	10.4645 in	C _{left} =	12.1250 in	r _y =	10.6167 in



Made By KMW
Checked By DWC

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

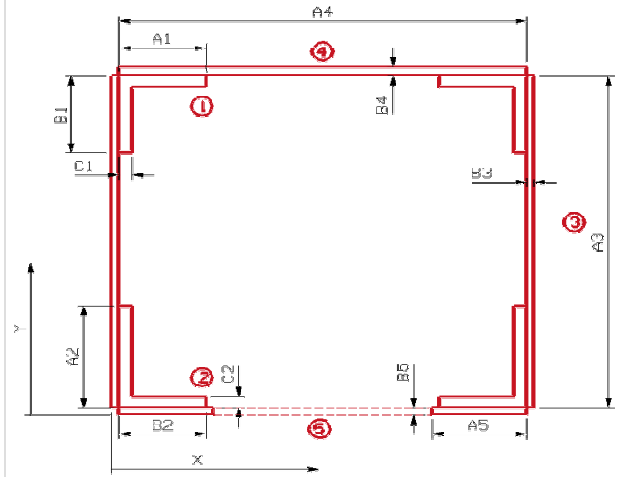
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6250$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6250$ in

Top Cover Plate:
 $A_4 = b = 22.0000$ in
 $B_4 = t = 0.5000$ in

Web Plate:
 $A_3 = b = 30.0000$ in
 $B_3 = t = 1.0000$ in

Perforated Cover Plate
 $A_5 = b = 5.2500$ in
 $B_5 = t = 0.6250$ in



Member L105-L106

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	7.5000	30.3125	227.3438	0.2441	14.0815	1487.1730	1487.4171
	Vertical Leg	9.2188	26.3125	242.5684	41.7845	10.0815	936.9700	978.7544
2	Horizontal Leg	7.5000	0.9375	7.0313	0.2441	15.2935	1754.1747	1754.4189
	Vertical Leg	9.2188	4.9375	45.5176	41.7845	11.2935	1175.7803	1217.5648
3	Plate	60.0000	15.6250	937.5000	4500.0000	0.6060	22.0314	4522.0314
4	Plate	11.0000	30.8750	339.6250	0.2292	14.6440	2358.9265	2359.1557
5	Perforated Plate	6.5625	0.3125	2.0508	0.2136	15.9185	1662.9205	1663.1342
Total		111.00		1801.64	4584.50		9397.98	13982.48
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	4.0000	0.0625	-0.2500	31.0938	-7.7734	-0.0001	14.8544	-55.1631
2	0.1250	30.0000	-3.7500	15.0000	-56.2500	-281.2500	1.2394	-5.7602
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-4.00	-64.02	-281.25		-60.92	-342.17



Made By KMW
Checked By DWC

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.2310 in	S _{top} =	938.80 in ³	y-bar =	16.2394 in	S _{top} =	916.34 in ³
I _x =	13982.48 in ⁴	S _{bott.} =	861.47 in ³	I _x =	13640.30 in ⁴	S _{bott.} =	839.95 in ³
C _{top} =	14.8940 in	A =	111.0000 in ²	C _{top} =	14.8856 in	A =	107.0000 in ²
C _{bottom} =	16.2310 in	r _x =	11.2236 in	C _{bottom} =	16.2394 in	r _x =	11.2907 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.7500	4.0000	15.0000	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.3125	6.0498	0.1500	10.6875	526.4951	526.6451	
1 (Right)	Horizontal Leg	3.7500	20.0000	75.0000	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	22.6875	104.5752	0.1500	10.6875	526.4951	526.6451	
2 (Left)	Horizontal Leg	3.7500	4.0000	15.0000	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.3125	6.0498	0.1500	10.6875	526.4951	526.6451	
2 (Right)	Horizontal Leg	3.7500	20.0000	75.0000	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	22.6875	104.5752	0.1500	10.6875	526.4951	526.6451	
3 (Left)	Plate	30.0000	0.5000	15.0000	2.5000	11.5000	3967.5000	3970.0000	
3 (Right)	Plate	30.0000	23.5000	705.0000	2.5000	11.5000	3967.5000	3970.0000	
4	Plate	11.0000	12.0000	132.0000	443.6667	0.0000	0.0000	443.6667	
5 (Left)	Perforated Plate	3.2813	3.6250	11.8945	7.5366	8.3750	230.1489	237.6855	
5 (Right)	Perforated Plate	3.2813	20.3750	66.8555	7.5366	8.3750	230.1489	237.6855	
Total		111.00		1332.00	509.34		11461.28	11970.62	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0625	4.0000	-0.2500	12.0000	-3.0000	-0.3333	0.4184	-0.0438	-0.3771
2	30.0000	0.1250	-3.7500	23.9375	-89.7656	-0.0049	12.3559	-572.5032	-572.5081
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-4.00		-92.77	-0.34		-572.55	-572.89

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.0000 in	S _{right} =	997.55 in ³	x-bar =	11.5816 in	S _{right} =	917.81 in ³
I _y =	11970.62 in ⁴	S _{left} =	997.55 in ³	I _y =	11397.73 in ⁴	S _{left} =	984.12 in ³
C _{right} =	12.0000 in	A =	111.0000 in ²	C _{right} =	12.4184 in	A =	107.0000 in ²
C _{left} =	12.0000 in	r _y =	10.3848 in	C _{left} =	11.5816 in	r _y =	10.3209 in



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6875$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6875$ in

Top Cover Plate:

$A_4 = b = 22.0000$ in
 $B_4 = t = 0.6250$ in

Web Plates:**

$A_3 = b = 30.0000$ in
 $B_3 = t = 1.4375$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.7500$ in



Member L106-L107

**There are 2 web plates, thickness shown is total of both

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	8.2500	30.4063	250.8516	0.3250	14.0370	1625.5634	1625.8884
	Vertical Leg	10.0547	26.4063	265.5066	44.8042	10.0370	1012.9275	1057.7317
2	Horizontal Leg	8.2500	1.0938	9.0234	0.3250	15.2755	1925.0568	1925.3818
	Vertical Leg	10.0547	5.0938	51.2161	44.8042	11.2755	1278.3168	1323.1210
3	Plate	86.2500	15.7500	1358.4375	6468.7500	0.6192	33.0720	6501.8220
4	Plate	13.7500	31.0625	427.1094	0.4476	14.6933	2968.5184	2968.9660
5	Perforated Plate	7.8750	0.3750	2.9531	0.3691	15.9942	2014.5457	2014.9148
Total		144.48		2365.10	6559.83		10858.00	17417.83
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.3692 in	$S_{top} = 1160.74 \text{ in}^3$			y-bar = 16.3692 in	$S_{top} = 1160.74 \text{ in}^3$		
$I_x = 17417.83 \text{ in}^4$	$S_{bott.} = 1064.06 \text{ in}^3$			$I_x = 17417.83 \text{ in}^4$	$S_{bott.} = 1064.06 \text{ in}^3$		
$C_{top} = 15.0058 \text{ in}$	$A = 144.4844 \text{ in}^2$			$C_{top} = 15.0058 \text{ in}$	$A = 144.4844 \text{ in}^2$		
$C_{bottom} = 16.3692 \text{ in}$	$r_x = 10.9796 \text{ in}$			$C_{bottom} = 16.3692 \text{ in}$	$r_x = 10.9796 \text{ in}$		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I_o	d	Ad^2	$I_{y,gross}$	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	4.4375	18.3047	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.7813	8.9550	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	20.4375	84.3047	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	23.0938	116.1002	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	4.4375	18.3047	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.7813	8.9550	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	20.4375	84.3047	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	23.0938	116.1002	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	43.1250	0.7188	30.9961	7.4261	11.7188	5922.3175	5929.7437	
3 (Right)	Plate	43.1250	24.1563	1041.7383	7.4261	11.7188	5922.3175	5929.7437	
4	Plate	13.7500	12.4375	171.0156	554.5833	0.0000	0.0000	554.5833	
5 (Left)	Perforated Plate	3.9375	4.0625	15.9961	9.0439	8.3750	276.1787	285.2227	
5 (Right)	Perforated Plate	3.9375	20.8125	81.9492	9.0439	8.3750	276.1787	285.2227	
Total		144.48		1797.02	637.82		15736.53	16374.34	
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 12.4375 in	$S_{right} = 1316.53 \text{ in}^3$			x-bar = 12.4375 in	$S_{right} = 1316.53 \text{ in}^3$		
$I_y = 16374.34 \text{ in}^4$	$S_{left} = 1316.53 \text{ in}^3$			$I_y = 16374.34 \text{ in}^4$	$S_{left} = 1316.53 \text{ in}^3$		
$C_{right} = 12.4375 \text{ in}$	$A = 144.4844 \text{ in}^2$			$C_{right} = 12.4375 \text{ in}$	$A = 144.4844 \text{ in}^2$		
$C_{left} = 12.4375 \text{ in}$	$r_y = 10.6456 \text{ in}$			$C_{left} = 12.4375 \text{ in}$	$r_y = 10.6456 \text{ in}$		



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_l = 0.6875$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_l = 0.6875$ in

Top Cover Plate: PL

$A_6 = b = 22.0000$ in
 $B_6 = t = 0.6250$ in

Side Plate 1: PL

$A_3 = b = 14.0000$ in
 $B_3 = t = 0.6875$ in

Web Plate 1: PL

$A_4 = b = 30.0000$ in
 $B_4 = t = 0.7500$ in

Side Plate 2: PL**

$A_8 = b = 0.0000$ in
 $B_8 = t = 0.0000$ in

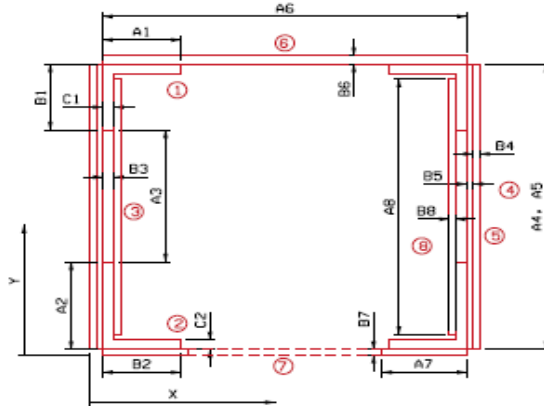
Web Plate 2: PL

$A_5 = b = 30.0000$ in
 $B_5 = t = 0.6875$ in

Perforated Bottom Cover Plate: PL

$A_7 = b = 5.2500$ in
 $B_7 = t = 0.7500$ in

**No interior side plate



Member L107-L108

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	8.2500	30.4063	250.8516	0.3250	14.1098	1642.4688	1642.7938
	Vertical Leg	10.0547	26.4063	265.5066	44.8042	10.1098	1027.6749	1072.4791
2	Horizontal Leg	8.2500	1.0938	9.0234	0.3250	15.2027	1906.7512	1907.0762
	Vertical Leg	10.0547	5.0938	51.2161	44.8042	11.2027	1261.8628	1306.6671
3	Plate	19.2500	15.7500	303.1875	314.4167	0.5464	5.7477	320.1644
4	Plate	45.0000	15.7500	708.7500	3375.0000	0.5464	13.4362	3388.4362
5	Plate	41.2500	15.7500	649.6875	3093.7500	0.5464	12.3165	3106.0665
6	Plate	13.7500	31.0625	427.1094	0.4476	14.7661	2998.0079	2998.4555
7	Perforated Plate	7.8750	0.3750	2.9531	0.3691	15.9214	1996.2480	1996.6172
8	Plate	0.0000	15.7500	0.0000	0.0000	0.5464	0.0000	0.0000
Total		163.73		2668.29	6874.24		10864.51	17738.76
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.2964 in	$S_{top} = 1176.42 \text{ in}^3$			y-bar = 16.2964 in	$S_{top} = 1176.42 \text{ in}^3$		
$I_x = 17738.76 \text{ in}^4$	$S_{bottom} = 1088.51 \text{ in}^3$			$I_x = 17738.76 \text{ in}^4$	$S_{bottom} = 1088.51 \text{ in}^3$		
$C_{top} = 15.0786 \text{ in}$	$A = 163.7344 \text{ in}^2$			$C_{top} = 15.0786 \text{ in}$	$A = 163.7344 \text{ in}^2$		
$C_{bottom} = 16.2964 \text{ in}$	$r_x = 10.4086 \text{ in}$			$C_{bottom} = 16.2964 \text{ in}$	$r_x = 10.4086 \text{ in}$		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I_o	d	Ad^2	$I_{y, gross}$	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	4.4375	18.3047	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.7813	8.9550	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	20.4375	84.3047	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	23.0938	116.1002	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	4.4375	18.3047	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.7813	8.9550	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	20.4375	84.3047	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	23.0938	116.1002	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	9.6250	1.7813	17.1445	0.3791	10.6563	1092.9733	1093.3524	
3 (Right)	Plate	9.6250	23.0938	222.2773	0.3791	10.6563	1092.9733	1093.3524	
4 (Left)	Plate	22.5000	0.3750	8.4375	1.0547	12.0625	3273.8379	3274.8926	
4 (Right)	Plate	22.5000	24.5000	551.2500	1.0547	12.0625	3273.8379	3274.8926	
5 (Left)	Plate	20.6250	1.0938	22.5586	0.8124	11.3438	2654.0387	2654.8511	
5 (Right)	Plate	20.6250	23.7813	490.4883	0.8124	11.3438	2654.0387	2654.8511	
6	Plate	13.7500	12.4375	171.0156	554.5833	0.0000	0.0000	554.5833	
7 (Left)	Perforated Plate	3.9375	4.0625	15.9961	9.0439	8.3750	276.1787	285.2227	
7 (Right)	Perforated Plate	3.9375	20.8125	81.9492	9.0439	8.3750	276.1787	285.2227	
8 (Left)	Plate	0.0000	2.1250	0.0000	0.0000	10.3125	0.0000	0.0000	
8 (Right)	Plate	0.0000	22.7500	0.0000	0.0000	10.3125	0.0000	0.0000	
Total		163.73		2036.45	614.88		17933.59	18561.05	
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 12.4375 in	$S_{right} = 1492.35 \text{ in}^3$			x-bar = 12.4375 in	$S_{right} = 1492.35 \text{ in}^3$		
$I_y = 18561.05 \text{ in}^4$	$S_{left} = 1492.35 \text{ in}^3$			$I_y = 18561.05 \text{ in}^4$	$S_{left} = 1492.35 \text{ in}^3$		
$C_{right} = 12.4375 \text{ in}$	$A = 163.7344 \text{ in}^2$			$C_{right} = 12.4375 \text{ in}$	$A = 163.7344 \text{ in}^2$		
$C_{left} = 12.4375 \text{ in}$	$r_y = 10.6471 \text{ in}$			$C_{left} = 12.4375 \text{ in}$	$r_y = 10.6471 \text{ in}$		



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_l = 0.7500$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_l = 0.7500$ in

Top Cover Plate: PL

$A_6 = b = 22.0000$ in
 $B_6 = t = 0.6250$ in

Side Plate 1: PL

$A_3 = b = 14.0000$ in
 $B_3 = t = 0.7500$ in

Web Plate 1: PL

$A_4 = b = 30.0000$ in
 $B_4 = t = 0.8750$ in

Side Plate 2: PL**

$A_8 = b = 0.0000$ in
 $B_8 = t = 0.0000$ in

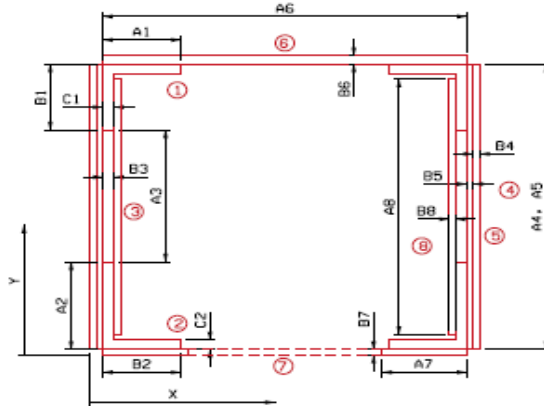
Web Plate 2: PL

$A_5 = b = 30.0000$ in
 $B_5 = t = 0.7500$ in

Perforated Bottom Cover Plate: PL

$A_7 = b = 5.2500$ in
 $B_7 = t = 0.7500$ in

**No interior side plate



Member L108-L109

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg		9.0000	30.3750	273.3750	0.4219	14.1276	1796.3033	1796.7251
	Vertical Leg		10.8750	26.3750	286.8281	47.6348	10.1276	1115.4314	1163.0661
2	Horizontal Leg		9.0000	1.1250	10.1250	0.4219	15.1224	2058.1812	2058.6031
	Vertical Leg		10.8750	5.1250	55.7344	47.6348	11.1224	1345.3207	1392.9554
3	Plate		21.0000	15.7500	330.7500	343.0000	0.4974	5.1954	348.1954
4	Plate		52.5000	15.7500	826.8750	3937.5000	0.4974	12.9885	3950.4885
5	Plate		45.0000	15.7500	708.7500	3375.0000	0.4974	11.1330	3386.1330
6	Plate		13.7500	31.0625	427.1094	0.4476	14.8151	3017.9513	3018.3989
7	Perforated Plate		7.8750	0.3750	2.9531	0.3691	15.8724	1983.9715	1984.3407
8	Plate		0.0000	15.7500	0.0000	0.0000	0.4974	0.0000	0.0000
Total			179.88		2922.50	7752.43		11346.48	19098.91
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.2474 in	$S_{top} = 1262.52 \text{ in}^3$			y-bar = 16.2474 in	$S_{top} = 1262.52 \text{ in}^3$		
$I_x = 19098.91 \text{ in}^4$	$S_{bott.} = 1175.51 \text{ in}^3$			$I_x = 19098.91 \text{ in}^4$	$S_{bott.} = 1175.51 \text{ in}^3$		
$C_{top} = 15.1276 \text{ in}$	$A = 179.8750 \text{ in}^2$			$C_{top} = 15.1276 \text{ in}$	$A = 179.8750 \text{ in}^2$		
$C_{bottom} = 16.2474 \text{ in}$	$r_x = 10.3043 \text{ in}$			$C_{bottom} = 16.2474 \text{ in}$	$r_x = 10.3043 \text{ in}$		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I_o	d	Ad^2	$I_{y, gross}$	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.5000	4.6250	20.8125	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	2.0000	10.8750	0.2549	10.6250	613.8428	614.0977	
1 (Right)	Horizontal Leg	4.5000	20.6250	92.8125	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	23.2500	126.4219	0.2549	10.6250	613.8428	614.0977	
2 (Left)	Horizontal Leg	4.5000	4.6250	20.8125	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	2.0000	10.8750	0.2549	10.6250	613.8428	614.0977	
2 (Right)	Horizontal Leg	4.5000	20.6250	92.8125	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	23.2500	126.4219	0.2549	10.6250	613.8428	614.0977	
3 (Left)	Plate	10.5000	2.0000	21.0000	0.4922	10.6250	1185.3516	1185.8438	
3 (Right)	Plate	10.5000	23.2500	244.1250	0.4922	10.6250	1185.3516	1185.8438	
4 (Left)	Plate	26.2500	0.4375	11.4844	1.6748	12.1875	3899.0479	3900.7227	
4 (Right)	Plate	26.2500	24.8125	651.3281	1.6748	12.1875	3899.0479	3900.7227	
5 (Left)	Plate	22.5000	1.2500	28.1250	1.0547	11.3750	2911.2891	2912.3438	
5 (Right)	Plate	22.5000	24.0000	540.0000	1.0547	11.3750	2911.2891	2912.3438	
6	Plate	13.7500	12.6250	173.5938	554.5833	0.0000	0.0000	554.5833	
7 (Left)	Perforated Plate	3.9375	4.2500	16.7344	9.0439	8.3750	276.1787	285.2227	
7 (Right)	Perforated Plate	3.9375	21.0000	82.6875	9.0439	8.3750	276.1787	285.2227	
8 (Left)	Plate	0.0000	2.3750	0.0000	0.0000	10.2500	0.0000	0.0000	
8 (Right)	Plate	0.0000	22.8750	0.0000	0.0000	10.2500	0.0000	0.0000	
Total		179.88		2270.92	620.38		20151.11	20785.24	
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 12.6250 in	$S_{right} = 1646.36 \text{ in}^3$			x-bar = 12.6250 in	$S_{right} = 1646.36 \text{ in}^3$		
$I_y = 20785.24 \text{ in}^4$	$S_{left} = 1646.36 \text{ in}^3$			$I_y = 20785.24 \text{ in}^4$	$S_{left} = 1646.36 \text{ in}^3$		
$C_{right} = 12.6250 \text{ in}$	$A = 179.8750 \text{ in}^2$			$C_{right} = 12.6250 \text{ in}$	$A = 179.8750 \text{ in}^2$		
$C_{left} = 12.6250 \text{ in}$	$r_y = 10.7496 \text{ in}$			$C_{left} = 12.6250 \text{ in}$	$r_y = 10.7496 \text{ in}$		



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_l = 0.7500$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_l = 0.7500$ in

Top Cover Plate: PL

$A_6 = b = 22.0000$ in
 $B_6 = t = 0.6250$ in

Side Plate 1: PL

$A_3 = b = 14.0000$ in
 $B_3 = t = 0.7500$ in

Web Plate 1: PL

$A_4 = b = 30.0000$ in
 $B_4 = t = 0.8125$ in

Side Plate 2: PL

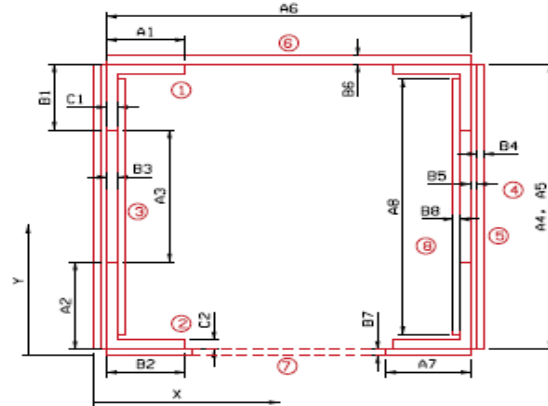
$A_8 = b = 28.0000$ in
 $B_8 = t = 0.3750$ in

Web Plate 2: PL

$A_5 = b = 30.0000$ in
 $B_5 = t = 0.7500$ in

Perforated Bottom Cover Plate: PL

$A_7 = b = 5.2500$ in
 $B_7 = t = 0.7500$ in



Member L109-L110

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	9.0000	30.3750	273.3750	0.4219	14.1711	1807.3888	1807.8107
	Vertical Leg	10.8750	26.3750	286.8281	47.6348	10.1711	1125.0397	1172.6744
2	Horizontal Leg	9.0000	1.1250	10.1250	0.4219	15.0789	2046.3504	2046.7722
	Vertical Leg	10.8750	5.1250	55.7344	47.6348	11.0789	1334.8118	1382.4466
3	Plate	21.0000	15.7500	330.7500	343.0000	0.4539	4.3259	347.3259
4	Plate	48.7500	15.7500	767.8125	3656.2500	0.4539	10.0423	3666.2923
5	Plate	45.0000	15.7500	708.7500	3375.0000	0.4539	9.2698	3384.2698
6	Plate	13.7500	31.0625	427.1094	0.4476	14.8586	3035.7105	3036.1580
7	Perforated Plate	7.8750	0.3750	2.9531	0.3691	15.8289	1973.1054	1973.4745
8	Plate	21.0000	15.7500	330.7500	1372.0000	0.4539	4.3259	1376.3259
Total		197.13		3194.19	8843.18		11350.37	20193.55
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.2039 in	$S_{top} = 1331.05 \text{ in}^3$			y-bar = 16.2039 in	$S_{top} = 1331.05 \text{ in}^3$		
$I_x = 20193.55 \text{ in}^4$	$S_{bottom} = 1246.22 \text{ in}^3$			$I_x = 20193.55 \text{ in}^4$	$S_{bottom} = 1246.22 \text{ in}^3$		
$C_{top} = 15.1711 \text{ in}$	$A = 197.1250 \text{ in}^2$			$C_{top} = 15.1711 \text{ in}$	$A = 197.1250 \text{ in}^2$		
$C_{bottom} = 16.2039 \text{ in}$	$r_x = 10.1213 \text{ in}$			$C_{bottom} = 16.2039 \text{ in}$	$r_x = 10.1213 \text{ in}$		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I_o	d	Ad^2	$I_{y, gross}$	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.5000	4.5625	20.5313	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	1.9375	10.5352	0.2549	10.6250	613.8428	614.0977	
1 (Right)	Horizontal Leg	4.5000	20.5625	92.5313	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	23.1875	126.0820	0.2549	10.6250	613.8428	614.0977	
2 (Left)	Horizontal Leg	4.5000	4.5625	20.5313	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	1.9375	10.5352	0.2549	10.6250	613.8428	614.0977	
2 (Right)	Horizontal Leg	4.5000	20.5625	92.5313	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	23.1875	126.0820	0.2549	10.6250	613.8428	614.0977	
3 (Left)	Plate	10.5000	1.9375	20.3438	0.4922	10.6250	1185.3516	1185.8438	
3 (Right)	Plate	10.5000	23.1875	243.4688	0.4922	10.6250	1185.3516	1185.8438	
4 (Left)	Plate	24.3750	0.4063	9.9023	1.3409	12.1563	3602.0013	3603.3423	
4 (Right)	Plate	24.3750	24.7188	602.5195	1.3409	12.1563	3602.0013	3603.3423	
5 (Left)	Plate	22.5000	1.1875	26.7188	1.0547	11.3750	2911.2891	2912.3438	
5 (Right)	Plate	22.5000	23.9375	538.5938	1.0547	11.3750	2911.2891	2912.3438	
6	Plate	13.7500	12.5625	172.7344	554.5833	0.0000	0.0000	554.5833	
7 (Left)	Perforated Plate	3.9375	4.1875	16.4883	9.0439	8.3750	276.1787	285.2227	
7 (Right)	Perforated Plate	3.9375	20.9375	82.4414	9.0439	8.3750	276.1787	285.2227	
8 (Left)	Plate	10.5000	2.5000	26.2500	0.1230	10.0625	1063.1660	1063.2891	
8 (Right)	Plate	10.5000	22.6250	237.5625	0.1230	10.0625	1063.1660	1063.2891	
Total		197.13		2476.38	619.96		21683.34	22317.06	
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 12.5625 in	$S_{right} = 1776.48 \text{ in}^3$			x-bar = 12.5625 in	$S_{right} = 1776.48 \text{ in}^3$		
$I_y = 22317.06 \text{ in}^4$	$S_{left} = 1776.48 \text{ in}^3$			$I_y = 22317.06 \text{ in}^4$	$S_{left} = 1776.48 \text{ in}^3$		
$C_{right} = 12.5625 \text{ in}$	$A = 197.1250 \text{ in}^2$			$C_{right} = 12.5625 \text{ in}$	$A = 197.1250 \text{ in}^2$		
$C_{left} = 12.5625 \text{ in}$	$r_y = 10.6401 \text{ in}$			$C_{left} = 12.5625 \text{ in}$	$r_y = 10.6401 \text{ in}$		



Made By KMW
Checked By DWC

Date 2/7/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_l = 0.7500$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_l = 0.7500$ in

Top Cover Plate: PL

$A_6 = b = 22.0000$ in
 $B_6 = t = 0.6250$ in

Side Plate 1: PL

$A_3 = b = 14.0000$ in
 $B_3 = t = 0.7500$ in

Web Plate 1: PL

$A_4 = b = 30.0000$ in
 $B_4 = t = 0.8125$ in

Side Plate 2: PL

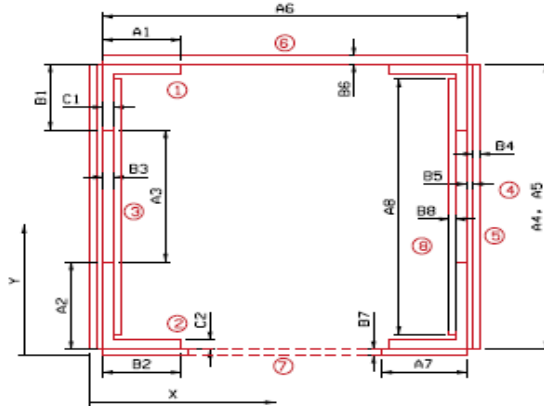
$A_8 = b = 28.0000$ in
 $B_8 = t = 0.5000$ in

Web Plate 2: PL

$A_5 = b = 30.0000$ in
 $B_5 = t = 0.7500$ in

Perforated Bottom Cover Plate: PL

$A_7 = b = 5.2500$ in
 $B_7 = t = 0.7500$ in



Member L110-L111

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg		9.0000	30.3750	273.3750	0.4219	14.1867	1811.3612	1811.7830
	Vertical Leg		10.8750	26.3750	286.8281	47.6348	10.1867	1128.4855	1176.1203
2	Horizontal Leg		9.0000	1.1250	10.1250	0.4219	15.0633	2042.1281	2042.5499
	Vertical Leg		10.8750	5.1250	55.7344	47.6348	11.0633	1331.0640	1378.6988
3	Plate		21.0000	15.7500	330.7500	343.0000	0.4383	4.0343	347.0343
4	Plate		48.7500	15.7500	767.8125	3656.2500	0.4383	9.3654	3665.6154
5	Plate		45.0000	15.7500	708.7500	3375.0000	0.4383	8.6450	3383.6450
6	Plate		13.7500	31.0625	427.1094	0.4476	14.8742	3042.0736	3042.5212
7	Perforated Plate		7.8750	0.3750	2.9531	0.3691	15.8133	1969.2270	1969.5962
8	Plate		28.0000	15.7500	441.0000	1829.3333	0.4383	5.3791	1834.7124
Total			204.13		3304.44	9300.51		11351.76	20652.28
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0625	30.0000	-1.8750	15.7500	-29.5313	-140.6250	0.4424	-0.3669	-140.9919
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.88		-29.53	-140.63		-0.37	-140.99



Made By KMW
Checked By DWC

Date 2/7/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.1883 in	$S_{top} = 1359.89 \text{ in}^3$			y-bar = 16.1924 in	$S_{top} = 1350.97 \text{ in}^3$		
$I_x = 20652.28 \text{ in}^4$	$S_{bottom} = 1275.75 \text{ in}^3$			$I_x = 20511.28 \text{ in}^4$	$S_{bottom} = 1266.73 \text{ in}^3$		
$C_{top} = 15.1867 \text{ in}$	$A = 204.1250 \text{ in}^2$			$C_{top} = 15.1826 \text{ in}$	$A = 202.2500 \text{ in}^2$		
$C_{bottom} = 16.1883 \text{ in}$	$r_x = 10.0586 \text{ in}$			$C_{bottom} = 16.1924 \text{ in}$	$r_x = 10.0705 \text{ in}$		

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I_o	d	Ad^2	$I_{y, gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1 (Left)	Horizontal Leg		4.5000	4.5625	20.5313	13.5000	8.0000	288.0000	301.5000
	Vertical Leg		5.4375	1.9375	10.5352	0.2549	10.6250	613.8428	614.0977
1 (Right)	Horizontal Leg		4.5000	20.5625	92.5313	13.5000	8.0000	288.0000	301.5000
	Vertical Leg		5.4375	23.1875	126.0820	0.2549	10.6250	613.8428	614.0977
2 (Left)	Horizontal Leg		4.5000	4.5625	20.5313	13.5000	8.0000	288.0000	301.5000
	Vertical Leg		5.4375	1.9375	10.5352	0.2549	10.6250	613.8428	614.0977
2 (Right)	Horizontal Leg		4.5000	20.5625	92.5313	13.5000	8.0000	288.0000	301.5000
	Vertical Leg		5.4375	23.1875	126.0820	0.2549	10.6250	613.8428	614.0977
3 (Left)	Plate		10.5000	1.9375	20.3438	0.4922	10.6250	1185.3516	1185.8438
3 (Right)	Plate		10.5000	23.1875	243.4688	0.4922	10.6250	1185.3516	1185.8438
4 (Left)	Plate		24.3750	0.4063	9.9023	1.3409	12.1563	3602.0013	3603.3423
4 (Right)	Plate		24.3750	24.7188	602.5195	1.3409	12.1563	3602.0013	3603.3423
5 (Left)	Plate		22.5000	1.1875	26.7188	1.0547	11.3750	2911.2891	2912.3438
5 (Right)	Plate		22.5000	23.9375	538.5938	1.0547	11.3750	2911.2891	2912.3438
6	Plate		13.7500	12.5625	172.7344	554.5833	0.0000	0.0000	554.5833
7 (Left)	Perforated Plate		3.9375	4.1875	16.4883	9.0439	8.3750	276.1787	285.2227
7 (Right)	Perforated Plate		3.9375	20.9375	82.4414	9.0439	8.3750	276.1787	285.2227
8 (Left)	Plate		14.0000	2.5625	35.8750	0.2917	10.0000	1400.0000	1400.2917
8 (Right)	Plate		14.0000	22.5625	315.8750	0.2917	10.0000	1400.0000	1400.2917
Total			204.13		2564.32	620.29		22357.01	22991.06
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	30.0000	0.0625	-1.8750	0.0313	-0.0586	-0.0006	12.6474	-299.9200	-299.9206
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.88		-0.06	0.00		-299.92	-299.92

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 12.5625 in	$S_{right} = 1830.13 \text{ in}^3$			x-bar = 12.6787 in	$S_{right} = 1823.12 \text{ in}^3$		
$I_y = 22991.06 \text{ in}^4$	$S_{left} = 1830.13 \text{ in}^3$			$I_y = 22691.14 \text{ in}^4$	$S_{left} = 1789.71 \text{ in}^3$		
$C_{right} = 12.5625 \text{ in}$	$A = 204.1250 \text{ in}^2$			$C_{right} = 12.4463 \text{ in}$	$A = 202.2500 \text{ in}^2$		
$C_{left} = 12.5625 \text{ in}$	$r_y = 10.6128 \text{ in}$			$C_{left} = 12.6787 \text{ in}$	$r_y = 10.5921 \text{ in}$		



Made By KMW
Checked By DWC

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_l = 0.6875$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_l = 0.6875$ in

Top Cover Plate: PL

$A_6 = b = 22.0000$ in
 $B_6 = t = 0.6250$ in

Side Plate 1: PL

$A_3 = b = 14.0000$ in
 $B_3 = t = 0.6875$ in

Web Plate 1: PL

$A_4 = b = 30.0000$ in
 $B_4 = t = 0.7500$ in

Side Plate 2: PL**

$A_8 = b = 0.0000$ in
 $B_8 = t = 0.0000$ in

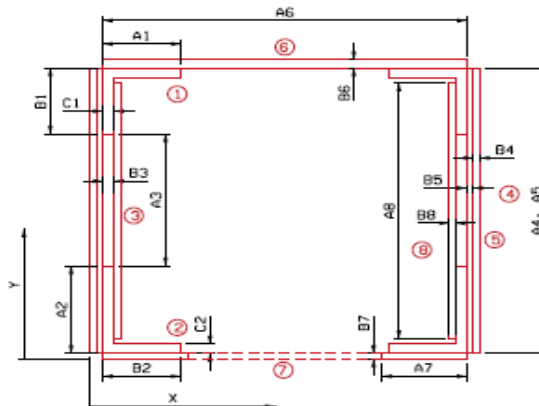
Web Plate 2: PL

$A_5 = b = 30.0000$ in
 $B_5 = t = 0.7500$ in

Perforated Bottom Cover Plate: PL

$A_7 = b = 5.2500$ in
 $B_7 = t = 0.7500$ in

**No interior side plate



Member L111-L112

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	8.2500	30.4063	250.8516	0.3250	14.1221	1645.3184	1645.6433
	Vertical Leg	10.0547	26.4063	265.5066	44.8042	10.1221	1030.1637	1074.9680
2	Horizontal Leg	8.2500	1.0938	9.0234	0.3250	15.1904	1903.6835	1904.0085
	Vertical Leg	10.0547	5.0938	51.2161	44.8042	11.1904	1259.1081	1303.9124
3	Plate	19.2500	15.7500	303.1875	314.4167	0.5342	5.4932	319.9099
4	Plate	45.0000	15.7500	708.7500	3375.0000	0.5342	12.8412	3387.8412
5	Plate	45.0000	15.7500	708.7500	3375.0000	0.5342	12.8412	3387.8412
6	Plate	13.7500	31.0625	427.1094	0.4476	14.7783	3002.9780	3003.4256
7	Perforated Plate	7.8750	0.3750	2.9531	0.3691	15.9092	1993.1812	1993.5504
8	Plate	0.0000	15.7500	0.0000	0.0000	0.5342	0.0000	0.0000
Total		167.48		2727.35	7155.49		10865.61	18021.10
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	22.0000	0.1250	-2.7500	31.3125	-86.1094	-0.0036	15.2792	-641.9970
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.75	-86.11	0.00		-642.00	-642.00



Made By KMW
Checked By DWC

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.2842 in	$S_{top} = 1194.18 \text{ in}^3$			y-bar = 16.0333 in	$S_{top} = 1132.80 \text{ in}^3$		
$I_x = 18021.10 \text{ in}^4$	$S_{bottom} = 1106.66 \text{ in}^3$			$I_x = 17379.10 \text{ in}^4$	$S_{bottom} = 1083.94 \text{ in}^3$		
$C_{top} = 15.0908 \text{ in}$	$A = 167.4844 \text{ in}^2$			$C_{top} = 15.3417 \text{ in}$	$A = 164.7344 \text{ in}^2$		
$C_{bottom} = 16.2842 \text{ in}$	$r_x = 10.3730 \text{ in}$			$C_{bottom} = 16.0333 \text{ in}$	$r_x = 10.2712 \text{ in}$		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I_o	d	Ad^2	$I_{y, gross}$	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	4.5000	18.5625	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.8438	9.2692	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	20.5000	84.5625	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	23.1563	116.4144	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	4.5000	18.5625	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.8438	9.2692	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	20.5000	84.5625	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	23.1563	116.4144	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	9.6250	1.8438	17.7461	0.3791	10.6563	1092.9733	1093.3524	
3 (Right)	Plate	9.6250	23.1563	222.8789	0.3791	10.6563	1092.9733	1093.3524	
4 (Left)	Plate	22.5000	0.3750	8.4375	1.0547	12.1250	3307.8516	3308.9063	
4 (Right)	Plate	22.5000	24.6250	554.0625	1.0547	12.1250	3307.8516	3308.9063	
5 (Left)	Plate	22.5000	1.1250	25.3125	1.0547	11.3750	2911.2891	2912.3438	
5 (Right)	Plate	22.5000	23.8750	537.1875	1.0547	11.3750	2911.2891	2912.3438	
6	Plate	13.7500	12.5000	171.8750	554.5833	0.0000	0.0000	554.5833	
7 (Left)	Perforated Plate	3.9375	4.1250	16.2422	9.0439	8.3750	276.1787	285.2227	
7 (Right)	Perforated Plate	3.9375	20.8750	82.1953	9.0439	8.3750	276.1787	285.2227	
8 (Left)	Plate	0.0000	2.1875	0.0000	0.0000	10.3125	0.0000	0.0000	
8 (Right)	Plate	0.0000	22.8125	0.0000	0.0000	10.3125	0.0000	0.0000	
Total		167.48		2093.55	615.37		18516.12	19144.06	
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1250	22.0000	-2.7500	12.5625	-34.5469	-110.9167	0.0635	-0.0111	-110.9278
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.75		-34.55	-110.92		-0.01	-110.93

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 12.5000 in	$S_{right} = 1531.52 \text{ in}^3$			x-bar = 12.4990 in	$S_{right} = 1522.52 \text{ in}^3$		
$I_y = 19144.06 \text{ in}^4$	$S_{left} = 1531.52 \text{ in}^3$			$I_y = 19033.13 \text{ in}^4$	$S_{left} = 1522.78 \text{ in}^3$		
$C_{right} = 12.5000 \text{ in}$	$A = 167.4844 \text{ in}^2$			$C_{right} = 12.5010 \text{ in}$	$A = 164.7344 \text{ in}^2$		
$C_{left} = 12.5000 \text{ in}$	$r_y = 10.6913 \text{ in}$			$C_{left} = 12.4990 \text{ in}$	$r_y = 10.7489 \text{ in}$		



Made By KMW
Checked By DWC

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

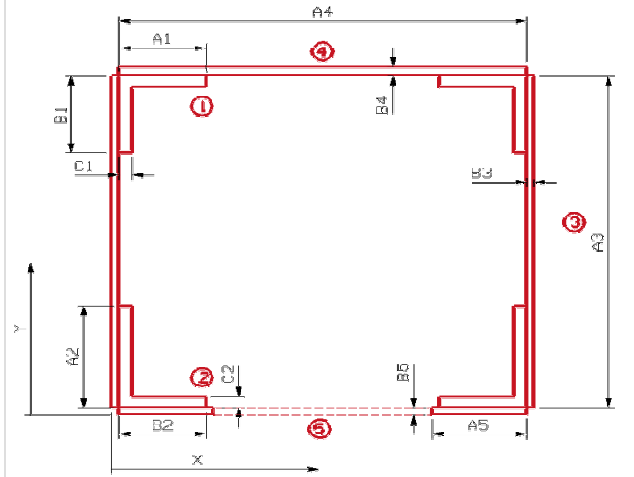
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.7500$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.7500$ in

Top Cover Plate:
 $A_4 = b = 22.0000$ in
 $B_4 = t = 0.6250$ in

Web Plates:**
 $A_3 = b = 30.0000$ in
 $B_3 = t = 1.5625$ in

Perforated Cover Plate
 $A_5 = b = 5.2500$ in
 $B_5 = t = 0.7500$ in



Member L112-L113

**There are 2 web plates, thickness shown is total of both

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	9.0000	30.3750	273.3750	0.4219	14.0482	1776.1793	1776.6012	
	Vertical Leg	10.8750	26.3750	286.8281	47.6348	10.0482	1098.0191	1145.6539	
2	Horizontal Leg	9.0000	1.1250	10.1250	0.4219	15.2018	2079.8395	2080.2614	
	Vertical Leg	10.8750	5.1250	55.7344	47.6348	11.2018	1364.5870	1412.2217	
3	Plate	93.7500	15.7500	1476.5625	7031.2500	0.5768	31.1853	7062.4353	
4	Plate	13.7500	31.0625	427.1094	0.4476	14.7357	2985.7059	2986.1535	
5	Perforated Plate	7.8750	0.3750	2.9531	0.3691	15.9518	2003.8600	2004.2291	
Total		155.13		2532.69	7128.18		11339.38	18467.56	
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	
1	0.1250	30.0000	-3.7500	15.7500	-59.0625	-281.2500	0.5910	-1.3100	-282.5600
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-3.75	-59.06	-281.25		-1.31	-282.56	



Made By KMW
Checked By DWC

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.3268 in	S _{top} =	1227.22 in ³	y-bar =	16.3410 in	S _{top} =	1209.59 in ³
I _x =	18467.56 in ⁴	S _{bott.} =	1131.12 in ³	I _x =	18185.00 in ⁴	S _{bott.} =	1112.84 in ³
C _{top} =	15.0482 in	A =	155.1250 in ²	C _{top} =	15.0340 in	A =	151.3750 in ²
C _{bottom} =	16.3268 in	r _x =	10.9110 in	C _{bottom} =	16.3410 in	r _x =	10.9605 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.5000	4.5625	20.5313	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	1.9375	10.5352	0.2549	10.6250	613.8428	614.0977	
1 (Right)	Horizontal Leg	4.5000	20.5625	92.5313	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	23.1875	126.0820	0.2549	10.6250	613.8428	614.0977	
2 (Left)	Horizontal Leg	4.5000	4.5625	20.5313	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	1.9375	10.5352	0.2549	10.6250	613.8428	614.0977	
2 (Right)	Horizontal Leg	4.5000	20.5625	92.5313	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	23.1875	126.0820	0.2549	10.6250	613.8428	614.0977	
3 (Left)	Plate	46.8750	0.7813	36.6211	9.5367	11.7813	6506.1493	6515.6860	
3 (Right)	Plate	46.8750	24.3438	1141.1133	9.5367	11.7813	6506.1493	6515.6860	
4	Plate	13.7500	12.5625	172.7344	554.5833	0.0000	0.0000	554.5833	
5 (Left)	Perforated Plate	3.9375	4.1875	16.4883	9.0439	8.3750	276.1787	285.2227	
5 (Right)	Perforated Plate	3.9375	20.9375	82.4414	9.0439	8.3750	276.1787	285.2227	
Total		155.13		1948.76	646.76		17172.03	17818.79	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	30.0000	0.1250	-3.7500	0.0625	-0.2344	-0.0049	12.8097	-615.3278	-615.3327
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-3.75		-0.23	0.00		-615.33	-615.33

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.5625 in	S _{right} =	1418.41 in ³	x-bar =	12.8722 in	S _{right} =	1404.04 in ³
I _y =	17818.79 in ⁴	S _{left} =	1418.41 in ³	I _y =	17203.46 in ⁴	S _{left} =	1336.49 in ³
C _{right} =	12.5625 in	A =	155.1250 in ²	C _{right} =	12.2528 in	A =	151.3750 in ²
C _{left} =	12.5625 in	r _y =	10.7176 in	C _{left} =	12.8722 in	r _y =	10.6606 in



Made By KMW
Checked By DWC

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.7500$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.7500$ in

Web Plate 1:

$A_3 = b = 30.0000$ in
 $B_3 = t = 0.9375$ in

Top Cover Plate:

$A_4 = b = 22.0000$ in
 $B_4 = t = 0.6250$ in

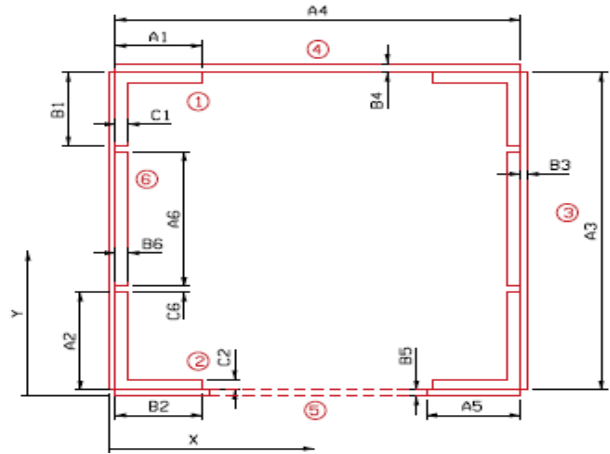
Web Plate 2:

$A_6 = b = 14.0000$ in
 $B_6 = t = 0.7500$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.7500$ in

$C_6 = \text{gap} = 0.0000$ in



Member L113-L114

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	9.0000	30.3750	273.3750	0.4219	13.9796	1758.8626	1759.2845
	Vertical Leg	10.8750	26.3750	286.8281	47.6348	9.9796	1083.0673	1130.7020
2	Horizontal Leg	9.0000	1.1250	10.1250	0.4219	15.2704	2098.6664	2099.0883
	Vertical Leg	10.8750	5.1250	55.7344	47.6348	11.2704	1381.3636	1428.9984
3	Plate	56.2500	15.7500	885.9375	4218.7500	0.6454	23.4305	4242.1805
4	Plate	13.7500	31.0625	427.1094	0.4476	14.6671	2957.9520	2958.3996
5	Perforated Plate	7.8750	0.3750	2.9531	0.3691	16.0204	2021.1444	2021.5135
6	Side Plates	21.0000	15.7500	330.7500	343.0000	0.6454	8.7474	351.7474
Total		138.63		2272.81	4658.68		11333.23	15991.91
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	22.0000	0.0625	-1.3750	31.3438	-43.0977	-0.0004	15.0981	-313.4350
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.38	-43.10	0.00		-313.44	-313.44



Made By KMW
Checked By DWC

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.3954 in	S _{top} =	1067.58 in ³	y-bar =	16.2456 in	S _{top} =	1036.30 in ³
I _x =	15991.91 in ⁴	S _{bott.} =	975.39 in ³	I _x =	15678.48 in ⁴	S _{bott.} =	965.09 in ³
C _{top} =	14.9796 in	A =	138.6250 in ²	C _{top} =	15.1294 in	A =	137.2500 in ²
C _{bottom} =	16.3954 in	r _x =	10.7406 in	C _{bottom} =	16.2456 in	r _x =	10.6880 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.5000	3.9375	17.7188	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	1.3125	7.1367	0.2549	10.6250	613.8428	614.0977	
1 (Right)	Horizontal Leg	4.5000	19.9375	89.7188	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	22.5625	122.6836	0.2549	10.6250	613.8428	614.0977	
2 (Left)	Horizontal Leg	4.5000	3.9375	17.7188	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	1.3125	7.1367	0.2549	10.6250	613.8428	614.0977	
2 (Right)	Horizontal Leg	4.5000	19.9375	89.7188	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	22.5625	122.6836	0.2549	10.6250	613.8428	614.0977	
3 (Left)	Plate	28.1250	0.4688	13.1836	2.0599	11.4688	3699.3439	3701.4038	
3 (Right)	Plate	28.1250	23.4063	658.3008	2.0599	11.4688	3699.3439	3701.4038	
4	Plate	13.7500	11.9375	164.1406	554.5833	0.0000	0.0000	554.5833	
5 (Left)	Perforated Plate	3.9375	3.5625	14.0273	9.0439	8.3750	276.1787	285.2227	
5 (Right)	Perforated Plate	3.9375	20.3125	79.9805	9.0439	8.3750	276.1787	285.2227	
6 (Left)	Plate	10.5000	1.3125	13.7813	0.4922	10.6250	1185.3516	1185.8438	
6 (Right)	Plate	10.5000	22.5625	236.9063	0.4922	10.6250	1185.3516	1185.8438	
Total		138.63		1654.84	632.80		13929.12	14561.91	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0625	22.0000	-1.3750	11.8750	-16.3281	-55.4583	0.0631	-0.0055	-55.4638
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.38		-16.33	-55.46		-0.01	-55.46

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	11.9375 in	S _{right} =	1219.85 in ³	x-bar =	11.9381 in	S _{right} =	1215.26 in ³
I _y =	14561.91 in ⁴	S _{left} =	1219.85 in ³	I _y =	14506.45 in ⁴	S _{left} =	1215.14 in ³
C _{right} =	11.9375 in	A =	138.6250 in ²	C _{right} =	11.9369 in	A =	137.2500 in ²
C _{left} =	11.9375 in	r _y =	10.2492 in	C _{left} =	11.9381 in	r _y =	10.2807 in



Made By KMW
Checked By DWC

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.8750$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.8750$ in

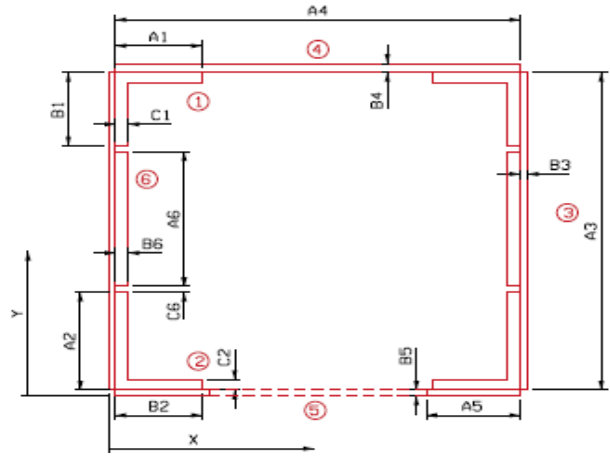
Web Plate 1:
 $A_3 = b = 30.0000$ in
 $B_3 = t = 0.8750$ in

Top Cover Plate:
 $A_4 = b = 22.0000$ in
 $B_4 = t = 0.6250$ in

Web Plate 2:
 $A_6 = b = 14.0000$ in
 $B_6 = t = 0.4375$ in

Perforated Cover Plate
 $A_5 = b = 5.2500$ in
 $B_5 = t = 0.7500$ in

$C_6 = \text{gap} = 0.0000$ in



Member L114-L115

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	10.5000	30.3125	318.2813	0.6699	13.8863	2024.7101	2025.3800	
	Vertical Leg	12.4688	26.3125	328.0840	52.7487	9.8863	1218.6840	1271.4327	
2	Horizontal Leg	10.5000	1.1875	12.4688	0.6699	15.2387	2438.2864	2438.9564	
	Vertical Leg	12.4688	5.1875	64.6816	52.7487	11.2387	1574.9055	1627.6542	
3	Plate	52.5000	15.7500	826.8750	3937.5000	0.6762	24.0049	3961.5049	
4	Plate	13.7500	31.0625	427.1094	0.4476	14.6363	2945.5455	2945.9931	
5	Perforated Plate	7.8750	0.3750	2.9531	0.3691	16.0512	2028.9212	2029.2903	
6	Side Plates	12.2500	15.7500	192.9375	200.0833	0.6762	5.6011	205.6845	
Total		132.31		2173.39	4245.24		12260.66	16505.90	
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	
1	0.0625	18.0000	-1.1250	21.7500	-24.4688	-30.3750	5.2882	-31.4608	-61.8358
2	0.2500	3.0000	-0.7500	2.2500	-1.6875	-0.5625	14.2118	-151.4812	-152.0437
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				-1.88		-26.16		-182.94	-213.88



Made By KMW
Checked By DWC

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.4262 in	S _{top} = 1104.16 in ³			y-bar = 16.4618 in	S _{top} = 1092.46 in ³		
I _x = 16505.90 in ⁴	S _{bott.} = 1004.85 in ³			I _x = 16292.02 in ⁴	S _{bott.} = 989.69 in ³		
C _{top} = 14.9488 in	A = 132.3125 in ²			C _{top} = 14.9132 in	A = 130.4375 in ²		
C _{bottom} = 16.4262 in	r _x = 11.1691 in			C _{bottom} = 16.4618 in	r _x = 11.1760 in		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	5.2500	3.8750	20.3438	15.7500	8.0000	336.0000	351.7500	
	Vertical Leg	6.2344	1.3125	8.1826	0.3978	10.5625	695.5468	695.9446	
1 (Right)	Horizontal Leg	5.2500	19.8750	104.3438	15.7500	8.0000	336.0000	351.7500	
	Vertical Leg	6.2344	22.4375	139.8838	0.3978	10.5625	695.5468	695.9446	
2 (Left)	Horizontal Leg	5.2500	3.8750	20.3438	15.7500	8.0000	336.0000	351.7500	
	Vertical Leg	6.2344	1.3125	8.1826	0.3978	10.5625	695.5468	695.9446	
2 (Right)	Horizontal Leg	5.2500	19.8750	104.3438	15.7500	8.0000	336.0000	351.7500	
	Vertical Leg	6.2344	22.4375	139.8838	0.3978	10.5625	695.5468	695.9446	
3 (Left)	Plate	26.2500	0.4375	11.4844	1.6748	11.4375	3433.9307	3435.6055	
3 (Right)	Plate	26.2500	23.3125	611.9531	1.6748	11.4375	3433.9307	3435.6055	
4	Plate	13.7500	11.8750	163.2813	554.5833	0.0000	0.0000	554.5833	
5 (Left)	Perforated Plate	3.9375	3.5000	13.7813	9.0439	8.3750	276.1787	285.2227	
5 (Right)	Perforated Plate	3.9375	20.2500	79.7344	9.0439	8.3750	276.1787	285.2227	
6 (Left)	Plate	6.1250	1.0938	6.6992	0.0977	10.7813	711.9415	712.0392	
6 (Right)	Plate	6.1250	22.6563	138.7695	0.0977	10.7813	711.9415	712.0392	
Total		132.31		1571.21	640.81		12970.29	13611.10	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	18.0000	0.0625	-1.1250	23.7188	-26.6836	-0.0004	12.0135	-162.3637	-162.3640
2	3.0000	0.2500	-0.7500	23.6250	-17.7188	-0.0039	11.9197	-106.5596	-106.5635
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.88		-44.40	0.00		-268.92	-268.93

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 11.8750 in	S _{right} = 1146.20 in ³			x-bar = 11.7053 in	S _{right} = 1107.72 in ³		
I _y = 13611.10 in ⁴	S _{left} = 1146.20 in ³			I _y = 13342.17 in ⁴	S _{left} = 1139.84 in ³		
C _{right} = 11.8750 in	A = 132.3125 in ²			C _{right} = 12.0447 in	A = 130.4375 in ²		
C _{left} = 11.8750 in	r _y = 10.1425 in			C _{left} = 11.7053 in	r _y = 10.1137 in		



Made By KMW
Checked By DWC

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

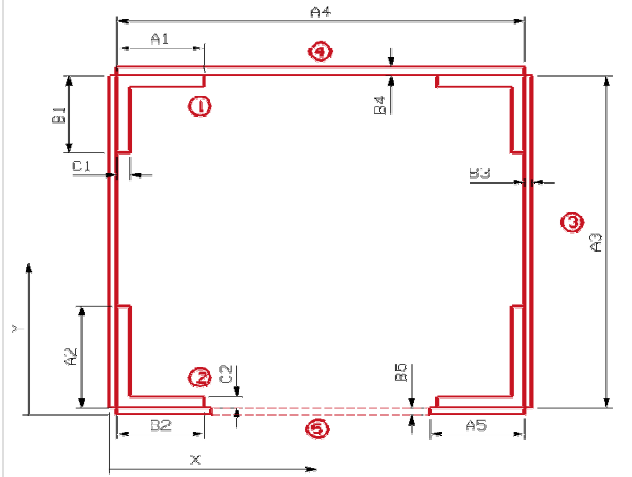
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6875$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6875$ in

Top Cover Plate:
 $A_4 = b = 22.0000$ in
 $B_4 = t = 0.6250$ in

Web Plate:
 $A_3 = b = 30.0000$ in
 $B_3 = t = 0.8750$ in

Perforated Cover Plate
 $A_5 = b = 5.2500$ in
 $B_5 = t = 0.7500$ in



Member L115-L116

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	8.2500	30.4063	250.8516	0.3250	13.8483	1582.1453	1582.4702
	Vertical Leg	10.0547	26.4063	265.5066	44.8042	9.8483	975.1926	1019.9968
2	Horizontal Leg	8.2500	1.0938	9.0234	0.3250	15.4642	1972.9193	1973.2443
	Vertical Leg	10.0547	5.0938	51.2161	44.8042	11.4642	1321.4682	1366.2724
3	Plate	52.5000	15.7500	826.8750	3937.5000	0.8080	34.2718	3971.7718
4	Plate	13.7500	31.0625	427.1094	0.4476	14.5045	2892.7488	2893.1964
5	Perforated Plate	7.8750	0.3750	2.9531	0.3691	16.1830	2062.3691	2062.7382
Total		110.73		1833.54	4028.58		10841.12	14869.69
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By KMW
Checked By DWC

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.5580 in	S _{top} =	1003.55 in ³	y-bar =	16.5580 in	S _{top} =	1003.55 in ³
I _x =	14869.69 in ⁴	S _{bott.} =	898.04 in ³	I _x =	14869.69 in ⁴	S _{bott.} =	898.04 in ³
C _{top} =	14.8170 in	A =	110.7344 in ²	C _{top} =	14.8170 in	A =	110.7344 in ²
C _{bottom} =	16.5580 in	r _x =	11.5880 in	C _{bottom} =	16.5580 in	r _x =	11.5880 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	3.8750	15.9844	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.2188	6.1271	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	19.8750	81.9844	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.5313	113.2723	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	3.8750	15.9844	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.2188	6.1271	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	19.8750	81.9844	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.5313	113.2723	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	26.2500	0.4375	11.4844	1.6748	11.4375	3433.9307	3435.6055	
3 (Right)	Plate	26.2500	23.3125	611.9531	1.6748	11.4375	3433.9307	3435.6055	
4	Plate	13.7500	11.8750	163.2813	554.5833	0.0000	0.0000	554.5833	
5 (Left)	Perforated Plate	3.9375	3.5000	13.7813	9.0439	8.3750	276.1787	285.2227	
5 (Right)	Perforated Plate	3.9375	20.2500	79.7344	9.0439	8.3750	276.1787	285.2227	
Total		110.73		1314.97	626.31		10759.75	11386.07	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	11.8750 in	S _{right} =	958.83 in ³	x-bar =	11.8750 in	S _{right} =	958.83 in ³
I _y =	11386.07 in ⁴	S _{left} =	958.83 in ³	I _y =	11386.07 in ⁴	S _{left} =	958.83 in ³
C _{right} =	11.8750 in	A =	110.7344 in ²	C _{right} =	11.8750 in	A =	110.7344 in ²
C _{left} =	11.8750 in	r _y =	10.1402 in	C _{left} =	11.8750 in	r _y =	10.1402 in



Made By KMW
Checked By DWC

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

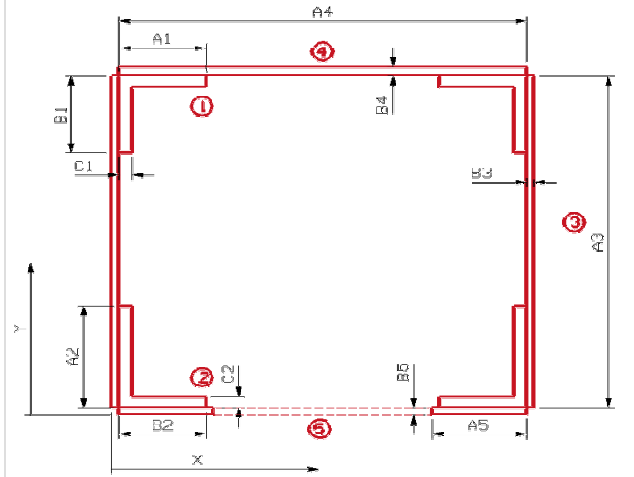
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6875$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6875$ in

Top Cover Plate:
 $A_4 = b = 22.0000$ in
 $B_4 = t = 0.6250$ in

Web Plate:
 $A_3 = b = 30.0000$ in
 $B_3 = t = 0.9375$ in

Perforated Cover Plate
 $A_5 = b = 5.2500$ in
 $B_5 = t = 0.7500$ in



Member L116-L117

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	8.2500	30.4063	250.8516	0.3250	13.8748	1588.1983	1588.5232
	Vertical Leg	10.0547	26.4063	265.5066	44.8042	9.8748	980.4409	1025.2451
2	Horizontal Leg	8.2500	1.0938	9.0234	0.3250	15.4377	1966.1723	1966.4972
	Vertical Leg	10.0547	5.0938	51.2161	44.8042	11.4377	1315.3740	1360.1782
3	Plate	56.2500	15.7500	885.9375	4218.7500	0.7815	34.3536	4253.1036
4	Plate	13.7500	31.0625	427.1094	0.4476	14.5310	2903.3147	2903.7623
5	Perforated Plate	7.8750	0.3750	2.9531	0.3691	16.1565	2055.6291	2055.9983
Total		114.48		1892.60	4309.83		10843.48	15153.31
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By KMW
Checked By DWC

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.5315 in	S _{top} =	1020.87 in ³	y-bar =	16.5315 in	S _{top} =	1020.87 in ³
I _x =	15153.31 in ⁴	S _{bott.} =	916.63 in ³	I _x =	15153.31 in ⁴	S _{bott.} =	916.63 in ³
C _{top} =	14.8435 in	A =	114.4844 in ²	C _{top} =	14.8435 in	A =	114.4844 in ²
C _{bottom} =	16.5315 in	r _x =	11.5048 in	C _{bottom} =	16.5315 in	r _x =	11.5048 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	3.9375	16.2422	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.2813	6.4413	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	19.9375	82.2422	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.5938	113.5865	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	3.9375	16.2422	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.2813	6.4413	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	19.9375	82.2422	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.5938	113.5865	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	28.1250	0.4688	13.1836	2.0599	11.4688	3699.3439	3701.4038	
3 (Right)	Plate	28.1250	23.4063	658.3008	2.0599	11.4688	3699.3439	3701.4038	
4	Plate	13.7500	11.9375	164.1406	554.5833	0.0000	0.0000	554.5833	
5 (Left)	Perforated Plate	3.9375	3.5625	14.0273	9.0439	8.3750	276.1787	285.2227	
5 (Right)	Perforated Plate	3.9375	20.3125	79.9805	9.0439	8.3750	276.1787	285.2227	
Total		114.48		1366.66	627.08		11290.58	11917.66	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	11.9375 in	S _{right} =	998.34 in ³	x-bar =	11.9375 in	S _{right} =	998.34 in ³
I _y =	11917.66 in ⁴	S _{left} =	998.34 in ³	I _y =	11917.66 in ⁴	S _{left} =	998.34 in ³
C _{right} =	11.9375 in	A =	114.4844 in ²	C _{right} =	11.9375 in	A =	114.4844 in ²
C _{left} =	11.9375 in	r _y =	10.2029 in	C _{left} =	11.9375 in	r _y =	10.2029 in



Made By KMW
Checked By DWC

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.7500$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.7500$ in

Web Plate 1:

$A_3 = b = 30.0000$ in
 $B_3 = t = 0.8750$ in

Top Cover Plate:

$A_4 = b = 22.0000$ in
 $B_4 = t = 0.6250$ in

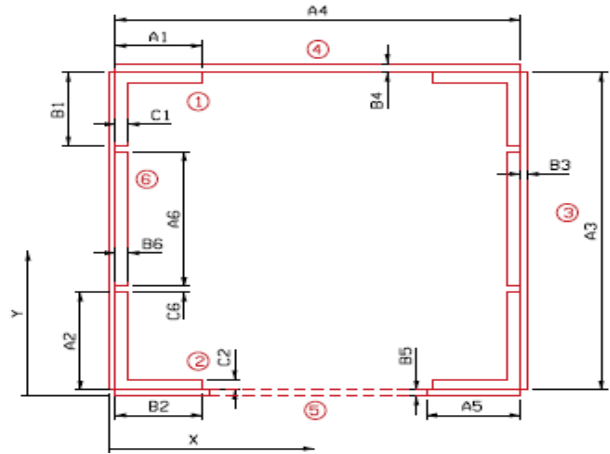
Web Plate 2:

$A_6 = b = 14.0000$ in
 $B_6 = t = 0.7500$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.7500$ in

$C_6 = \text{gap} = 0.0000$ in



Member L117-L118

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	9.0000	30.3750	273.3750	0.4219	13.9617	1754.3501	1754.7720
	Vertical Leg	10.8750	26.3750	286.8281	47.6348	9.9617	1079.1758	1126.8106
2	Horizontal Leg	9.0000	1.1250	10.1250	0.4219	15.2883	2103.6016	2104.0235
	Vertical Leg	10.8750	5.1250	55.7344	47.6348	11.2883	1385.7659	1433.4007
3	Plate	52.5000	15.7500	826.8750	3937.5000	0.6633	23.1014	3960.6014
4	Plate	13.7500	31.0625	427.1094	0.4476	14.6492	2950.7187	2951.1663
5	Perforated Plate	7.8750	0.3750	2.9531	0.3691	16.0383	2025.6747	2026.0438
6	Side Plates	21.0000	15.7500	330.7500	343.0000	0.6633	9.2406	352.2406
Total		134.88		2213.75	4377.43		11331.63	15709.06
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By KMW
Checked By DWC

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.4133 in	S _{top} = 1049.95 in ³			y-bar = 16.4133 in	S _{top} = 1049.95 in ³		
I _x = 15709.06 in ⁴	S _{bott.} = 957.09 in ³			I _x = 15709.06 in ⁴	S _{bott.} = 957.09 in ³		
C _{top} = 14.9617 in	A = 134.8750 in ²			C _{top} = 14.9617 in	A = 134.8750 in ²		
C _{bottom} = 16.4133 in	r _x = 10.7922 in			C _{bottom} = 16.4133 in	r _x = 10.7922 in		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.5000	3.8750	17.4375	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	1.2500	6.7969	0.2549	10.6250	613.8428	614.0977	
1 (Right)	Horizontal Leg	4.5000	19.8750	89.4375	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	22.5000	122.3438	0.2549	10.6250	613.8428	614.0977	
2 (Left)	Horizontal Leg	4.5000	3.8750	17.4375	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	1.2500	6.7969	0.2549	10.6250	613.8428	614.0977	
2 (Right)	Horizontal Leg	4.5000	19.8750	89.4375	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	22.5000	122.3438	0.2549	10.6250	613.8428	614.0977	
3 (Left)	Plate	26.2500	0.4375	11.4844	1.6748	11.4375	3433.9307	3435.6055	
3 (Right)	Plate	26.2500	23.3125	611.9531	1.6748	11.4375	3433.9307	3435.6055	
4	Plate	13.7500	11.8750	163.2813	554.5833	0.0000	0.0000	554.5833	
5 (Left)	Perforated Plate	3.9375	3.5000	13.7813	9.0439	8.3750	276.1787	285.2227	
5 (Right)	Perforated Plate	3.9375	20.2500	79.7344	9.0439	8.3750	276.1787	285.2227	
6 (Left)	Plate	10.5000	1.2500	13.1250	0.4922	10.6250	1185.3516	1185.8438	
6 (Right)	Plate	10.5000	22.5000	236.2500	0.4922	10.6250	1185.3516	1185.8438	
Total		134.88		1601.64	632.02		13398.29	14030.32	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 11.8750 in	S _{right} = 1181.50 in ³			x-bar = 11.8750 in	S _{right} = 1181.50 in ³		
I _y = 14030.32 in ⁴	S _{left} = 1181.50 in ³			I _y = 14030.32 in ⁴	S _{left} = 1181.50 in ³		
C _{right} = 11.8750 in	A = 134.8750 in ²			C _{right} = 11.8750 in	A = 134.8750 in ²		
C _{left} = 11.8750 in	r _y = 10.1992 in			C _{left} = 11.8750 in	r _y = 10.1992 in		



Made By KMW
Checked By DWC

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

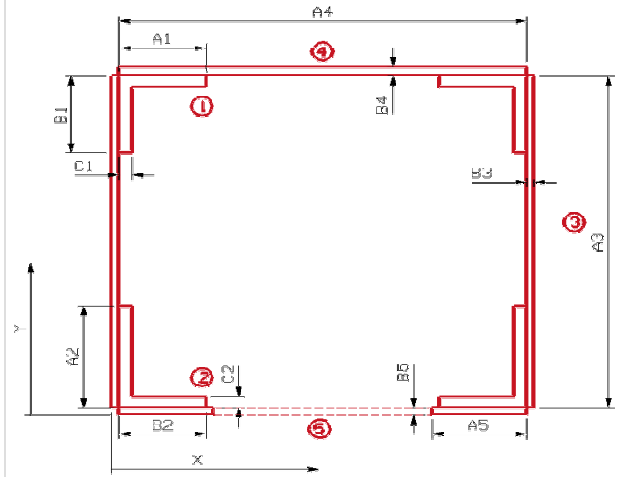
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.7500$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.7500$ in

Top Cover Plate:
 $A_4 = b = 22.0000$ in
 $B_4 = t = 0.6250$ in

Web Plates:**
 $A_3 = b = 30.0000$ in
 $B_3 = t = 1.6250$ in

Perforated Cover Plate
 $A_5 = b = 5.2500$ in
 $B_5 = t = 0.7500$ in



Member L118-L119

**There are 2 web plates, thickness shown is total of both

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	9.0000	30.3750	273.3750	0.4219	14.0619	1779.6233	1780.0452
	Vertical Leg	10.8750	26.3750	286.8281	47.6348	10.0619	1100.9963	1148.6311
2	Horizontal Leg	9.0000	1.1250	10.1250	0.4219	15.1881	2076.1162	2076.5380
	Vertical Leg	10.8750	5.1250	55.7344	47.6348	11.1881	1361.2723	1408.9070
3	Plate	97.5000	15.7500	1535.6250	7312.5000	0.5631	30.9198	7343.4198
4	Plate	13.7500	31.0625	427.1094	0.4476	14.7494	2991.2251	2991.6727
5	Perforated Plate	7.8750	0.3750	2.9531	0.3691	15.9381	2000.4412	2000.8104
Total		158.88		2591.75	7409.43		11340.59	18750.02
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By KMW
Checked By DWC

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.3131 in	S _{top} = 1244.87 in ³			y-bar = 16.3131 in	S _{top} = 1244.87 in ³		
I _x = 18750.02 in ⁴	S _{bott.} = 1149.38 in ³			I _x = 18750.02 in ⁴	S _{bott.} = 1149.38 in ³		
C _{top} = 15.0619 in	A = 158.8750 in ²			C _{top} = 15.0619 in	A = 158.8750 in ²		
C _{bottom} = 16.3131 in	r _x = 10.8636 in			C _{bottom} = 16.3131 in	r _x = 10.8636 in		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.5000	4.6250	20.8125	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	2.0000	10.8750	0.2549	10.6250	613.8428	614.0977	
1 (Right)	Horizontal Leg	4.5000	20.6250	92.8125	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	23.2500	126.4219	0.2549	10.6250	613.8428	614.0977	
2 (Left)	Horizontal Leg	4.5000	4.6250	20.8125	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	2.0000	10.8750	0.2549	10.6250	613.8428	614.0977	
2 (Right)	Horizontal Leg	4.5000	20.6250	92.8125	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	23.2500	126.4219	0.2549	10.6250	613.8428	614.0977	
3 (Left)	Plate	48.7500	0.8125	39.6094	10.7275	11.8125	6802.3389	6813.0664	
3 (Right)	Plate	48.7500	24.4375	1191.3281	10.7275	11.8125	6802.3389	6813.0664	
4	Plate	13.7500	12.6250	173.5938	554.5833	0.0000	0.0000	554.5833	
5 (Left)	Perforated Plate	3.9375	4.2500	16.7344	9.0439	8.3750	276.1787	285.2227	
5 (Right)	Perforated Plate	3.9375	21.0000	82.6875	9.0439	8.3750	276.1787	285.2227	
Total		158.88		2005.80	649.15		17764.41	18413.55	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 12.6250 in	S _{right} = 1458.50 in ³			x-bar = 12.6250 in	S _{right} = 1458.50 in ³		
I _y = 18413.55 in ⁴	S _{left} = 1458.50 in ³			I _y = 18413.55 in ⁴	S _{left} = 1458.50 in ³		
C _{right} = 12.6250 in	A = 158.8750 in ²			C _{right} = 12.6250 in	A = 158.8750 in ²		
C _{left} = 12.6250 in	r _y = 10.7657 in			C _{left} = 12.6250 in	r _y = 10.7657 in		



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.7500$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.7500$ in

Top Cover Plate:

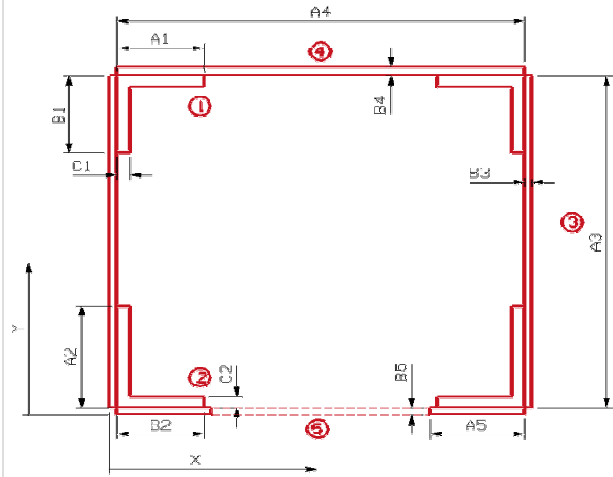
$A_4 = b = 22.0000$ in
 $B_4 = t = 0.6250$ in

Web Plates:**

$A_3 = b = 30.0000$ in
 $B_3 = t = 1.6250$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.7500$ in



Member L119-L120

**There are 2 web plates, thickness shown is total of both

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	9.0000	30.3750	273.3750	0.4219	14.0619	1779.6233	1780.0452
	Vertical Leg	10.8750	26.3750	286.8281	47.6348	10.0619	1100.9963	1148.6311
2	Horizontal Leg	9.0000	1.1250	10.1250	0.4219	15.1881	2076.1162	2076.5380
	Vertical Leg	10.8750	5.1250	55.7344	47.6348	11.1881	1361.2723	1408.9070
3	Plate	97.5000	15.7500	1535.6250	7312.5000	0.5631	30.9198	7343.4198
4	Plate	13.7500	31.0625	427.1094	0.4476	14.7494	2991.2251	2991.6727
5	Perforated Plate	7.8750	0.3750	2.9531	0.3691	15.9381	2000.4412	2000.8104
Total		158.88		2591.75	7409.43		11340.59	18750.02
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.3131 in	S _{top} =	1244.87 in ³	y-bar =	16.3131 in	S _{top} =	1244.87 in ³
I _x =	18750.02 in ⁴	S _{bott.} =	1149.38 in ³	I _x =	18750.02 in ⁴	S _{bott.} =	1149.38 in ³
C _{top} =	15.0619 in	A =	158.8750 in ²	C _{top} =	15.0619 in	A =	158.8750 in ²
C _{bottom} =	16.3131 in	r _x =	10.8636 in	C _{bottom} =	16.3131 in	r _x =	10.8636 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.5000	4.6250	20.8125	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	2.0000	10.8750	0.2549	10.6250	613.8428	614.0977	
1 (Right)	Horizontal Leg	4.5000	20.6250	92.8125	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	23.2500	126.4219	0.2549	10.6250	613.8428	614.0977	
2 (Left)	Horizontal Leg	4.5000	4.6250	20.8125	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	2.0000	10.8750	0.2549	10.6250	613.8428	614.0977	
2 (Right)	Horizontal Leg	4.5000	20.6250	92.8125	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	23.2500	126.4219	0.2549	10.6250	613.8428	614.0977	
3 (Left)	Plate	48.7500	0.8125	39.6094	10.7275	11.8125	6802.3389	6813.0664	
3 (Right)	Plate	48.7500	24.4375	1191.3281	10.7275	11.8125	6802.3389	6813.0664	
4	Plate	13.7500	12.6250	173.5938	554.5833	0.0000	0.0000	554.5833	
5 (Left)	Perforated Plate	3.9375	4.2500	16.7344	9.0439	8.3750	276.1787	285.2227	
5 (Right)	Perforated Plate	3.9375	21.0000	82.6875	9.0439	8.3750	276.1787	285.2227	
Total		158.88		2005.80	649.15		17764.41	18413.55	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.6250 in	S _{right} =	1458.50 in ³	x-bar =	12.6250 in	S _{right} =	1458.50 in ³
I _y =	18413.55 in ⁴	S _{left} =	1458.50 in ³	I _y =	18413.55 in ⁴	S _{left} =	1458.50 in ³
C _{right} =	12.6250 in	A =	158.8750 in ²	C _{right} =	12.6250 in	A =	158.8750 in ²
C _{left} =	12.6250 in	r _y =	10.7657 in	C _{left} =	12.6250 in	r _y =	10.7657 in



Made By KMW
Checked By DWC

Date 2/7/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

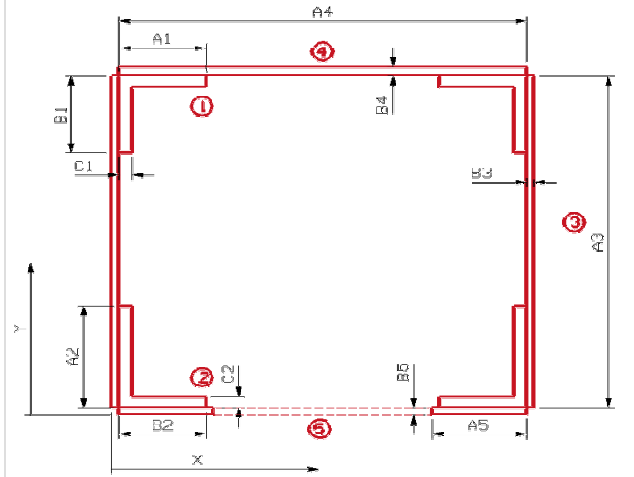
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6250$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6250$ in

Top Cover Plate:
 $A_4 = b = 22.0000$ in
 $B_4 = t = 0.6250$ in

Web Plates:**
 $A_3 = b = 30.0000$ in
 $B_3 = t = 1.5625$ in

Perforated Cover Plate
 $A_5 = b = 5.2500$ in
 $B_5 = t = 0.7500$ in



Member L120-L121

**There are 2 web plates, thickness shown is total of both

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	7.5000	30.4375	228.2813	0.2441	14.0863	1488.1751	1488.4192
	Vertical Leg	9.2188	26.4375	243.7207	41.7845	10.0863	937.8519	979.6363
2	Horizontal Leg	7.5000	1.0625	7.9688	0.2441	15.2887	1753.0867	1753.3309
	Vertical Leg	9.2188	5.0625	46.6699	41.7845	11.2887	1174.7928	1216.5773
3	Plate	93.7500	15.7500	1476.5625	7031.2500	0.6012	33.8872	7065.1372
4	Plate	13.7500	31.0625	427.1094	0.4476	14.7113	2975.8000	2976.2476
5	Perforated Plate	7.8750	0.3750	2.9531	0.3691	15.9762	2010.0114	2010.3805
Total		148.81		2433.27	7116.12		10373.61	17489.73
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	4.0000	0.1250	-0.5000	31.3125	-15.6563	-0.0007	15.0117	-112.6759
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.50	-15.66	0.00		-112.68	-112.68



Made By KMW
Checked By DWC

Date 2/7/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.3512 in	S _{top} =	1164.14 in ³	y-bar =	16.3008 in	S _{top} =	1152.77 in ³
I _x =	17489.73 in ⁴	S _{bott.} =	1069.63 in ³	I _x =	17377.05 in ⁴	S _{bott.} =	1066.03 in ³
C _{top} =	15.0238 in	A =	148.8125 in ²	C _{top} =	15.0742 in	A =	148.3125 in ²
C _{bottom} =	16.3512 in	r _x =	10.8411 in	C _{bottom} =	16.3008 in	r _x =	10.8243 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.7500	4.5625	17.1094	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.8750	8.6426	0.1500	10.6875	526.4951	526.6451	
1 (Right)	Horizontal Leg	3.7500	20.5625	77.1094	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	23.2500	107.1680	0.1500	10.6875	526.4951	526.6451	
2 (Left)	Horizontal Leg	3.7500	4.5625	17.1094	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.8750	8.6426	0.1500	10.6875	526.4951	526.6451	
2 (Right)	Horizontal Leg	3.7500	20.5625	77.1094	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	23.2500	107.1680	0.1500	10.6875	526.4951	526.6451	
3 (Left)	Plate	46.8750	0.7813	36.6211	9.5367	11.7813	6506.1493	6515.6860	
3 (Right)	Plate	46.8750	24.3438	1141.1133	9.5367	11.7813	6506.1493	6515.6860	
4	Plate	13.7500	12.5625	172.7344	554.5833	0.0000	0.0000	554.5833	
5 (Left)	Perforated Plate	3.9375	4.1875	16.4883	9.0439	8.3750	276.1787	285.2227	
5 (Right)	Perforated Plate	3.9375	20.9375	82.4414	9.0439	8.3750	276.1787	285.2227	
Total		148.81		1869.46	637.34		16630.64	17267.98	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1250	4.0000	-0.5000	2.9375	-1.4688	-0.6667	9.6574	-46.6332	-47.2998
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.50		-1.47	-0.67		-46.63	-47.30

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.5625 in	S _{right} =	1374.57 in ³	x-bar =	12.5949 in	S _{right} =	1374.35 in ³
I _y =	17267.98 in ⁴	S _{left} =	1374.57 in ³	I _y =	17220.68 in ⁴	S _{left} =	1367.27 in ³
C _{right} =	12.5625 in	A =	148.8125 in ²	C _{right} =	12.5301 in	A =	148.3125 in ²
C _{left} =	12.5625 in	r _y =	10.7721 in	C _{left} =	12.5949 in	r _y =	10.7755 in



Made By KMW
Checked By DWC

Date 2/7/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6250$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6250$ in

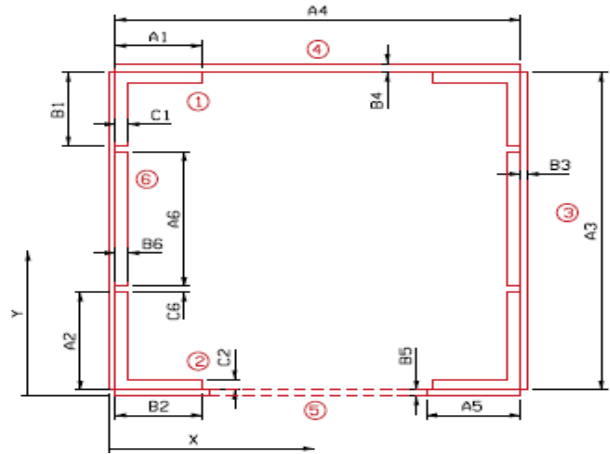
Web Plate 1:
 $A_3 = b = 30.0000$ in
 $B_3 = t = 0.8750$ in

Top Cover Plate:
 $A_4 = b = 22.0000$ in
 $B_4 = t = 0.6250$ in

Web Plate 2:
 $A_6 = b = 14.0000$ in
 $B_6 = t = 0.6250$ in

Perforated Cover Plate
 $A_5 = b = 5.2500$ in
 $B_5 = t = 0.7500$ in

$C_6 = \text{gap} = 0.0000$ in



Member L121-L122

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	7.5000	30.4375	228.2813	0.2441	13.9721	1464.1485	1464.3926
	Vertical Leg	9.2188	26.4375	243.7207	41.7845	9.9721	916.7395	958.5240
2	Horizontal Leg	7.5000	1.0625	7.9688	0.2441	15.4029	1779.3682	1779.6123
	Vertical Leg	9.2188	5.0625	46.6699	41.7845	11.4029	1198.6768	1240.4612
3	Plate	52.5000	15.7500	826.8750	3937.5000	0.7154	26.8688	3964.3688
4	Plate	13.7500	31.0625	427.1094	0.4476	14.5971	2929.7889	2930.2364
5	Perforated Plate	7.8750	0.3750	2.9531	0.3691	16.0904	2038.8432	2039.2123
6	Side Plates	17.5000	15.7500	275.6250	285.8333	0.7154	8.9563	294.7896
Total		125.06		2059.20	4308.21		10363.39	14671.60
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	22.0000	0.1250	-2.7500	31.3125	-86.1094	-0.0036	15.1809	-633.7660
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.75	-86.11	0.00		-633.77	-633.77



Made By KMW
Checked By DWC

Date 2/7/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.4654 in	S _{top} =	984.04 in ³	y-bar =	16.1316 in	S _{top} =	920.91 in ³
I _x =	14671.60 in ⁴	S _{bott.} =	891.06 in ³	I _x =	14037.83 in ⁴	S _{bott.} =	870.21 in ³
C _{top} =	14.9096 in	A =	125.0625 in ²	C _{top} =	15.2434 in	A =	122.3125 in ²
C _{bottom} =	16.4654 in	r _x =	10.8312 in	C _{bottom} =	16.1316 in	r _x =	10.7131 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.7500	3.8750	14.5313	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.1875	5.4736	0.1500	10.6875	526.4951	526.6451	
1 (Right)	Horizontal Leg	3.7500	19.8750	74.5313	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	22.5625	103.9990	0.1500	10.6875	526.4951	526.6451	
2 (Left)	Horizontal Leg	3.7500	3.8750	14.5313	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.1875	5.4736	0.1500	10.6875	526.4951	526.6451	
2 (Right)	Horizontal Leg	3.7500	19.8750	74.5313	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	22.5625	103.9990	0.1500	10.6875	526.4951	526.6451	
3 (Left)	Plate	26.2500	0.4375	11.4844	1.6748	11.4375	3433.9307	3435.6055	
3 (Right)	Plate	26.2500	23.3125	611.9531	1.6748	11.4375	3433.9307	3435.6055	
4	Plate	13.7500	11.8750	163.2813	554.5833	0.0000	0.0000	554.5833	
5 (Left)	Perforated Plate	3.9375	3.5000	13.7813	9.0439	8.3750	276.1787	285.2227	
5 (Right)	Perforated Plate	3.9375	20.2500	79.7344	9.0439	8.3750	276.1787	285.2227	
6 (Left)	Plate	8.7500	1.1875	10.3906	0.2848	10.6875	999.4482	999.7331	
6 (Right)	Plate	8.7500	22.5625	197.4219	0.2848	10.6875	999.4482	999.7331	
Total		125.06		1485.12	622.19		12485.10	13107.29	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1250	22.0000	-2.7500	11.8750	-32.6563	-110.9167	0.0000	0.0000	-110.9167
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.75		-32.66	-110.92		0.00	-110.92

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	11.8750 in	S _{right} =	1103.77 in ³	x-bar =	11.8750 in	S _{right} =	1094.43 in ³
I _y =	13107.29 in ⁴	S _{left} =	1103.77 in ³	I _y =	12996.37 in ⁴	S _{left} =	1094.43 in ³
C _{right} =	11.8750 in	A =	125.0625 in ²	C _{right} =	11.8750 in	A =	122.3125 in ²
C _{left} =	11.8750 in	r _y =	10.2375 in	C _{left} =	11.8750 in	r _y =	10.3080 in



Made By KMW
Checked By DWC

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

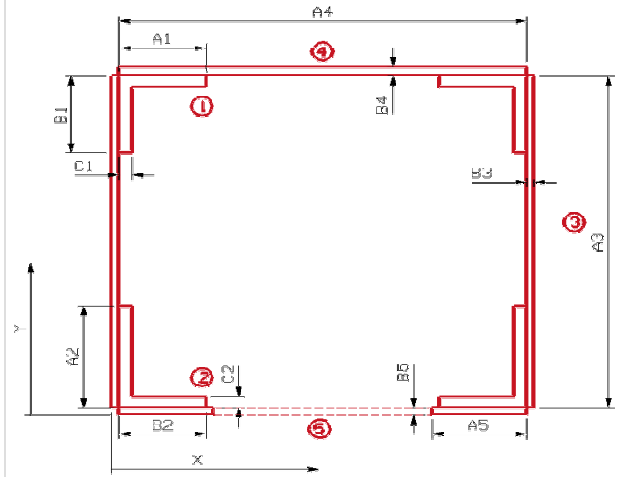
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.4375$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.4375$ in

Top Cover Plate:
 $A_4 = b = 22.0000$ in
 $B_4 = t = 0.3750$ in

Web Plate:
 $A_3 = b = 30.0000$ in
 $B_3 = t = 0.8750$ in

Perforated Cover Plate
 $A_5 = b = 5.2500$ in
 $B_5 = t = 0.5000$ in



Member L122-L123

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.2500	30.2813	158.9766	0.0837	14.2772	1070.1455	1070.2293
	Vertical Leg	6.6172	26.2813	173.9080	31.5372	10.2772	698.9072	730.4444
2	Horizontal Leg	5.2500	0.7188	3.7734	0.0837	15.2853	1226.6188	1226.7026
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	11.2853	842.7580	874.2952
3	Plate	52.5000	15.5000	813.7500	3937.5000	0.5041	13.3407	3950.8407
4	Plate	8.2500	30.6875	253.1719	0.0967	14.6834	1778.7204	1778.8171
5	Perforated Plate	5.2500	0.2500	1.3125	0.1094	15.7541	1303.0049	1303.1143
Total		89.73		1436.12	4000.95		6933.50	10934.44
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	22.0000	0.1250	-2.7500	30.8125	-84.7344	-0.0036	15.2766	-641.7777
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.75	-84.73	0.00		-641.78	-641.78



Made By KMW
Checked By DWC

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.0041 in	S _{top} =	735.29 in ³	y-bar =	15.5359 in	S _{top} =	671.01 in ³
I _x =	10934.44 in ⁴	S _{bott.} =	683.23 in ³	I _x =	10292.66 in ⁴	S _{bott.} =	662.51 in ³
C _{top} =	14.8709 in	A =	89.7344 in ²	C _{top} =	15.3391 in	A =	86.9844 in ²
C _{bottom} =	16.0041 in	r _x =	11.0387 in	C _{bottom} =	15.5359 in	r _x =	10.8779 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.8750	10.1719	7.8750	8.0000	168.0000	175.8750	
	Vertical Leg	3.3086	1.0938	3.6188	0.0528	10.7813	384.5756	384.6283	
1 (Right)	Horizontal Leg	2.6250	19.8750	52.1719	7.8750	8.0000	168.0000	175.8750	
	Vertical Leg	3.3086	22.6563	74.9603	0.0528	10.7813	384.5756	384.6283	
2 (Left)	Horizontal Leg	2.6250	3.8750	10.1719	7.8750	8.0000	168.0000	175.8750	
	Vertical Leg	3.3086	1.0938	3.6188	0.0528	10.7813	384.5756	384.6283	
2 (Right)	Horizontal Leg	2.6250	19.8750	52.1719	7.8750	8.0000	168.0000	175.8750	
	Vertical Leg	3.3086	22.6563	74.9603	0.0528	10.7813	384.5756	384.6283	
3 (Left)	Plate	26.2500	0.4375	11.4844	1.6748	11.4375	3433.9307	3435.6055	
3 (Right)	Plate	26.2500	23.3125	611.9531	1.6748	11.4375	3433.9307	3435.6055	
4	Plate	8.2500	11.8750	97.9688	332.7500	0.0000	0.0000	332.7500	
5 (Left)	Perforated Plate	2.6250	3.5000	9.1875	6.0293	8.3750	184.1191	190.1484	
5 (Right)	Perforated Plate	2.6250	20.2500	53.1563	6.0293	8.3750	184.1191	190.1484	
Total		89.73		1065.60	379.87		9446.40	9826.27	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1250	22.0000	-2.7500	11.8750	-32.6563	-110.9167	0.0000	0.0000	-110.9167
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.75		-32.66	-110.92		0.00	-110.92

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	11.8750 in	S _{right} =	827.48 in ³	x-bar =	11.8750 in	S _{right} =	818.14 in ³
I _y =	9826.27 in ⁴	S _{left} =	827.48 in ³	I _y =	9715.35 in ⁴	S _{left} =	818.14 in ³
C _{right} =	11.8750 in	A =	89.7344 in ²	C _{right} =	11.8750 in	A =	86.9844 in ²
C _{left} =	11.8750 in	r _y =	10.4644 in	C _{left} =	11.8750 in	r _y =	10.5684 in



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.4375$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.4375$ in

Top Cover Plate:

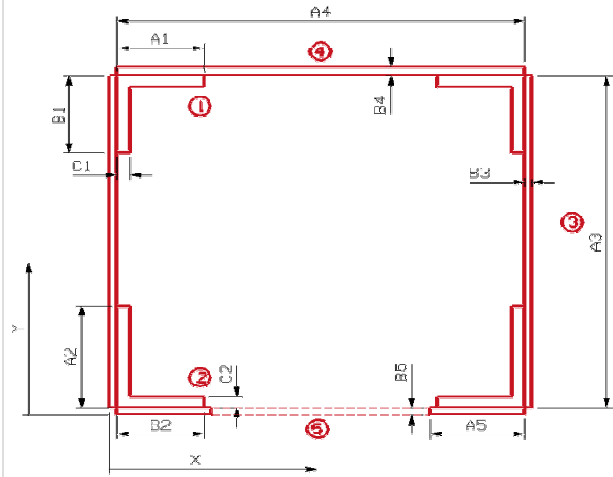
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 30.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member L123-L124

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.5000	30.2813	105.9844	0.0558	14.0455	690.4667	690.5225
	Vertical Leg	6.6172	26.2813	173.9080	31.5372	10.0455	667.7547	699.2919
2	Horizontal Leg	3.5000	0.7188	2.5156	0.0558	15.5170	842.7200	842.7758
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	11.5170	877.7116	909.2488
3	Plate	22.5000	15.5000	348.7500	1687.5000	0.7357	12.1797	1699.6797
4	Plate	8.8125	30.6875	270.4336	0.1033	14.4518	1840.5189	1840.6222
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	15.9857	1533.2643	1533.3893
Total		57.55		934.32	1750.91		6464.62	8215.53
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.2357 in	S _{top} =	561.20 in ³	y-bar =	16.2357 in	S _{top} =	561.20 in ³
I _x =	8215.53 in ⁴	S _{bott.} =	506.01 in ³	I _x =	8215.53 in ⁴	S _{bott.} =	506.01 in ³
C _{top} =	14.6393 in	A =	57.5469 in ²	C _{top} =	14.6393 in	A =	57.5469 in ²
C _{bottom} =	16.2357 in	r _x =	11.9483 in	C _{bottom} =	16.2357 in	r _x =	11.9483 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.7500	2.3750	4.1563	2.3333	9.7500	166.3594	168.6927	
	Vertical Leg	3.3086	0.5938	1.9645	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	1.7500	21.8750	38.2813	2.3333	9.7500	166.3594	168.6927	
	Vertical Leg	3.3086	23.6563	78.2689	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	1.7500	2.3750	4.1563	2.3333	9.7500	166.3594	168.6927	
	Vertical Leg	3.3086	0.5938	1.9645	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	1.7500	21.8750	38.2813	2.3333	9.7500	166.3594	168.6927	
	Vertical Leg	3.3086	23.6563	78.2689	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	11.2500	0.1875	2.1094	0.1318	11.9375	1603.1689	1603.3008	
3 (Right)	Plate	11.2500	24.0625	270.7031	0.1318	11.9375	1603.1689	1603.3008	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.3750	10.1250	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.8750	62.6250	9.0000	8.7500	229.6875	238.6875	
Total		57.55		697.76	433.37		6090.92	6524.29	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	538.09 in ³	x-bar =	12.1250 in	S _{right} =	538.09 in ³
I _y =	6524.29 in ⁴	S _{left} =	538.09 in ³	I _y =	6524.29 in ⁴	S _{left} =	538.09 in ³
C _{right} =	12.1250 in	A =	57.5469 in ²	C _{right} =	12.1250 in	A =	57.5469 in ²
C _{left} =	12.1250 in	r _y =	10.6477 in	C _{left} =	12.1250 in	r _y =	10.6477 in



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

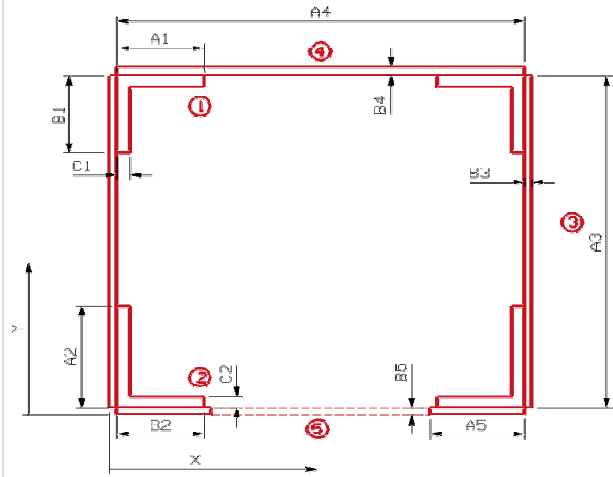
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 30.0000$ in
 $B_3 = t = 0.5000$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L124-L125

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	30.2188	75.5469	0.0203	13.6062	462.8183	462.8387
	Vertical Leg	2.3047	28.2188	65.0354	2.6115	11.6062	310.4477	313.0592
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	16.0813	646.5245	646.5449
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	14.0813	456.9836	459.5951
3	Plate	30.0000	15.3750	461.2500	2250.0000	1.2376	45.9496	2295.9496
4	Plate	8.8125	30.5625	269.3320	0.1033	13.9499	1714.9100	1715.0133
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	16.4251	1214.0275	1214.0803
Total		52.92		879.17	2255.42		4851.66	7107.08
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	16.6126	in	S _{top} =	502.71	in ³	y-bar =	16.6126	in	S _{top} =	502.71	in ³
I _x =	7107.08	in ⁴	S _{bott.} =	427.81	in ³	I _x =	7107.08	in ⁴	S _{bott.} =	427.81	in ³
C _{top} =	14.1374	in	A =	52.9219	in ²	C _{top} =	14.1374	in	A =	52.9219	in ²
C _{bottom} =	16.6126	in	r _x =	11.5885	in	C _{bottom} =	16.6126	in	r _x =	11.5885	in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.5000	3.1250	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.6563	0.7562	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	22.0000	27.5000	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.8438	27.4762	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.5000	3.1250	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.6563	0.7562	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	22.0000	27.5000	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.8438	27.4762	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	15.0000	0.2500	3.7500	0.3125	12.0000	2160.0000	2160.3125	
3 (Right)	Plate	15.0000	24.2500	363.7500	0.3125	12.0000	2160.0000	2160.3125	
4	Plate	8.8125	12.2500	107.9531	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.5000	7.8750	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	21.0000	47.2500	6.7500	8.7500	172.2656	179.0156	
Total		52.92		648.29	426.39		5759.41	6185.80	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.2500	in	S _{right} =	504.96	in ³	x-bar =	12.2500	in	S _{right} =	504.96	in ³
I _y =	6185.80	in ⁴	S _{left} =	504.96	in ³	I _y =	6185.80	in ⁴	S _{left} =	504.96	in ³
C _{right} =	12.2500	in	A =	52.9219	in ²	C _{right} =	12.2500	in	A =	52.9219	in ²
C _{left} =	12.2500	in	r _y =	10.8114	in	C _{left} =	12.2500	in	r _y =	10.8114	in



Made By KMW
Checked By DWC

Date 2/7/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

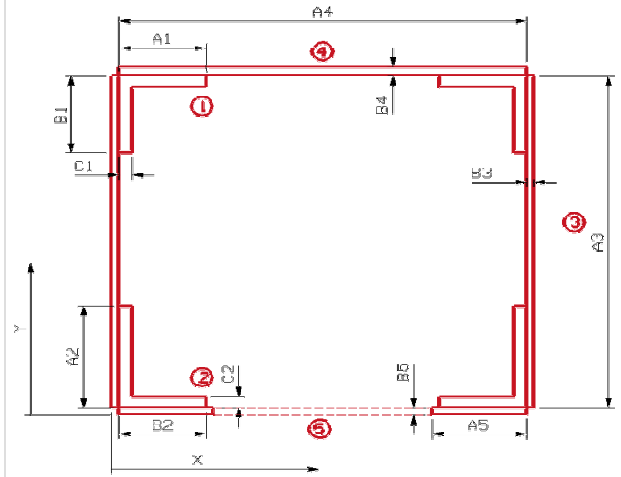
Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:
 $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:
 $A_3 = b = 30.0000$ in
 $B_3 = t = 0.5000$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L125-L126

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	30.2188	75.5469	0.0203	13.6062	462.8183	462.8387
	Vertical Leg	2.3047	28.2188	65.0354	2.6115	11.6062	310.4477	313.0592
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	16.0813	646.5245	646.5449
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	14.0813	456.9836	459.5951
3	Plate	30.0000	15.3750	461.2500	2250.0000	1.2376	45.9496	2295.9496
4	Plate	8.8125	30.5625	269.3320	0.1033	13.9499	1714.9100	1715.0133
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	16.4251	1214.0275	1214.0803
Total		52.92		879.17	2255.42		4851.66	7107.08
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	4.0000	0.1250	-0.5000	30.6875	-15.3438	-0.0007	14.3273	-102.6361
2	4.0000	0.1250	-0.5000	28.7500	-14.3750	-0.0007	12.3898	-76.7538
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.00	-29.72	0.00		-179.39	-179.39



Made By KMW
Checked By DWC

Date 2/7/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.6126 in	S _{top} =	502.71 in ³	y-bar =	16.3602 in	S _{top} =	481.43 in ³
I _x =	7107.08 in ⁴	S _{bott.} =	427.81 in ³	I _x =	6927.69 in ⁴	S _{bott.} =	423.45 in ³
C _{top} =	14.1374 in	A =	52.9219 in ²	C _{top} =	14.3898 in	A =	51.9219 in ²
C _{bottom} =	16.6126 in	r _x =	11.5885 in	C _{bottom} =	16.3602 in	r _x =	11.5510 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.5000	3.1250	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.6563	0.7562	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	22.0000	27.5000	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.8438	27.4762	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.5000	3.1250	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.6563	0.7562	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	22.0000	27.5000	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.8438	27.4762	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	15.0000	0.2500	3.7500	0.3125	12.0000	2160.0000	2160.3125	
3 (Right)	Plate	15.0000	24.2500	363.7500	0.3125	12.0000	2160.0000	2160.3125	
4	Plate	8.8125	12.2500	107.9531	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.5000	7.8750	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	21.0000	47.2500	6.7500	8.7500	172.2656	179.0156	
Total		52.92		648.29	426.39		5759.41	6185.80	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1250	4.0000	-0.5000	2.5000	-1.2500	-0.6667	9.7500	-47.5313	-48.1979
2	0.1250	4.0000	-0.5000	22.0000	-11.0000	-0.6667	9.7500	-47.5313	-48.1979
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.00		-12.25	-1.33		-95.06	-96.40

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2500 in	S _{right} =	504.96 in ³	x-bar =	12.2500 in	S _{right} =	497.09 in ³
I _y =	6185.80 in ⁴	S _{left} =	504.96 in ³	I _y =	6089.41 in ⁴	S _{left} =	497.09 in ³
C _{right} =	12.2500 in	A =	52.9219 in ²	C _{right} =	12.2500 in	A =	51.9219 in ²
C _{left} =	12.2500 in	r _y =	10.8114 in	C _{left} =	12.2500 in	r _y =	10.8296 in



Made By CTG
Checked By NRF

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam WF14x 95

- $A_1 = t_w = 0.4650$ in
- $A_2 = t_f = 0.7480$ in
- $B_1 = d = 14.1200$ in
- $B_2 = b_f = 14.5450$ in



Member L127-L128

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		5.8702	7.2725	42.6907	0.1058	0.0000	0.0000	0.1058
2	Flange Plates		21.7593	7.2725	158.2447	383.6114	0.0000	0.0000	383.6114
Total			27.63		200.94	383.72		0.00	383.72
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	7.2725	in	S _{top} = 52.76 in ³	y-bar =	7.2725	in	S _{top} = 52.76 in ³
I _x =	383.72	in ⁴	S _{bott.} = 52.76 in ³	I _x =	383.72	in ⁴	S _{bott.} = 52.76 in ³
c _{top} =	7.2725	in	A = 27.6295 in ²	c _{top} =	7.2725	in	A = 27.6295 in ²
c _{bottom} =	7.2725	in	r _x = 3.7267 in	c _{bottom} =	7.2725	in	r _x = 3.7267 in



Made By CTG
Checked By NRF

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		5.8702	7.0600	41.4433	77.9584	0.0000	0.0000	77.9584
2	Left Flange		10.8797	0.3740	4.0690	0.5073	6.6860	486.3490	486.8563
	Right Flange		10.8797	13.7460	149.5518	0.5073	6.6860	486.3490	486.8563
Total			27.63		195.06	78.97		972.70	1051.67
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	7.0600	in	S _{right} =	148.96	in ³	x-bar =	7.0600	in	S _{right} =	148.96	in ³
I _y =	1051.67	in ⁴	S _{left} =	148.96	in ³	I _y =	1051.67	in ⁴	S _{left} =	148.96	in ³
C _{right} =	7.0600	in	A =	27.6295	in ²	C _{right} =	7.0600	in	A =	27.6295	in ²
C _{left} =	7.0600	in	r _y =	6.1696	in	C _{left} =	7.0600	in	r _y =	6.1696	in



Made By CTG
Checked By NRF

Date 1/20/2012
Date 1/25/2012

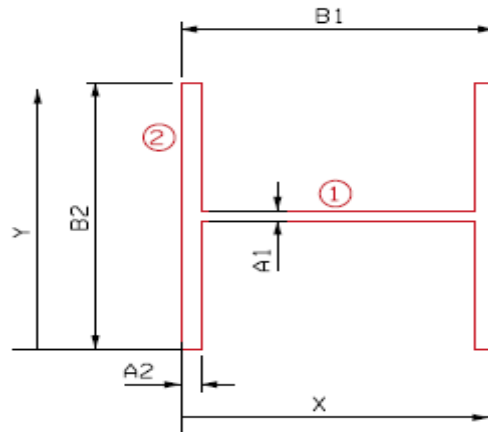
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam WF14x 95

- $A_1 = t_w = 0.4650$ in
- $A_2 = t_f = 0.7480$ in
- $B_1 = d = 14.1200$ in
- $B_2 = b_f = 14.5450$ in



Member L128-L129

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x, gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		5.8702	7.2725	42.6907	0.1058	0.0000	0.0000	0.1058
2	Flange Plates		21.7593	7.2725	158.2447	383.6114	0.0000	0.0000	383.6114
Total			27.63		200.94	383.72		0.00	383.72
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.2725	in	$S_{top} =$	52.76	in ³	y-bar =	7.2725	in	$S_{top} =$	52.76	in ³
$I_x =$	383.72	in ⁴	$S_{bott.} =$	52.76	in ³	$I_x =$	383.72	in ⁴	$S_{bott.} =$	52.76	in ³
$c_{top} =$	7.2725	in	A =	27.6295	in ²	$c_{top} =$	7.2725	in	A =	27.6295	in ²
$c_{bottom} =$	7.2725	in	$r_x =$	3.7267	in	$c_{bottom} =$	7.2725	in	$r_x =$	3.7267	in



Made By CTG
Checked By NRF

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		5.8702	7.0600	41.4433	77.9584	0.0000	0.0000	77.9584
2	Left Flange		10.8797	0.3740	4.0690	0.5073	6.6860	486.3490	486.8563
	Right Flange		10.8797	13.7460	149.5518	0.5073	6.6860	486.3490	486.8563
Total			27.63		195.06	78.97		972.70	1051.67
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	7.0600	in	S _{right} =	148.96	in ³	x-bar =	7.0600	in	S _{right} =	148.96	in ³
I _y =	1051.67	in ⁴	S _{left} =	148.96	in ³	I _y =	1051.67	in ⁴	S _{left} =	148.96	in ³
C _{right} =	7.0600	in	A =	27.6295	in ²	C _{right} =	7.0600	in	A =	27.6295	in ²
C _{left} =	7.0600	in	r _y =	6.1696	in	C _{left} =	7.0600	in	r _y =	6.1696	in



Made By KMW
Checked By ADK

Date 2/6/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam **WF14x 202**

- $A_1 = t_w = 0.9300$ in
- $A_2 = t_f = 1.5030$ in
- $B_1 = d = 15.6300$ in
- $B_2 = b_f = 15.7500$ in



Member L129-L130

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		11.7403	7.8750	92.4550	0.8462	0.0000	0.0000	0.8462
2	Flange Plates		47.3445	7.8750	372.8379	978.6996	0.0000	0.0000	978.6996
Total			59.08		465.29	979.55		0.00	979.55
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	12.6240	0.0625	-0.7890	8.3088	-6.5556	-0.0003	0.4396	-0.1525	-0.1527
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.79		-6.56	0.00		-0.15	-0.15

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	7.8750	in	S _{top} = 124.39 in ³	y-bar =	7.8691	in	S _{top} = 124.27 in ³
I _x =	979.55	in ⁴	S _{bott.} = 124.39 in ³	I _x =	979.39	in ⁴	S _{bott.} = 124.46 in ³
c _{top} =	7.8750	in	A = 59.0848 in ²	c _{top} =	7.8809	in	A = 58.2958 in ²
c _{bottom} =	7.8750	in	r _x = 4.0717 in	c _{bottom} =	7.8691	in	r _x = 4.0988 in



Made By KMW
 Checked By ADK

Date 2/6/2012
 Date 2/15/2012

Job No. P402110046
 Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		11.7403	7.8150	91.7506	155.9167	0.0000	0.0000	155.9167
2	Left Flange		23.6723	0.7515	17.7897	4.4563	7.0635	1181.0803	1185.5367
	Right Flange		23.6723	14.8785	352.2076	4.4563	7.0635	1181.0803	1185.5367
Total			59.08		461.75	164.83		2362.16	2526.99
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0625	12.6240	-0.7890	7.8150	-6.1660	-10.4783	0.0000	0.0000	-10.4783
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.79		-6.17	-10.48		0.00	-10.48

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	7.8150	in	S _{right} =	323.35	in ³	x-bar =	7.8150	in	S _{right} =	322.01	in ³
I _y =	2526.99	in ⁴	S _{left} =	323.35	in ³	I _y =	2516.51	in ⁴	S _{left} =	322.01	in ³
C _{right} =	7.8150	in	A =	59.0848	in ²	C _{right} =	7.8150	in	A =	58.2958	in ²
C _{left} =	7.8150	in	r _y =	6.5398	in	C _{left} =	7.8150	in	r _y =	6.5702	in



Made By KMW
Checked By ADK

Date 2/6/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam **WF14x 202**

- $A_1 = t_w = 0.9300$ in
- $A_2 = t_f = 1.5030$ in
- $B_1 = d = 15.6300$ in
- $B_2 = b_f = 15.7500$ in



Member L130-L131

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		11.7403	7.8750	92.4550	0.8462	0.0000	0.0000	0.8462
2	Flange Plates		47.3445	7.8750	372.8379	978.6996	0.0000	0.0000	978.6996
Total			59.08		465.29	979.55		0.00	979.55
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	4.0000	0.2500	-1.0000	8.2150	-8.2150	-0.0052	0.3459	-0.1196	-0.1248
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.00		-8.22	-0.01		-0.12	-0.12

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	7.8750	in	$S_{top} = 124.39$ in ³	y-bar =	7.8691	in	$S_{top} = 124.28$ in ³
$I_x =$	979.55	in ⁴	$S_{bott.} = 124.39$ in ³	$I_x =$	979.42	in ⁴	$S_{bott.} = 124.46$ in ³
$c_{top} =$	7.8750	in	$A = 59.0848$ in ²	$c_{top} =$	7.8809	in	$A = 58.0848$ in ²
$c_{bottom} =$	7.8750	in	$r_x = 4.0717$ in	$c_{bottom} =$	7.8691	in	$r_x = 4.1063$ in



Made By KMW
Checked By ADK

Date 2/6/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		11.7403	7.8150	91.7506	155.9167	0.0000	0.0000	155.9167
2	Left Flange		23.6723	0.7515	17.7897	4.4563	7.0635	1181.0803	1185.5367
	Right Flange		23.6723	14.8785	352.2076	4.4563	7.0635	1181.0803	1185.5367
Total			59.08		461.75	164.83		2362.16	2526.99
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.2500	4.0000	-1.0000	3.5030	-3.5030	-1.3333	4.3862	-19.2391	-20.5724
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.00		-3.50	-1.33		-19.24	-20.57

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	7.8150	in	S _{right} =	323.35	in ³	x-bar =	7.8892	in	S _{right} =	323.79	in ³
I _y =	2526.99	in ⁴	S _{left} =	323.35	in ³	I _y =	2506.42	in ⁴	S _{left} =	317.70	in ³
C _{right} =	7.8150	in	A =	59.0848	in ²	C _{right} =	7.7408	in	A =	58.0848	in ²
C _{left} =	7.8150	in	r _y =	6.5398	in	C _{left} =	7.8892	in	r _y =	6.5689	in



Made By CTG
Checked By NRF

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam WF14x 211

- $A_1 = t_w = 0.9800$ in
- $A_2 = t_f = 1.5630$ in
- $B_1 = d = 15.7500$ in
- $B_2 = b_f = 15.8000$ in



Member L131-L132

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		12.3715	7.9000	97.7350	0.9901	0.0000	0.0000	0.9901
2	Flange Plates		49.3908	7.9000	390.1873	1027.4933	0.0000	0.0000	1027.4933
Total			61.76		487.92	1028.48		0.00	1028.48
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	7.9000	in	$S_{top} = 130.19$	in ³	y-bar =	7.9000	in	$S_{top} = 130.19$	in ³		
$I_x =$	1028.48	in ⁴	$S_{bott.} = 130.19$	in ³	$I_x =$	1028.48	in ⁴	$S_{bott.} = 130.19$	in ³		
$c_{top} =$	7.9000	in	A =	61.7623	in ²	$c_{top} =$	7.9000	in	A =	61.7623	in ²
$c_{bottom} =$	7.9000	in	$r_x =$	4.0807	in	$c_{bottom} =$	7.9000	in	$r_x =$	4.0807	in



Made By CTG
Checked By NRF

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.3715	7.8750	97.4257	164.2993	0.0000	0.0000	164.2993
2	Left Flange		24.6954	0.7815	19.2995	5.0275	7.0935	1242.6168	1247.6443
	Right Flange		24.6954	14.9685	369.6531	5.0275	7.0935	1242.6168	1247.6443
Total			61.76		486.38	174.35		2485.23	2659.59
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties				
x-bar =	7.8750	in	S _{right} =	337.73 in ³	x-bar =	7.8750	in	S _{right} =	337.73 in ³
I _y =	2659.59	in ⁴	S _{left} =	337.73 in ³	I _y =	2659.59	in ⁴	S _{left} =	337.73 in ³
C _{right} =	7.8750	in	A =	61.7623 in ²	C _{right} =	7.8750	in	A =	61.7623 in ²
C _{left} =	7.8750	in	r _y =	6.5621 in	C _{left} =	7.8750	in	r _y =	6.5621 in



Made By CTG
Checked By NRF

Date 1/20/2012
Date 1/25/2012

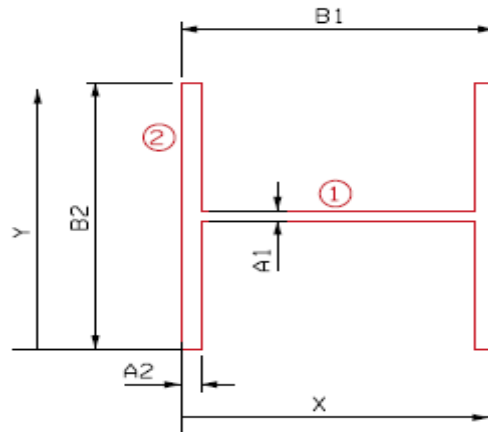
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam WF14x 211

- $A_1 = t_w = 0.9800$ in
- $A_2 = t_f = 1.5630$ in
- $B_1 = d = 15.7500$ in
- $B_2 = b_f = 15.8000$ in



Member L132-L133

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		12.3715	7.9000	97.7350	0.9901	0.0000	0.0000	0.9901
2	Flange Plates		49.3908	7.9000	390.1873	1027.4933	0.0000	0.0000	1027.4933
Total			61.76		487.92	1028.48		0.00	1028.48
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	7.9000	in	$S_{top} = 130.19$ in ³	y-bar =	7.9000	in	$S_{top} = 130.19$ in ³
$I_x =$	1028.48	in ⁴	$S_{bott.} = 130.19$ in ³	$I_x =$	1028.48	in ⁴	$S_{bott.} = 130.19$ in ³
$c_{top} =$	7.9000	in	A = 61.7623 in ²	$c_{top} =$	7.9000	in	A = 61.7623 in ²
$c_{bottom} =$	7.9000	in	$r_x = 4.0807$ in	$c_{bottom} =$	7.9000	in	$r_x = 4.0807$ in



Made By CTG
Checked By NRF

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.3715	7.8750	97.4257	164.2993	0.0000	0.0000	164.2993
2	Left Flange		24.6954	0.7815	19.2995	5.0275	7.0935	1242.6168	1247.6443
	Right Flange		24.6954	14.9685	369.6531	5.0275	7.0935	1242.6168	1247.6443
Total			61.76		486.38	174.35		2485.23	2659.59
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	7.8750	in	S _{right} =	337.73	in ³	x-bar =	7.8750	in	S _{right} =	337.73	in ³
I _y =	2659.59	in ⁴	S _{left} =	337.73	in ³	I _y =	2659.59	in ⁴	S _{left} =	337.73	in ³
C _{right} =	7.8750	in	A =	61.7623	in ²	C _{right} =	7.8750	in	A =	61.7623	in ²
C _{left} =	7.8750	in	r _y =	6.5621	in	C _{left} =	7.8750	in	r _y =	6.5621	in



Made By CTG
Checked By NRF

Date 1/20/2012
Date 1/25/2012

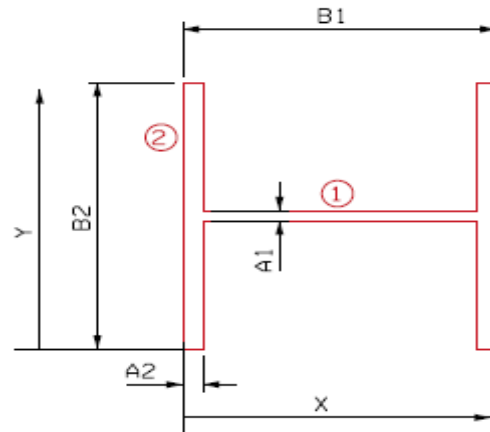
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam WF14x 111

- $A_1 = t_w = 0.5400$ in
- $A_2 = t_f = 0.8730$ in
- $B_1 = d = 14.3700$ in
- $B_2 = b_f = 14.6200$ in



Member L133-L134

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x, gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		6.8170	7.3100	49.8320	0.1657	0.0000	0.0000	0.1657
2	Flange Plates		25.5265	7.3100	186.5989	454.6792	0.0000	0.0000	454.6792
Total			32.34		236.43	454.84		0.00	454.84
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	7.3100	in	$S_{top} = 62.22$ in ³	y-bar =	7.3100	in	$S_{top} = 62.22$ in ³
$I_x =$	454.84	in ⁴	$S_{bott.} = 62.22$ in ³	$I_x =$	454.84	in ⁴	$S_{bott.} = 62.22$ in ³
$c_{top} =$	7.3100	in	$A = 32.3435$ in ²	$c_{top} =$	7.3100	in	$A = 32.3435$ in ²
$c_{bottom} =$	7.3100	in	$r_x = 3.7501$ in	$c_{bottom} =$	7.3100	in	$r_x = 3.7501$ in



Made By CTG
Checked By NRF

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		6.8170	7.1850	48.9799	90.5323	0.0000	0.0000	90.5323
2	Left Flange		12.7633	0.4365	5.5712	0.8106	6.7485	581.2676	582.0782
	Right Flange		12.7633	13.9335	177.8369	0.8106	6.7485	581.2676	582.0782
Total			32.34		232.39	92.15		1162.54	1254.69
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	7.1850	in	S _{right} =	174.63	in ³	x-bar =	7.1850	in	S _{right} =	174.63	in ³
I _y =	1254.69	in ⁴	S _{left} =	174.63	in ³	I _y =	1254.69	in ⁴	S _{left} =	174.63	in ³
C _{right} =	7.1850	in	A =	32.3435	in ²	C _{right} =	7.1850	in	A =	32.3435	in ²
C _{left} =	7.1850	in	r _y =	6.2284	in	C _{left} =	7.1850	in	r _y =	6.2284	in



Made By CTG
Checked By NRF

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam WF14x 111

- $A_1 = t_w = 0.5400$ in
- $A_2 = t_f = 0.8730$ in
- $B_1 = d = 14.3700$ in
- $B_2 = b_f = 14.6200$ in



Member L134-L135

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		6.8170	7.3100	49.8320	0.1657	0.0000	0.0000	0.1657
2	Flange Plates		25.5265	7.3100	186.5989	454.6792	0.0000	0.0000	454.6792
Total			32.34		236.43	454.84		0.00	454.84
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.3100	in	$S_{top} =$	62.22	in ³	y-bar =	7.3100	in	$S_{top} =$	62.22	in ³
$I_x =$	454.84	in ⁴	$S_{bott.} =$	62.22	in ³	$I_x =$	454.84	in ⁴	$S_{bott.} =$	62.22	in ³
$c_{top} =$	7.3100	in	A =	32.3435	in ²	$c_{top} =$	7.3100	in	A =	32.3435	in ²
$c_{bottom} =$	7.3100	in	$r_x =$	3.7501	in	$c_{bottom} =$	7.3100	in	$r_x =$	3.7501	in



Made By CTG
Checked By NRF

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		6.8170	7.1850	48.9799	90.5323	0.0000	0.0000	90.5323
2	Left Flange		12.7633	0.4365	5.5712	0.8106	6.7485	581.2676	582.0782
	Right Flange		12.7633	13.9335	177.8369	0.8106	6.7485	581.2676	582.0782
Total			32.34		232.39	92.15		1162.54	1254.69
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	7.1850	in	S _{right} =	174.63	in ³	x-bar =	7.1850	in	S _{right} =	174.63	in ³
I _y =	1254.69	in ⁴	S _{left} =	174.63	in ³	I _y =	1254.69	in ⁴	S _{left} =	174.63	in ³
C _{right} =	7.1850	in	A =	32.3435	in ²	C _{right} =	7.1850	in	A =	32.3435	in ²
C _{left} =	7.1850	in	r _y =	6.2284	in	C _{left} =	7.1850	in	r _y =	6.2284	in



Made By SFH
Checked By DMP

Date 1/17/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

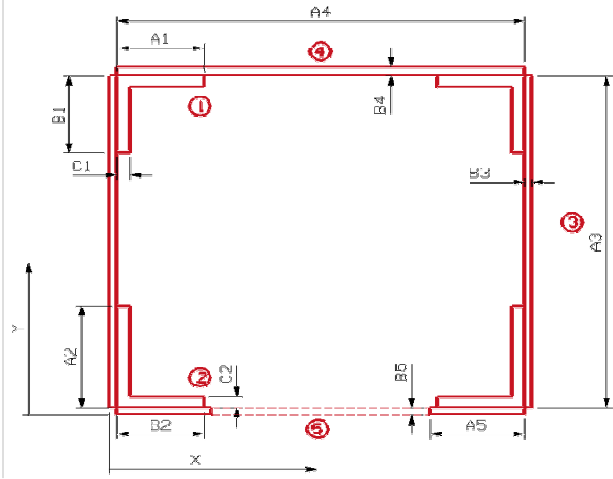
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member U0-U1

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5985	336.3153	336.3356
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5985	212.3354	214.9469
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.0890	496.2470	496.2674
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.0890	336.8139	339.4254
3	Plate	22.7500	13.3750	304.2813	1281.5833	1.2452	35.2750	1316.8583
4	Plate	8.8125	26.5625	234.0820	0.1033	11.9423	1256.8236	1256.9269
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.4327	937.3641	937.4168
Total		45.67		667.73	1287.00		3611.17	4898.18
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/17/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	14.6202	in	S _{top} =	403.81	in ³	y-bar =	14.6202	in	S _{top} =	403.81	in ³
I _x =	4898.18	in ⁴	S _{bott.} =	335.03	in ³	I _x =	4898.18	in ⁴	S _{bott.} =	335.03	in ³
C _{top} =	12.1298	in	A =	45.6719	in ²	C _{top} =	12.1298	in	A =	45.6719	in ²
C _{bottom} =	14.6202	in	r _x =	10.3560	in	C _{bottom} =	14.6202	in	r _x =	10.3560	in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.4375	7.7344	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.9375	47.1094	6.7500	8.7500	172.2656	179.0156	
Total		45.67		556.63	426.13		4698.37	5124.50	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.1875	in	S _{right} =	420.47	in ³	x-bar =	12.1875	in	S _{right} =	420.47	in ³
I _y =	5124.50	in ⁴	S _{left} =	420.47	in ³	I _y =	5124.50	in ⁴	S _{left} =	420.47	in ³
C _{right} =	12.1875	in	A =	45.6719	in ²	C _{right} =	12.1875	in	A =	45.6719	in ²
C _{left} =	12.1875	in	r _y =	10.5926	in	C _{left} =	12.1875	in	r _y =	10.5926	in



Made By SFH
Checked By DMP

Date 1/17/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.4375$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.4375$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member U1-U2

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x, gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.2500	26.2813	137.9766	0.0837	12.1823	779.1420	779.2258
	Vertical Leg	6.6172	22.2813	147.4392	31.5372	8.1823	443.0190	474.5562
2	Horizontal Leg	5.2500	0.7188	3.7734	0.0837	13.3802	939.9087	939.9924
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	9.3802	582.2363	613.7735
3	Plate	22.7500	13.5000	307.1250	1281.5833	0.5990	8.1618	1289.7452
4	Plate	8.8125	26.6875	235.1836	0.1033	12.5885	1396.5270	1396.6303
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	13.8490	1150.7634	1150.8884
Total		61.30		864.22	1345.05		5299.76	6644.81
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/17/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.0990 in	S _{top} =	520.10 in ³	y-bar =	14.0990 in	S _{top} =	520.10 in ³
I _x =	6644.81 in ⁴	S _{bott.} =	471.30 in ³	I _x =	6644.81 in ⁴	S _{bott.} =	471.30 in ³
C _{top} =	12.7760 in	A =	61.2969 in ²	C _{top} =	12.7760 in	A =	61.2969 in ²
C _{bottom} =	14.0990 in	r _x =	10.4117 in	C _{bottom} =	14.0990 in	r _x =	10.4117 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.4375	9.0234	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	20.9375	54.9609	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.4375	9.0234	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	20.9375	54.9609	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.4375	10.3125	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.9375	62.8125	9.0000	8.7500	229.6875	238.6875	
Total		61.30		747.06	455.63		6282.01	6737.64	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	552.83 in ³	x-bar =	12.1875 in	S _{right} =	552.83 in ³
I _y =	6737.64 in ⁴	S _{left} =	552.83 in ³	I _y =	6737.64 in ⁴	S _{left} =	552.83 in ³
C _{right} =	12.1875 in	A =	61.2969 in ²	C _{right} =	12.1875 in	A =	61.2969 in ²
C _{left} =	12.1875 in	r _y =	10.4842 in	C _{left} =	12.1875 in	r _y =	10.4842 in



Made By SFH
Checked By DMP

Date 1/17/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6250$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6250$ in

Top Cover Plate:

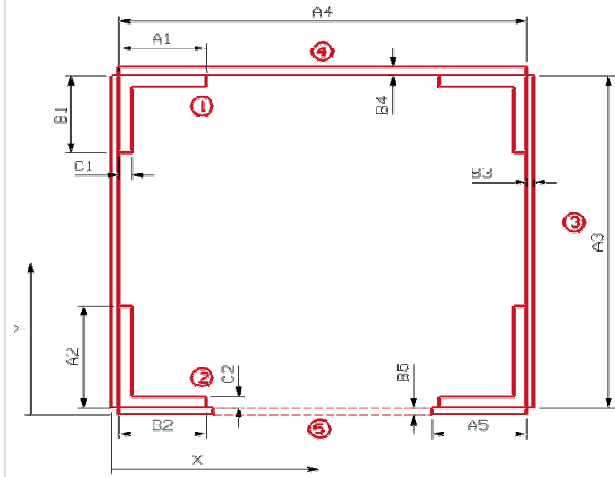
$A_4 = b = 22.0000$ in
 $B_4 = t = 0.5000$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.8750$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.6250$ in



Member U2-U3

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	7.5000	26.3125	197.3438	0.2441	12.0825	1094.8931	1095.1373
	Vertical Leg	9.2188	22.3125	205.6934	41.7845	8.0825	602.2250	644.0094
2	Horizontal Leg	7.5000	0.9375	7.0313	0.2441	13.2925	1325.1879	1325.4320
	Vertical Leg	9.2188	4.9375	45.5176	41.7845	9.2925	796.0517	837.8361
3	Plate	45.5000	13.6250	619.9375	2563.1667	0.6050	16.6565	2579.8232
4	Plate	11.0000	26.8750	295.6250	0.2292	12.6450	1758.8441	1759.0733
5	Perforated Plate	6.5625	0.3125	2.0508	0.2136	13.9175	1271.1433	1271.3569
Total		96.50		1373.20	2647.67		6865.00	9512.67
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/17/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.2300 in	S _{top} =	737.70 in ³	y-bar =	14.2300 in	S _{top} =	737.70 in ³
I _x =	9512.67 in ⁴	S _{bott.} =	668.49 in ³	I _x =	9512.67 in ⁴	S _{bott.} =	668.49 in ³
C _{top} =	12.8950 in	A =	96.5000 in ²	C _{top} =	12.8950 in	A =	96.5000 in ²
C _{bottom} =	14.2300 in	r _x =	9.9286 in	C _{bottom} =	14.2300 in	r _x =	9.9286 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.7500	3.8750	14.5313	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.1875	5.4736	0.1500	10.6875	526.4951	526.6451	
1 (Right)	Horizontal Leg	3.7500	19.8750	74.5313	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	22.5625	103.9990	0.1500	10.6875	526.4951	526.6451	
2 (Left)	Horizontal Leg	3.7500	3.8750	14.5313	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.1875	5.4736	0.1500	10.6875	526.4951	526.6451	
2 (Right)	Horizontal Leg	3.7500	19.8750	74.5313	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	22.5625	103.9990	0.1500	10.6875	526.4951	526.6451	
3 (Left)	Plate	22.7500	0.4375	9.9531	1.4515	11.4375	2976.0732	2977.5247	
3 (Right)	Plate	22.7500	23.3125	530.3594	1.4515	11.4375	2976.0732	2977.5247	
4	Plate	11.0000	11.8750	130.6250	443.6667	0.0000	0.0000	443.6667	
5 (Left)	Perforated Plate	3.2813	3.5000	11.4844	7.5366	8.3750	230.1489	237.6855	
5 (Right)	Perforated Plate	3.2813	20.2500	66.4453	7.5366	8.3750	230.1489	237.6855	
Total		96.50		1145.94	507.24		9478.42	9985.67	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	11.8750 in	S _{right} =	840.90 in ³	x-bar =	11.8750 in	S _{right} =	840.90 in ³
I _y =	9985.67 in ⁴	S _{left} =	840.90 in ³	I _y =	9985.67 in ⁴	S _{left} =	840.90 in ³
C _{right} =	11.8750 in	A =	96.5000 in ²	C _{right} =	11.8750 in	A =	96.5000 in ²
C _{left} =	11.8750 in	r _y =	10.1724 in	C _{left} =	11.8750 in	r _y =	10.1724 in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

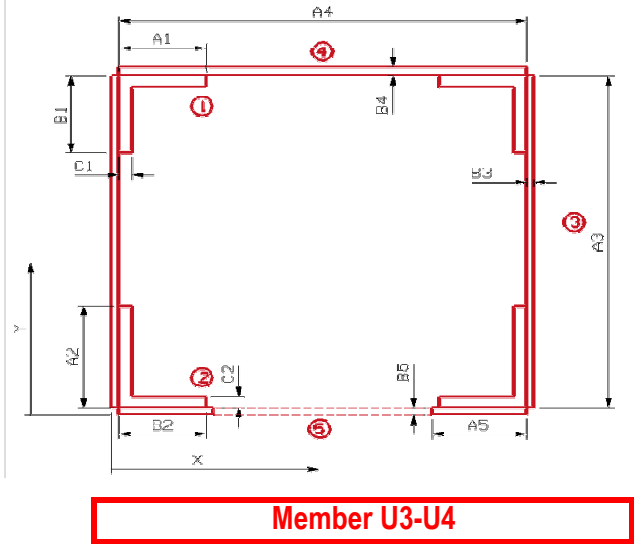
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6250$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6250$ in

Top Cover Plate:
 $A_4 = b = 22.0000$ in
 $B_4 = t = 0.5000$ in

Web Plate 1:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.8750$ in

Perforated Cover Plate
 $A_5 = b = 5.2500$ in
 $B_5 = t = 0.6250$ in



X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	7.5000	26.3125	197.3438	0.2441	12.0825	1094.8931	1095.1373
	Vertical Leg	9.2188	22.3125	205.6934	41.7845	8.0825	602.2250	644.0094
2	Horizontal Leg	7.5000	0.9375	7.0313	0.2441	13.2925	1325.1879	1325.4320
	Vertical Leg	9.2188	4.9375	45.5176	41.7845	9.2925	796.0517	837.8361
3	Plate	45.5000	13.6250	619.9375	2563.1667	0.6050	16.6565	2579.8232
4	Plate	11.0000	26.8750	295.6250	0.2292	12.6450	1758.8441	1759.0733
5	Perforated Plate	6.5625	0.3125	2.0508	0.2136	13.9175	1271.1433	1271.3569
Total		96.50		1373.20	2647.67		6865.00	9512.67
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.2300 in	S _{top} =	737.70 in ³	y-bar =	14.2300 in	S _{top} =	737.70 in ³
I _x =	9512.67 in ⁴	S _{bott.} =	668.49 in ³	I _x =	9512.67 in ⁴	S _{bott.} =	668.49 in ³
C _{top} =	12.8950 in	A =	96.5000 in ²	C _{top} =	12.8950 in	A =	96.5000 in ²
C _{bottom} =	14.2300 in	r _x =	9.9286 in	C _{bottom} =	14.2300 in	r _x =	9.9286 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.7500	3.8750	14.5313	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.1875	5.4736	0.1500	10.6875	526.4951	526.6451	
1 (Right)	Horizontal Leg	3.7500	19.8750	74.5313	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	22.5625	103.9990	0.1500	10.6875	526.4951	526.6451	
2 (Left)	Horizontal Leg	3.7500	3.8750	14.5313	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.1875	5.4736	0.1500	10.6875	526.4951	526.6451	
2 (Right)	Horizontal Leg	3.7500	19.8750	74.5313	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	22.5625	103.9990	0.1500	10.6875	526.4951	526.6451	
3 (Left)	Plate	22.7500	0.4375	9.9531	1.4515	11.4375	2976.0732	2977.5247	
3 (Right)	Plate	22.7500	23.3125	530.3594	1.4515	11.4375	2976.0732	2977.5247	
4	Plate	11.0000	11.8750	130.6250	443.6667	0.0000	0.0000	443.6667	
5 (Left)	Perforated Plate	3.2813	3.5000	11.4844	7.5366	8.3750	230.1489	237.6855	
5 (Right)	Perforated Plate	3.2813	20.2500	66.4453	7.5366	8.3750	230.1489	237.6855	
Total		96.50		1145.94	507.24		9478.42	9985.67	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	11.8750 in	S _{right} =	840.90 in ³	x-bar =	11.8750 in	S _{right} =	840.90 in ³
I _y =	9985.67 in ⁴	S _{left} =	840.90 in ³	I _y =	9985.67 in ⁴	S _{left} =	840.90 in ³
C _{right} =	11.8750 in	A =	96.5000 in ²	C _{right} =	11.8750 in	A =	96.5000 in ²
C _{left} =	11.8750 in	r _y =	10.1724 in	C _{left} =	11.8750 in	r _y =	10.1724 in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.5000$ in

Top Cover Plate:

$A_4 = b = 22.0000$ in
 $B_4 = t = 0.4375$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.8125$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.5625$ in



Member U4-U5

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x, gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	6.0000	26.3125	157.8750	0.1250	12.1745	889.3168	889.4418
	Vertical Leg	7.5000	22.3125	167.3438	35.1563	8.1745	501.1735	536.3297
2	Horizontal Leg	6.0000	0.8125	4.8750	0.1250	13.3255	1065.4071	1065.5321
	Vertical Leg	7.5000	4.8125	36.0938	35.1563	9.3255	652.2313	687.3876
3	Plate	42.2500	13.5625	573.0156	2380.0833	0.5755	13.9912	2394.0745
4	Plate	9.6250	26.7813	257.7695	0.1535	12.6433	1538.5834	1538.7369
5	Perforated Plate	5.9063	0.2813	1.6611	0.1557	13.8567	1134.0494	1134.2052
Total		84.78		1198.63	2450.96		5794.75	8245.71
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.1380 in	S _{top} =	641.09 in ³	y-bar =	14.1380 in	S _{top} =	641.09 in ³
I _x =	8245.71 in ⁴	S _{bott.} =	583.23 in ³	I _x =	8245.71 in ⁴	S _{bott.} =	583.23 in ³
C _{top} =	12.8620 in	A =	84.7813 in ²	C _{top} =	12.8620 in	A =	84.7813 in ²
C _{bottom} =	14.1380 in	r _x =	9.8620 in	C _{bottom} =	14.1380 in	r _x =	9.8620 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.0000	3.8125	11.4375	9.0000	8.0000	192.0000	201.0000	
	Vertical Leg	3.7500	1.0625	3.9844	0.0781	10.7500	433.3594	433.4375	
1 (Right)	Horizontal Leg	3.0000	19.8125	59.4375	9.0000	8.0000	192.0000	201.0000	
	Vertical Leg	3.7500	22.5625	84.6094	0.0781	10.7500	433.3594	433.4375	
2 (Left)	Horizontal Leg	3.0000	3.8125	11.4375	9.0000	8.0000	192.0000	201.0000	
	Vertical Leg	3.7500	1.0625	3.9844	0.0781	10.7500	433.3594	433.4375	
2 (Right)	Horizontal Leg	3.0000	19.8125	59.4375	9.0000	8.0000	192.0000	201.0000	
	Vertical Leg	3.7500	22.5625	84.6094	0.0781	10.7500	433.3594	433.4375	
3 (Left)	Plate	21.1250	0.4063	8.5820	1.1622	11.4063	2748.4161	2749.5783	
3 (Right)	Plate	21.1250	23.2188	490.4961	1.1622	11.4063	2748.4161	2749.5783	
4	Plate	9.6250	11.8125	113.6953	388.2083	0.0000	0.0000	388.2083	
5 (Left)	Perforated Plate	2.9531	3.4375	10.1514	6.7830	8.3750	207.1340	213.9170	
5 (Right)	Perforated Plate	2.9531	20.1875	59.6162	6.7830	8.3750	207.1340	213.9170	
Total		84.78		1001.48	440.41		8412.54	8852.95	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	11.8125 in	S _{right} =	749.46 in ³	x-bar =	11.8125 in	S _{right} =	749.46 in ³
I _y =	8852.95 in ⁴	S _{left} =	749.46 in ³	I _y =	8852.95 in ⁴	S _{left} =	749.46 in ³
C _{right} =	11.8125 in	A =	84.7813 in ²	C _{right} =	11.8125 in	A =	84.7813 in ²
C _{left} =	11.8125 in	r _y =	10.2187 in	C _{left} =	11.8125 in	r _y =	10.2187 in



Made By DWC
Checked By KMW

Date 1/26/2012
Date 2/7/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.5000$ in

Top Cover Plate:

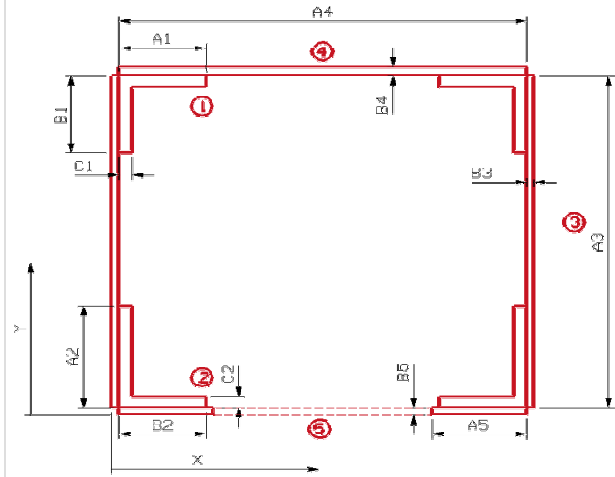
$A_4 = b = 22.0000$ in
 $B_4 = t = 0.4375$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.8125$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.5625$ in



Member U5-U6

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	6.0000	26.3125	157.8750	0.1250	12.1745	889.3168	889.4418
	Vertical Leg	7.5000	22.3125	167.3438	35.1563	8.1745	501.1735	536.3297
2	Horizontal Leg	6.0000	0.8125	4.8750	0.1250	13.3255	1065.4071	1065.5321
	Vertical Leg	7.5000	4.8125	36.0938	35.1563	9.3255	652.2313	687.3876
3	Plate	42.2500	13.5625	573.0156	2380.0833	0.5755	13.9912	2394.0745
4	Plate	9.6250	26.7813	257.7695	0.1535	12.6433	1538.5834	1538.7369
5	Perforated Plate	5.9063	0.2813	1.6611	0.1557	13.8567	1134.0494	1134.2052
Total		84.78		1198.63	2450.96		5794.75	8245.71
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	5.0000	0.5625	-2.8125	0.2813	-0.7910	-0.0742	14.3322	-577.7177
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.81	-0.79	-0.07		-577.72	-577.79



Made By DWC
Checked By KMW

Date 1/26/2012
Date 2/7/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.1380 in	S _{top} =	641.09 in ³	y-bar =	14.6134 in	S _{top} =	619.05 in ³
I _x =	8245.71 in ⁴	S _{bott.} =	583.23 in ³	I _x =	7667.92 in ⁴	S _{bott.} =	524.72 in ³
C _{top} =	12.8620 in	A =	84.7813 in ²	C _{top} =	12.3866 in	A =	81.9688 in ²
C _{bottom} =	14.1380 in	r _x =	9.8620 in	C _{bottom} =	14.6134 in	r _x =	9.6720 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.0000	3.8125	11.4375	9.0000	8.0000	192.0000	201.0000	
	Vertical Leg	3.7500	1.0625	3.9844	0.0781	10.7500	433.3594	433.4375	
1 (Right)	Horizontal Leg	3.0000	19.8125	59.4375	9.0000	8.0000	192.0000	201.0000	
	Vertical Leg	3.7500	22.5625	84.6094	0.0781	10.7500	433.3594	433.4375	
2 (Left)	Horizontal Leg	3.0000	3.8125	11.4375	9.0000	8.0000	192.0000	201.0000	
	Vertical Leg	3.7500	1.0625	3.9844	0.0781	10.7500	433.3594	433.4375	
2 (Right)	Horizontal Leg	3.0000	19.8125	59.4375	9.0000	8.0000	192.0000	201.0000	
	Vertical Leg	3.7500	22.5625	84.6094	0.0781	10.7500	433.3594	433.4375	
3 (Left)	Plate	21.1250	0.4063	8.5820	1.1622	11.4063	2748.4161	2749.5783	
3 (Right)	Plate	21.1250	23.2188	490.4961	1.1622	11.4063	2748.4161	2749.5783	
4	Plate	9.6250	11.8125	113.6953	388.2083	0.0000	0.0000	388.2083	
5 (Left)	Perforated Plate	2.9531	3.4375	10.1514	6.7830	8.3750	207.1340	213.9170	
5 (Right)	Perforated Plate	2.9531	20.1875	59.6162	6.7830	8.3750	207.1340	213.9170	
Total		84.78		1001.48	440.41		8412.54	8852.95	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.5625	5.0000	-2.8125	3.3125	-9.3164	-5.8594	8.7917	-217.3869	-223.2463
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.81		-9.32	-5.86		-217.39	-223.25

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	11.8125 in	S _{right} =	749.46 in ³	x-bar =	12.1042 in	S _{right} =	749.05 in ³
I _y =	8852.95 in ⁴	S _{left} =	749.46 in ³	I _y =	8629.70 in ⁴	S _{left} =	712.95 in ³
C _{right} =	11.8125 in	A =	84.7813 in ²	C _{right} =	11.5208 in	A =	81.9688 in ²
C _{left} =	11.8125 in	r _y =	10.2187 in	C _{left} =	12.1042 in	r _y =	10.2606 in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.4375$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.4375$ in

Top Cover Plate:

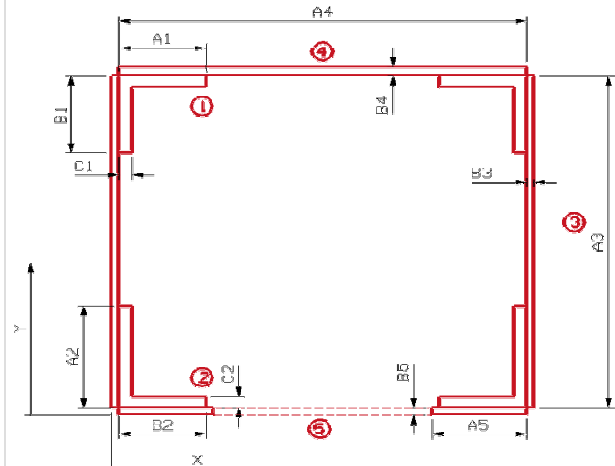
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member U6-U7

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.2500	26.2813	137.9766	0.0837	12.1487	774.8582	774.9420
	Vertical Leg	6.6172	22.2813	147.4392	31.5372	8.1487	439.3950	470.9321
2	Horizontal Leg	5.2500	0.7188	3.7734	0.0837	13.4138	944.6261	944.7098
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	9.4138	586.4069	617.9441
3	Plate	19.5000	13.5000	263.2500	1098.5000	0.6325	7.8012	1106.3012
4	Plate	8.8125	26.6875	235.1836	0.1033	12.5550	1389.0962	1389.1995
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	13.8825	1156.3434	1156.4684
Total		58.05		820.35	1161.97		5298.53	6460.50
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.1325 in	S _{top} =	507.00 in ³	y-bar =	14.1325 in	S _{top} =	507.00 in ³
I _x =	6460.50 in ⁴	S _{bott.} =	457.14 in ³	I _x =	6460.50 in ⁴	S _{bott.} =	457.14 in ³
C _{top} =	12.7425 in	A =	58.0469 in ²	C _{top} =	12.7425 in	A =	58.0469 in ²
C _{bottom} =	14.1325 in	r _x =	10.5498 in	C _{bottom} =	14.1325 in	r _x =	10.5498 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.3750	8.8594	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.5938	1.9645	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	20.8750	54.7969	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.6563	78.2689	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.3750	8.8594	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.5938	1.9645	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	20.8750	54.7969	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.6563	78.2689	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	9.7500	0.1875	1.8281	0.1143	11.9375	1389.4131	1389.5273	
3 (Right)	Plate	9.7500	24.0625	234.6094	0.1143	11.9375	1389.4131	1389.5273	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.3750	10.1250	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.8750	62.6250	9.0000	8.7500	229.6875	238.6875	
Total		58.05		703.82	455.50		5801.88	6257.38	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	516.07 in ³	x-bar =	12.1250 in	S _{right} =	516.07 in ³
I _y =	6257.38 in ⁴	S _{left} =	516.07 in ³	I _y =	6257.38 in ⁴	S _{left} =	516.07 in ³
C _{right} =	12.1250 in	A =	58.0469 in ²	C _{right} =	12.1250 in	A =	58.0469 in ²
C _{left} =	12.1250 in	r _y =	10.3826 in	C _{left} =	12.1250 in	r _y =	10.3826 in



Made By DWC
Checked By KMW

Date 1/26/2012
Date 2/7/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

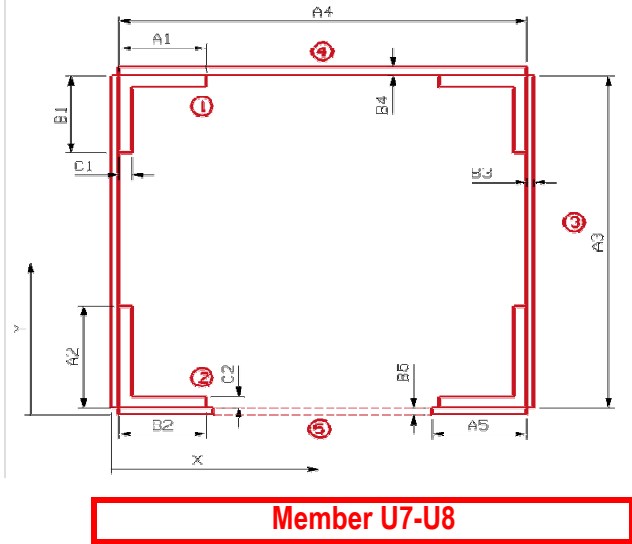
Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:
 $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member U7-U8

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x, gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5985	336.3153	336.3356	
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5985	212.3354	214.9469	
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.0890	496.2470	496.2674	
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.0890	336.8139	339.4254	
3	Plate	22.7500	13.3750	304.2813	1281.5833	1.2452	35.2750	1316.8583	
4	Plate	8.8125	26.5625	234.0820	0.1033	11.9423	1256.8236	1256.9269	
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.4327	937.3641	937.4168	
Total		45.67		667.73	1287.00		3611.17	4898.18	
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x, loss}	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	
1	0.3125	17.3333	-5.4167	9.0417	-48.9757	-135.6173	7.3132	-289.7020	-425.3193
2	0.3125	17.3333	-5.4167	9.0417	-48.9757	-135.6173	7.3132	-289.7020	-425.3193
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-10.83		-97.95	-271.23		-579.40	-850.64



Made By DWC
Checked By KMW

Date 1/26/2012
Date 2/7/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	14.6202	in	S _{top} =	403.81	in ³	y-bar =	16.3549	in	S _{top} =	389.37	in ³
I _x =	4898.18	in ⁴	S _{bott.} =	335.03	in ³	I _x =	4047.54	in ⁴	S _{bott.} =	247.48	in ³
C _{top} =	12.1298	in	A =	45.6719	in ²	C _{top} =	10.3951	in	A =	34.8385	in ²
C _{bottom} =	14.6202	in	r _x =	10.3560	in	C _{bottom} =	16.3549	in	r _x =	10.7787	in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.4375	7.7344	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.9375	47.1094	6.7500	8.7500	172.2656	179.0156	
Total		45.67		556.63	426.13		4698.37	5124.50	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	17.3333	0.3125	-5.4167	0.1563	-0.8464	-0.0441	12.0313	-784.0678	-784.1119
2	17.3333	0.3125	-5.4167	24.2188	-131.1849	-0.0441	12.0313	-784.0678	-784.1119
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-10.83		-132.03	-0.09		-1568.14	-1568.22

As-Built Section Properties				As-Inspected Section Properties							
x-bar =	12.1875	in	S _{right} =	420.47	in ³	x-bar =	12.1875	in	S _{right} =	291.80	in ³
I _y =	5124.50	in ⁴	S _{left} =	420.47	in ³	I _y =	3556.27	in ⁴	S _{left} =	291.80	in ³
C _{right} =	12.1875	in	A =	45.6719	in ²	C _{right} =	12.1875	in	A =	34.8385	in ²
C _{left} =	12.1875	in	r _y =	10.5926	in	C _{left} =	12.1875	in	r _y =	10.1034	in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

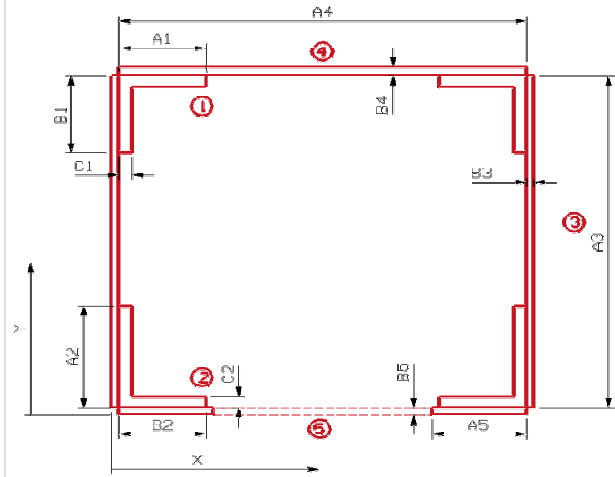
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member U8-U9

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x, gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.3438	65.8594	0.0203	12.0654	363.9365	363.9568
	Vertical Leg	2.3047	24.3438	56.1047	2.6115	10.0654	233.4945	236.1060
2	Horizontal Leg	2.5000	0.6563	1.6406	0.0203	13.6221	463.9020	463.9224
	Vertical Leg	2.3047	2.6563	6.1218	2.6115	11.6221	311.3000	313.9115
3	Plate	22.7500	13.5000	307.1250	1281.5833	0.7783	13.7816	1295.3649
4	Plate	8.8125	26.6875	235.1836	0.1033	12.4092	1357.0169	1357.1202
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	14.0283	1180.7627	1180.8877
Total		47.17		673.54	1287.08		3924.19	5211.27
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.2783 in	S _{top} =	413.70 in ³	y-bar =	14.2783 in	S _{top} =	413.70 in ³
I _x =	5211.27 in ⁴	S _{bott.} =	364.98 in ³	I _x =	5211.27 in ⁴	S _{bott.} =	364.98 in ³
C _{top} =	12.5967 in	A =	47.1719 in ²	C _{top} =	12.5967 in	A =	47.1719 in ²
C _{bottom} =	14.2783 in	r _x =	10.5107 in	C _{bottom} =	14.2783 in	r _x =	10.5107 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.4375	10.3125	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.9375	62.8125	9.0000	8.7500	229.6875	238.6875	
Total		47.17		574.91	430.63		4813.22	5243.84	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	430.26 in ³	x-bar =	12.1875 in	S _{right} =	430.26 in ³
I _y =	5243.84 in ⁴	S _{left} =	430.26 in ³	I _y =	5243.84 in ⁴	S _{left} =	430.26 in ³
C _{right} =	12.1875 in	A =	47.1719 in ²	C _{right} =	12.1875 in	A =	47.1719 in ²
C _{left} =	12.1875 in	r _y =	10.5435 in	C _{left} =	12.1875 in	r _y =	10.5435 in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.4375$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.4375$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.6875$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member U9-U10

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.2500	26.2813	137.9766	0.0837	12.2871	792.6055	792.6893
	Vertical Leg	6.6172	22.2813	147.4392	31.5372	8.2871	454.4406	485.9778
2	Horizontal Leg	5.2500	0.7188	3.7734	0.0837	13.2754	925.2422	925.3260
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	9.2754	569.2985	600.8357
3	Plate	35.7500	13.5000	482.6250	2013.9167	0.4942	8.7301	2022.6467
4	Plate	8.8125	26.6875	235.1836	0.1033	12.6933	1419.8769	1419.9801
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	13.7442	1133.4123	1133.5373
Total		74.30		1039.72	2077.39		5303.61	7380.99
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties					
y-bar =	13.9942	in	$S_{top} = 573.02$	in^3	y-bar =	13.9942	in	$S_{top} = 573.02$	in^3
$I_x =$	7380.99	in^4	$S_{bott.} = 527.43$	in^3	$I_x =$	7380.99	in^4	$S_{bott.} = 527.43$	in^3
$C_{top} =$	12.8808	in	$A = 74.2969$	in^2	$C_{top} =$	12.8808	in	$A = 74.2969$	in^2
$C_{bottom} =$	13.9942	in	$r_x = 9.9672$	in	$C_{bottom} =$	13.9942	in	$r_x = 9.9672$	in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I_o	d	Ad^2	$I_{y,gross}$	
Element	Description	(in^2)	(in)	(in^3)	(in^4)	(in)	(in^4)	(in^4)	
1 (Left)	Horizontal Leg	2.6250	3.6875	9.6797	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.9063	2.9984	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	21.1875	55.6172	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.9688	79.3029	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.6875	9.6797	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.9063	2.9984	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	21.1875	55.6172	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.9688	79.3029	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	17.8750	0.3438	6.1445	0.7041	12.0938	2614.3759	2615.0799	
3 (Right)	Plate	17.8750	24.5313	438.4961	0.7041	12.0938	2614.3759	2615.0799	
4	Plate	8.8125	12.4375	109.6055	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.6875	11.0625	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	21.1875	63.5625	9.0000	8.7500	229.6875	238.6875	
Total		74.30		924.07	456.68		8251.80	8708.48	
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y,loss}$
Loss #	b (in)	h (in)	(in^2)	(in)	(in^3)	(in^4)	(in)	(in^4)	(in^4)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties					
x-bar =	12.4375	in	$S_{right} = 700.18$	in^3	x-bar =	12.4375	in	$S_{right} = 700.18$	in^3
$I_y =$	8708.48	n^4	$S_{left} = 700.18$	in^3	$I_y =$	8708.48	n^4	$S_{left} = 700.18$	in^3
$C_{right} =$	12.4375	in	$A = 74.2969$	in^2	$C_{right} =$	12.4375	in	$A = 74.2969$	in^2
$C_{left} =$	12.4375	in	$r_y = 10.8264$	in	$C_{left} =$	12.4375	in	$r_y = 10.8264$	in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.5625$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.5625$ in

Top Cover Plate:

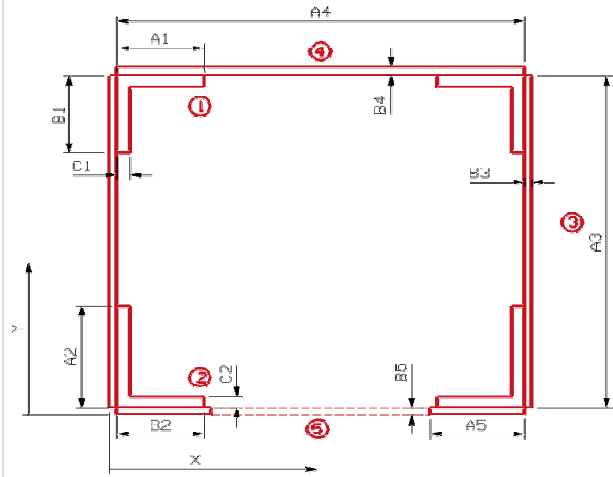
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.5000$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.7500$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.6250$ in



Member U10-U11

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	6.7500	26.3438	177.8203	0.1780	12.0876	986.2488	986.4268
	Vertical Leg	8.3672	22.3438	186.9543	38.5702	8.0876	547.2965	585.8667
2	Horizontal Leg	6.7500	0.9063	6.1172	0.1780	13.3499	1202.9774	1203.1554
	Vertical Leg	8.3672	4.9063	41.0515	38.5702	9.3499	731.4592	770.0294
3	Plate	39.0000	13.6250	531.3750	2197.0000	0.6311	15.5339	2212.5339
4	Plate	11.7500	26.8750	315.7813	0.2448	12.6189	1871.0263	1871.2711
5	Perforated Plate	7.5000	0.3125	2.3438	0.2441	13.9436	1458.1828	1458.4270
Total		88.48		1261.44	2274.99		6812.72	9087.71
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.2561 in	S _{top} =	706.18 in ³	y-bar =	14.2561 in	S _{top} =	706.18 in ³
I _x =	9087.71 in ⁴	S _{bott.} =	637.46 in ³	I _x =	9087.71 in ⁴	S _{bott.} =	637.46 in ³
C _{top} =	12.8689 in	A =	88.4844 in ²	C _{top} =	12.8689 in	A =	88.4844 in ²
C _{bottom} =	14.2561 in	r _x =	10.1343 in	C _{bottom} =	14.2561 in	r _x =	10.1343 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.3750	3.7500	12.6563	10.1250	8.7500	258.3984	268.5234	
	Vertical Leg	4.1836	1.0313	4.3143	0.1103	11.4688	550.2774	550.3877	
1 (Right)	Horizontal Leg	3.3750	21.2500	71.7188	10.1250	8.7500	258.3984	268.5234	
	Vertical Leg	4.1836	23.9688	100.2755	0.1103	11.4688	550.2774	550.3877	
2 (Left)	Horizontal Leg	3.3750	3.7500	12.6563	10.1250	8.7500	258.3984	268.5234	
	Vertical Leg	4.1836	1.0313	4.3143	0.1103	11.4688	550.2774	550.3877	
2 (Right)	Horizontal Leg	3.3750	21.2500	71.7188	10.1250	8.7500	258.3984	268.5234	
	Vertical Leg	4.1836	23.9688	100.2755	0.1103	11.4688	550.2774	550.3877	
3 (Left)	Plate	19.5000	0.3750	7.3125	0.9141	12.1250	2866.8047	2867.7188	
3 (Right)	Plate	19.5000	24.6250	480.1875	0.9141	12.1250	2866.8047	2867.7188	
4	Plate	11.7500	12.5000	146.8750	540.7448	0.0000	0.0000	540.7448	
5 (Left)	Perforated Plate	3.7500	3.7500	14.0625	11.2500	8.7500	287.1094	298.3594	
5 (Right)	Perforated Plate	3.7500	21.2500	79.6875	11.2500	8.7500	287.1094	298.3594	
Total		88.48		1106.05	606.01		9542.53	10148.55	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.5000 in	S _{right} =	811.88 in ³	x-bar =	12.5000 in	S _{right} =	811.88 in ³
I _y =	10148.55 in ⁴	S _{left} =	811.88 in ³	I _y =	10148.55 in ⁴	S _{left} =	811.88 in ³
C _{right} =	12.5000 in	A =	88.4844 in ²	C _{right} =	12.5000 in	A =	88.4844 in ²
C _{left} =	12.5000 in	r _y =	10.7095 in	C _{left} =	12.5000 in	r _y =	10.7095 in



Made By DWC
Checked By KMW

Date 1/30/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.5625$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.5625$ in

Top Cover Plate:

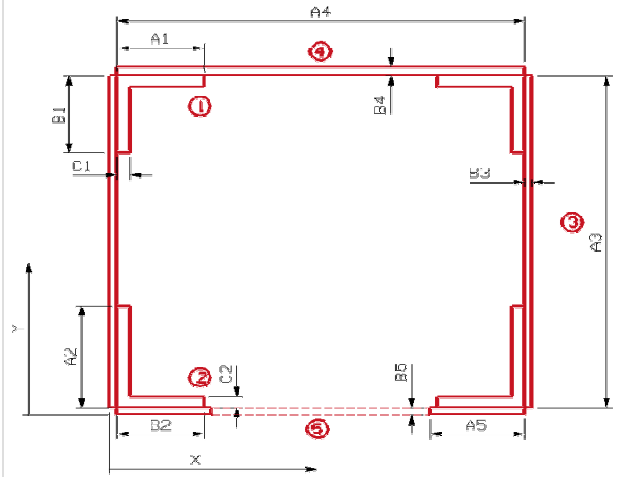
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.5000$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.7500$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.6250$ in



Member U11-U12

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	6.7500	26.3438	177.8203	0.1780	12.0876	986.2488	986.4268	
	Vertical Leg	8.3672	22.3438	186.9543	38.5702	8.0876	547.2965	585.8667	
2	Horizontal Leg	6.7500	0.9063	6.1172	0.1780	13.3499	1202.9774	1203.1554	
	Vertical Leg	8.3672	4.9063	41.0515	38.5702	9.3499	731.4592	770.0294	
3	Plate	39.0000	13.6250	531.3750	2197.0000	0.6311	15.5339	2212.5339	
4	Plate	11.7500	26.8750	315.7813	0.2448	12.6189	1871.0263	1871.2711	
5	Perforated Plate	7.5000	0.3125	2.3438	0.2441	13.9436	1458.1828	1458.4270	
Total		88.48		1261.44	2274.99		6812.72	9087.71	
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)	
1	0.1250	6.5000	-0.8125	3.8750	-3.1484	-2.8607	9.9152	-79.8780	-82.7387
2	0.1250	13.0000	-1.6250	20.1250	-32.7031	-22.8854	6.3348	-65.2105	-88.0960
3	23.5000	0.1250	-2.9375	27.0625	-79.4961	-0.0038	13.2723	-517.4515	-517.4553
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-5.38	-115.35	-25.75		-662.54	-688.29	



Made By DWC
Checked By KMW

Date 1/30/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.2561 in	S _{top} =	706.18 in ³	y-bar =	13.7902 in	S _{top} =	629.89 in ³
I _x =	9087.71 in ⁴	S _{bott.} =	637.46 in ³	I _x =	8399.42 in ⁴	S _{bott.} =	609.09 in ³
C _{top} =	12.8689 in	A =	88.4844 in ²	C _{top} =	13.3348 in	A =	83.1094 in ²
C _{bottom} =	14.2561 in	r _x =	10.1343 in	C _{bottom} =	13.7902 in	r _x =	10.0531 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.3750	3.7500	12.6563	10.1250	8.7500	258.3984	268.5234	
	Vertical Leg	4.1836	1.0313	4.3143	0.1103	11.4688	550.2774	550.3877	
1 (Right)	Horizontal Leg	3.3750	21.2500	71.7188	10.1250	8.7500	258.3984	268.5234	
	Vertical Leg	4.1836	23.9688	100.2755	0.1103	11.4688	550.2774	550.3877	
2 (Left)	Horizontal Leg	3.3750	3.7500	12.6563	10.1250	8.7500	258.3984	268.5234	
	Vertical Leg	4.1836	1.0313	4.3143	0.1103	11.4688	550.2774	550.3877	
2 (Right)	Horizontal Leg	3.3750	21.2500	71.7188	10.1250	8.7500	258.3984	268.5234	
	Vertical Leg	4.1836	23.9688	100.2755	0.1103	11.4688	550.2774	550.3877	
3 (Left)	Plate	19.5000	0.3750	7.3125	0.9141	12.1250	2866.8047	2867.7188	
3 (Right)	Plate	19.5000	24.6250	480.1875	0.9141	12.1250	2866.8047	2867.7188	
4	Plate	11.7500	12.5000	146.8750	540.7448	0.0000	0.0000	540.7448	
5 (Left)	Perforated Plate	3.7500	3.7500	14.0625	11.2500	8.7500	287.1094	298.3594	
5 (Right)	Perforated Plate	3.7500	21.2500	79.6875	11.2500	8.7500	287.1094	298.3594	
Total		88.48		1106.05	606.01		9542.53	10148.55	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	6.5000	0.1250	-0.8125	0.0625	-0.0508	-0.0011	12.8023	-133.1674	-133.1684
2	13.0000	0.1250	-1.6250	0.0625	-0.1016	-0.0021	12.8023	-266.3347	-266.3369
3	0.1250	23.5000	-2.9375	12.5000	-36.7188	-135.1862	0.3648	-0.3909	-135.5771
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-5.38		-36.87	-135.19		-399.89	-535.08

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.5000 in	S _{right} =	811.88 in ³	x-bar =	12.8648 in	S _{right} =	792.20 in ³
I _y =	10148.55 in ⁴	S _{left} =	811.88 in ³	I _y =	9613.46 in ⁴	S _{left} =	747.27 in ³
C _{right} =	12.5000 in	A =	88.4844 in ²	C _{right} =	12.1352 in	A =	83.1094 in ²
C _{left} =	12.5000 in	r _y =	10.7095 in	C _{left} =	12.8648 in	r _y =	10.7551 in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

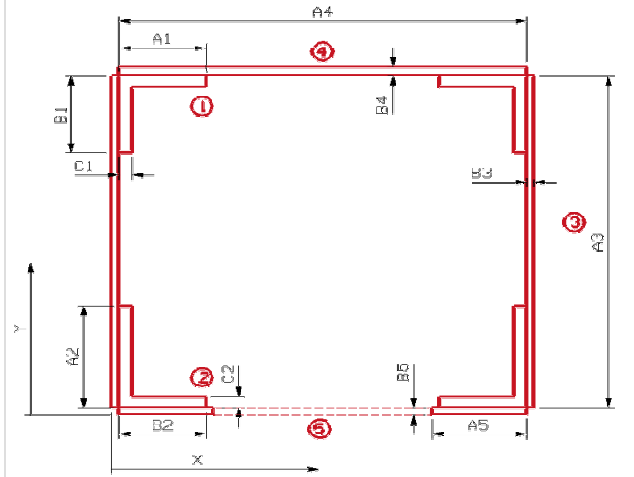
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.5625$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.5625$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.5000$ in

Web Plate 1:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.8125$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.6250$ in



Member U12-U13

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	6.7500	26.3438	177.8203	0.1780	12.1100	989.9009	990.0789
	Vertical Leg	8.3672	22.3438	186.9543	38.5702	8.1100	550.3268	588.8971
2	Horizontal Leg	6.7500	0.9063	6.1172	0.1780	13.3275	1198.9511	1199.1291
	Vertical Leg	8.3672	4.9063	41.0515	38.5702	9.3275	727.9650	766.5352
3	Plate	42.2500	13.6250	575.6563	2380.0833	0.6088	15.6571	2395.7404
4	Plate	11.7500	26.8750	315.7813	0.2448	12.6412	1877.6627	1877.9075
5	Perforated Plate	7.5000	0.3125	2.3438	0.2441	13.9213	1453.5100	1453.7542
Total		91.73		1305.72	2458.07		6813.97	9272.04
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.2338 in	S _{top} =	719.25 in ³	y-bar =	14.2338 in	S _{top} =	719.25 in ³
I _x =	9272.04 in ⁴	S _{bott.} =	651.41 in ³	I _x =	9272.04 in ⁴	S _{bott.} =	651.41 in ³
C _{top} =	12.8912 in	A =	91.7344 in ²	C _{top} =	12.8912 in	A =	91.7344 in ²
C _{bottom} =	14.2338 in	r _x =	10.0536 in	C _{bottom} =	14.2338 in	r _x =	10.0536 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.3750	3.8125	12.8672	10.1250	8.7500	258.3984	268.5234	
	Vertical Leg	4.1836	1.0938	4.5758	0.1103	11.4688	550.2774	550.3877	
1 (Right)	Horizontal Leg	3.3750	21.3125	71.9297	10.1250	8.7500	258.3984	268.5234	
	Vertical Leg	4.1836	24.0313	100.5370	0.1103	11.4688	550.2774	550.3877	
2 (Left)	Horizontal Leg	3.3750	3.8125	12.8672	10.1250	8.7500	258.3984	268.5234	
	Vertical Leg	4.1836	1.0938	4.5758	0.1103	11.4688	550.2774	550.3877	
2 (Right)	Horizontal Leg	3.3750	21.3125	71.9297	10.1250	8.7500	258.3984	268.5234	
	Vertical Leg	4.1836	24.0313	100.5370	0.1103	11.4688	550.2774	550.3877	
3 (Left)	Plate	21.1250	0.4063	8.5820	1.1622	12.1563	3121.7345	3122.8966	
3 (Right)	Plate	21.1250	24.7188	522.1836	1.1622	12.1563	3121.7345	3122.8966	
4	Plate	11.7500	12.5625	147.6094	540.7448	0.0000	0.0000	540.7448	
5 (Left)	Perforated Plate	3.7500	3.8125	14.2969	11.2500	8.7500	287.1094	298.3594	
5 (Right)	Perforated Plate	3.7500	21.3125	79.9219	11.2500	8.7500	287.1094	298.3594	
Total		91.73		1152.41	606.51		10052.39	10658.90	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.5625 in	S _{right} =	848.47 in ³	x-bar =	12.5625 in	S _{right} =	848.47 in ³
I _y =	10658.90 in ⁴	S _{left} =	848.47 in ³	I _y =	10658.90 in ⁴	S _{left} =	848.47 in ³
C _{right} =	12.5625 in	A =	91.7344 in ²	C _{right} =	12.5625 in	A =	91.7344 in ²
C _{left} =	12.5625 in	r _y =	10.7793 in	C _{left} =	12.5625 in	r _y =	10.7793 in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.5625$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.5625$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.5625$ in

Web Plate 1:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.8125$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.6875$ in



Member U13-U14

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	6.7500	26.4063	178.2422	0.1780	12.0219	975.5435	975.7215
	Vertical Leg	8.3672	22.4063	187.4773	38.5702	8.0219	538.4297	576.9999
2	Horizontal Leg	6.7500	0.9688	6.5391	0.1780	13.4156	1214.8621	1215.0400
	Vertical Leg	8.3672	4.9688	41.5745	38.5702	9.4156	741.7879	780.3582
3	Plate	42.2500	13.6875	578.2969	2380.0833	0.6969	20.5193	2400.6027
4	Plate	13.2188	26.9688	356.4932	0.3485	12.5844	2093.4000	2093.7485
5	Perforated Plate	8.2500	0.3438	2.8359	0.3250	14.0406	1626.4029	1626.7279
Total		93.95		1351.46	2458.25		7210.95	9669.20
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties					
y-bar =	14.3844	in	$S_{top} = 751.55$	in^3	y-bar =	14.3844	in	$S_{top} = 751.55$	in^3
$I_x =$	9669.20	in^4	$S_{bott.} = 672.20$	in^3	$I_x =$	9669.20	in^4	$S_{bott.} = 672.20$	in^3
$C_{top} =$	12.8656	in	$A = 93.9531$	in^2	$C_{top} =$	12.8656	in	$A = 93.9531$	in^2
$C_{bottom} =$	14.3844	in	$r_x = 10.1447$	in	$C_{bottom} =$	14.3844	in	$r_x = 10.1447$	in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I_o	d	Ad^2	$I_{y,gross}$	
Element	Description	(in^2)	(in)	(in^3)	(in^4)	(in)	(in^4)	(in^4)	
1 (Left)	Horizontal Leg	3.3750	3.8125	12.8672	10.1250	8.7500	258.3984	268.5234	
	Vertical Leg	4.1836	1.0938	4.5758	0.1103	11.4688	550.2774	550.3877	
1 (Right)	Horizontal Leg	3.3750	21.3125	71.9297	10.1250	8.7500	258.3984	268.5234	
	Vertical Leg	4.1836	24.0313	100.5370	0.1103	11.4688	550.2774	550.3877	
2 (Left)	Horizontal Leg	3.3750	3.8125	12.8672	10.1250	8.7500	258.3984	268.5234	
	Vertical Leg	4.1836	1.0938	4.5758	0.1103	11.4688	550.2774	550.3877	
2 (Right)	Horizontal Leg	3.3750	21.3125	71.9297	10.1250	8.7500	258.3984	268.5234	
	Vertical Leg	4.1836	24.0313	100.5370	0.1103	11.4688	550.2774	550.3877	
3 (Left)	Plate	21.1250	0.4063	8.5820	1.1622	12.1563	3121.7345	3122.8966	
3 (Right)	Plate	21.1250	24.7188	522.1836	1.1622	12.1563	3121.7345	3122.8966	
4	Plate	13.2188	12.5625	166.0605	608.3379	0.0000	0.0000	608.3379	
5 (Left)	Perforated Plate	4.1250	3.8125	15.7266	12.3750	8.7500	315.8203	328.1953	
5 (Right)	Perforated Plate	4.1250	21.3125	87.9141	12.3750	8.7500	315.8203	328.1953	
Total		93.95		1180.29	676.35		10109.81	10786.17	
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y,loss}$
Loss #	b (in)	h (in)	(in^2)	(in)	(in^3)	(in^4)	(in)	(in^4)	(in^4)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties					
x-bar =	12.5625	in	$S_{right} = 858.60$	in^3	x-bar =	12.5625	in	$S_{right} = 858.60$	in^3
$I_y =$	10786.17	n^4	$S_{left} = 858.60$	in^3	$I_y =$	10786.17	n^4	$S_{left} = 858.60$	in^3
$C_{right} =$	12.5625	in	$A = 93.9531$	in^2	$C_{right} =$	12.5625	in	$A = 93.9531$	in^2
$C_{left} =$	12.5625	in	$r_y = 10.7146$	in	$C_{left} =$	12.5625	in	$r_y = 10.7146$	in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

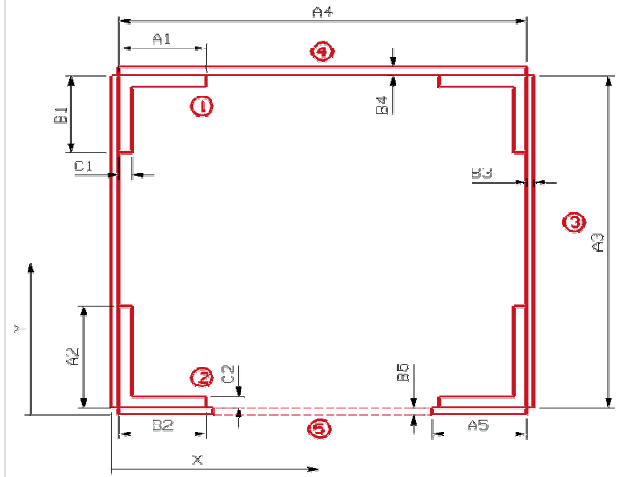
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.5625$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.5625$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.5000$ in

Web Plate 1:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.8125$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.6250$ in



Member U14-U15

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	6.7500	26.3438	177.8203	0.1780	12.1100	989.9009	990.0789
	Vertical Leg	8.3672	22.3438	186.9543	38.5702	8.1100	550.3268	588.8971
2	Horizontal Leg	6.7500	0.9063	6.1172	0.1780	13.3275	1198.9511	1199.1291
	Vertical Leg	8.3672	4.9063	41.0515	38.5702	9.3275	727.9650	766.5352
3	Plate	42.2500	13.6250	575.6563	2380.0833	0.6088	15.6571	2395.7404
4	Plate	11.7500	26.8750	315.7813	0.2448	12.6412	1877.6627	1877.9075
5	Perforated Plate	7.5000	0.3125	2.3438	0.2441	13.9213	1453.5100	1453.7542
Total		91.73		1305.72	2458.07		6813.97	9272.04
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.2338 in	S _{top} =	719.25 in ³	y-bar =	14.2338 in	S _{top} =	719.25 in ³
I _x =	9272.04 in ⁴	S _{bott.} =	651.41 in ³	I _x =	9272.04 in ⁴	S _{bott.} =	651.41 in ³
C _{top} =	12.8912 in	A =	91.7344 in ²	C _{top} =	12.8912 in	A =	91.7344 in ²
C _{bottom} =	14.2338 in	r _x =	10.0536 in	C _{bottom} =	14.2338 in	r _x =	10.0536 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.3750	3.8125	12.8672	10.1250	8.7500	258.3984	268.5234	
	Vertical Leg	4.1836	1.0938	4.5758	0.1103	11.4688	550.2774	550.3877	
1 (Right)	Horizontal Leg	3.3750	21.3125	71.9297	10.1250	8.7500	258.3984	268.5234	
	Vertical Leg	4.1836	24.0313	100.5370	0.1103	11.4688	550.2774	550.3877	
2 (Left)	Horizontal Leg	3.3750	3.8125	12.8672	10.1250	8.7500	258.3984	268.5234	
	Vertical Leg	4.1836	1.0938	4.5758	0.1103	11.4688	550.2774	550.3877	
2 (Right)	Horizontal Leg	3.3750	21.3125	71.9297	10.1250	8.7500	258.3984	268.5234	
	Vertical Leg	4.1836	24.0313	100.5370	0.1103	11.4688	550.2774	550.3877	
3 (Left)	Plate	21.1250	0.4063	8.5820	1.1622	12.1563	3121.7345	3122.8966	
3 (Right)	Plate	21.1250	24.7188	522.1836	1.1622	12.1563	3121.7345	3122.8966	
4	Plate	11.7500	12.5625	147.6094	540.7448	0.0000	0.0000	540.7448	
5 (Left)	Perforated Plate	3.7500	3.8125	14.2969	11.2500	8.7500	287.1094	298.3594	
5 (Right)	Perforated Plate	3.7500	21.3125	79.9219	11.2500	8.7500	287.1094	298.3594	
Total		91.73		1152.41	606.51		10052.39	10658.90	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.5625 in	S _{right} =	848.47 in ³	x-bar =	12.5625 in	S _{right} =	848.47 in ³
I _y =	10658.90 in ⁴	S _{left} =	848.47 in ³	I _y =	10658.90 in ⁴	S _{left} =	848.47 in ³
C _{right} =	12.5625 in	A =	91.7344 in ²	C _{right} =	12.5625 in	A =	91.7344 in ²
C _{left} =	12.5625 in	r _y =	10.7793 in	C _{left} =	12.5625 in	r _y =	10.7793 in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

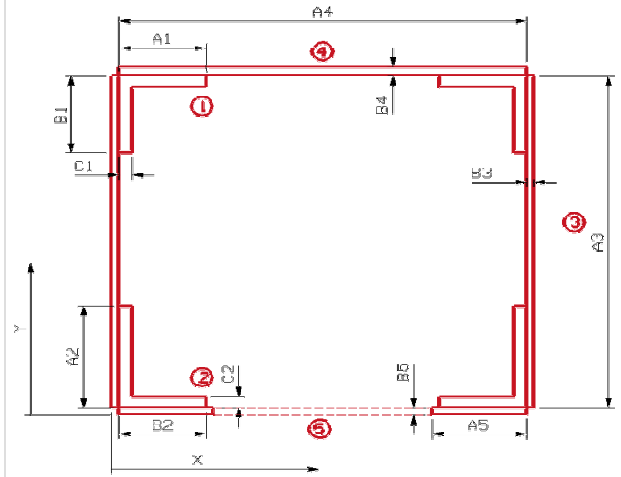
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.5625$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.5625$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.5000$ in

Web Plate 1:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.8125$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.6250$ in



Member U15-U16

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	6.7500	26.3438	177.8203	0.1780	12.1100	989.9009	990.0789
	Vertical Leg	8.3672	22.3438	186.9543	38.5702	8.1100	550.3268	588.8971
2	Horizontal Leg	6.7500	0.9063	6.1172	0.1780	13.3275	1198.9511	1199.1291
	Vertical Leg	8.3672	4.9063	41.0515	38.5702	9.3275	727.9650	766.5352
3	Plate	42.2500	13.6250	575.6563	2380.0833	0.6088	15.6571	2395.7404
4	Plate	11.7500	26.8750	315.7813	0.2448	12.6412	1877.6627	1877.9075
5	Perforated Plate	7.5000	0.3125	2.3438	0.2441	13.9213	1453.5100	1453.7542
Total		91.73		1305.72	2458.07		6813.97	9272.04
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	14.2338	in	S _{top} =	719.25	in ³	y-bar =	14.2338	in	S _{top} =	719.25	in ³
I _x =	9272.04	in ⁴	S _{bott.} =	651.41	in ³	I _x =	9272.04	in ⁴	S _{bott.} =	651.41	in ³
C _{top} =	12.8912	in	A =	91.7344	in ²	C _{top} =	12.8912	in	A =	91.7344	in ²
C _{bottom} =	14.2338	in	r _x =	10.0536	in	C _{bottom} =	14.2338	in	r _x =	10.0536	in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.3750	3.8125	12.8672	10.1250	8.7500	258.3984	268.5234	
	Vertical Leg	4.1836	1.0938	4.5758	0.1103	11.4688	550.2774	550.3877	
1 (Right)	Horizontal Leg	3.3750	21.3125	71.9297	10.1250	8.7500	258.3984	268.5234	
	Vertical Leg	4.1836	24.0313	100.5370	0.1103	11.4688	550.2774	550.3877	
2 (Left)	Horizontal Leg	3.3750	3.8125	12.8672	10.1250	8.7500	258.3984	268.5234	
	Vertical Leg	4.1836	1.0938	4.5758	0.1103	11.4688	550.2774	550.3877	
2 (Right)	Horizontal Leg	3.3750	21.3125	71.9297	10.1250	8.7500	258.3984	268.5234	
	Vertical Leg	4.1836	24.0313	100.5370	0.1103	11.4688	550.2774	550.3877	
3 (Left)	Plate	21.1250	0.4063	8.5820	1.1622	12.1563	3121.7345	3122.8966	
3 (Right)	Plate	21.1250	24.7188	522.1836	1.1622	12.1563	3121.7345	3122.8966	
4	Plate	11.7500	12.5625	147.6094	540.7448	0.0000	0.0000	540.7448	
5 (Left)	Perforated Plate	3.7500	3.8125	14.2969	11.2500	8.7500	287.1094	298.3594	
5 (Right)	Perforated Plate	3.7500	21.3125	79.9219	11.2500	8.7500	287.1094	298.3594	
Total		91.73		1152.41	606.51		10052.39	10658.90	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
x-bar =	12.5625	in	S _{right} =	848.47	in ³	x-bar =	12.5625	in	S _{right} =	848.47	in ³
I _y =	10658.90	in ⁴	S _{left} =	848.47	in ³	I _y =	10658.90	in ⁴	S _{left} =	848.47	in ³
C _{right} =	12.5625	in	A =	91.7344	in ²	C _{right} =	12.5625	in	A =	91.7344	in ²
C _{left} =	12.5625	in	r _y =	10.7793	in	C _{left} =	12.5625	in	r _y =	10.7793	in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.5000$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.5000$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.7500$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.6250$ in



Member U16-U17

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	6.0000	26.3750	158.2500	0.1250	12.0949	877.7256	877.8506
	Vertical Leg	7.5000	22.3750	167.8125	35.1563	8.0949	491.4606	526.6168
2	Horizontal Leg	6.0000	0.8750	5.2500	0.1250	13.4051	1078.1736	1078.2986
	Vertical Leg	7.5000	4.8750	36.5625	35.1563	9.4051	663.4135	698.5697
3	Plate	39.0000	13.6250	531.3750	2197.0000	0.6551	16.7350	2213.7350
4	Plate	11.7500	26.8750	315.7813	0.2448	12.5949	1863.9324	1864.1772
5	Perforated Plate	7.5000	0.3125	2.3438	0.2441	13.9676	1463.1952	1463.4394
Total		85.25		1217.38	2268.05		6454.64	8722.69
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.2801 in	S _{top} =	679.08 in ³	y-bar =	14.2801 in	S _{top} =	679.08 in ³
I _x =	8722.69 in ⁴	S _{bott.} =	610.83 in ³	I _x =	8722.69 in ⁴	S _{bott.} =	610.83 in ³
C _{top} =	12.8449 in	A =	85.2500 in ²	C _{top} =	12.8449 in	A =	85.2500 in ²
C _{bottom} =	14.2801 in	r _x =	10.1153 in	C _{bottom} =	14.2801 in	r _x =	10.1153 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.0000	3.7500	11.2500	9.0000	8.7500	229.6875	238.6875	
	Vertical Leg	3.7500	1.0000	3.7500	0.0781	11.5000	495.9375	496.0156	
1 (Right)	Horizontal Leg	3.0000	21.2500	63.7500	9.0000	8.7500	229.6875	238.6875	
	Vertical Leg	3.7500	24.0000	90.0000	0.0781	11.5000	495.9375	496.0156	
2 (Left)	Horizontal Leg	3.0000	3.7500	11.2500	9.0000	8.7500	229.6875	238.6875	
	Vertical Leg	3.7500	1.0000	3.7500	0.0781	11.5000	495.9375	496.0156	
2 (Right)	Horizontal Leg	3.0000	21.2500	63.7500	9.0000	8.7500	229.6875	238.6875	
	Vertical Leg	3.7500	24.0000	90.0000	0.0781	11.5000	495.9375	496.0156	
3 (Left)	Plate	19.5000	0.3750	7.3125	0.9141	12.1250	2866.8047	2867.7188	
3 (Right)	Plate	19.5000	24.6250	480.1875	0.9141	12.1250	2866.8047	2867.7188	
4	Plate	11.7500	12.5000	146.8750	540.7448	0.0000	0.0000	540.7448	
5 (Left)	Perforated Plate	3.7500	3.7500	14.0625	11.2500	8.7500	287.1094	298.3594	
5 (Right)	Perforated Plate	3.7500	21.2500	79.6875	11.2500	8.7500	287.1094	298.3594	
Total		85.25		1065.63	601.39		9210.33	9811.71	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.5000 in	S _{right} =	784.94 in ³	x-bar =	12.5000 in	S _{right} =	784.94 in ³
I _y =	9811.71 in ⁴	S _{left} =	784.94 in ³	I _y =	9811.71 in ⁴	S _{left} =	784.94 in ³
C _{right} =	12.5000 in	A =	85.2500 in ²	C _{right} =	12.5000 in	A =	85.2500 in ²
C _{left} =	12.5000 in	r _y =	10.7282 in	C _{left} =	12.5000 in	r _y =	10.7282 in



Made By DWC
Checked By KMW

Date 1/30/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.5000$ in

Top Cover Plate:

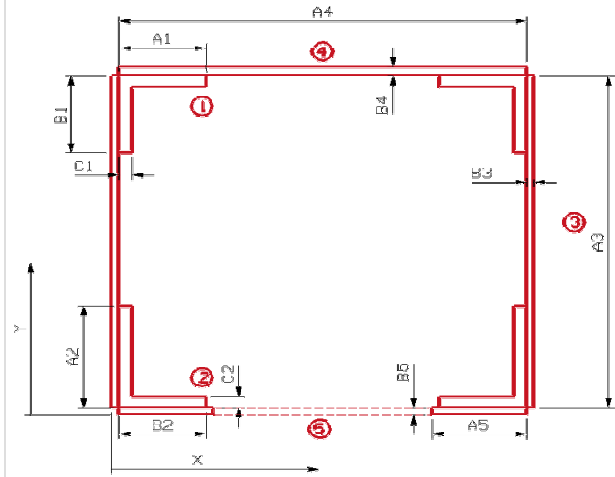
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.5000$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.5000$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.6250$ in



Member U17-U18

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	6.0000	26.3750	158.2500	0.1250	11.9771	860.7021	860.8271	
	Vertical Leg	7.5000	22.3750	167.8125	35.1563	7.9771	477.2531	512.4093	
2	Horizontal Leg	6.0000	0.8750	5.2500	0.1250	13.5229	1097.2168	1097.3418	
	Vertical Leg	7.5000	4.8750	36.5625	35.1563	9.5229	680.1456	715.3018	
3	Plate	26.0000	13.6250	354.2500	1464.6667	0.7729	15.5327	1480.1994	
4	Plate	11.7500	26.8750	315.7813	0.2448	12.4771	1829.2098	1829.4546	
5	Perforated Plate	7.5000	0.3125	2.3438	0.2441	14.0854	1487.9937	1488.2379	
Total		72.25		1040.25	1535.72		6448.05	7983.77	
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	
1	3.0000	0.6250	-1.8750	0.3125	-0.5859	-0.0610	15.0180	-422.8904	-422.9514
2	0.1250	7.5000	-0.9375	4.8750	-4.5703	-4.3945	10.4555	-102.4859	-106.8805
3	0.1250	7.5000	-0.9375	4.8750	-4.5703	-4.3945	10.4555	-102.4859	-106.8805
4	5.5000	0.1250	-0.6875	1.0625	-0.7305	-0.0009	14.2680	-139.9592	-139.9601
5	5.5000	0.1250	-0.6875	1.0625	-0.7305	-0.0009	14.2680	-139.9592	-139.9601
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-5.13	-11.19	-8.85		-907.78	-916.63	



Made By DWC
Checked By KMW

Date 1/30/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.3979 in	S _{top} =	627.31 in ³	y-bar =	15.3305 in	S _{top} =	599.19 in ³
I _x =	7983.77 in ⁴	S _{bott.} =	554.51 in ³	I _x =	7067.14 in ⁴	S _{bott.} =	460.98 in ³
C _{top} =	12.7271 in	A =	72.2500 in ²	C _{top} =	11.7945 in	A =	67.1250 in ²
C _{bottom} =	14.3979 in	r _x =	10.5120 in	C _{bottom} =	15.3305 in	r _x =	10.2608 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.0000	3.5000	10.5000	9.0000	8.7500	229.6875	238.6875	
	Vertical Leg	3.7500	0.7500	2.8125	0.0781	11.5000	495.9375	496.0156	
1 (Right)	Horizontal Leg	3.0000	21.0000	63.0000	9.0000	8.7500	229.6875	238.6875	
	Vertical Leg	3.7500	23.7500	89.0625	0.0781	11.5000	495.9375	496.0156	
2 (Left)	Horizontal Leg	3.0000	3.5000	10.5000	9.0000	8.7500	229.6875	238.6875	
	Vertical Leg	3.7500	0.7500	2.8125	0.0781	11.5000	495.9375	496.0156	
2 (Right)	Horizontal Leg	3.0000	21.0000	63.0000	9.0000	8.7500	229.6875	238.6875	
	Vertical Leg	3.7500	23.7500	89.0625	0.0781	11.5000	495.9375	496.0156	
3 (Left)	Plate	13.0000	0.2500	3.2500	0.2708	12.0000	1872.0000	1872.2708	
3 (Right)	Plate	13.0000	24.2500	315.2500	0.2708	12.0000	1872.0000	1872.2708	
4	Plate	11.7500	12.2500	143.9375	540.7448	0.0000	0.0000	540.7448	
5 (Left)	Perforated Plate	3.7500	3.5000	13.1250	11.2500	8.7500	287.1094	298.3594	
5 (Right)	Perforated Plate	3.7500	21.0000	78.7500	11.2500	8.7500	287.1094	298.3594	
Total		72.25		885.06	600.10		7220.72	7820.82	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.6250	3.0000	-1.8750	19.5000	-36.5625	-1.4063	7.4525	-104.1374	-105.5437
2	7.5000	0.1250	-0.9375	0.9375	-0.8789	-0.0012	11.1100	-115.7173	-115.7185
3	7.5000	0.1250	-0.9375	23.5625	-22.0898	-0.0012	11.5150	-124.3083	-124.3095
4	0.1250	5.5000	-0.6875	3.7500	-2.5781	-1.7331	8.2975	-47.3332	-49.0663
5	0.1250	5.5000	-0.6875	20.7500	-14.2656	-1.7331	8.7025	-52.0670	-53.8000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-5.13		-76.38	-4.87		-443.56	-448.44

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2500 in	S _{right} =	638.43 in ³	x-bar =	12.0475 in	S _{right} =	592.04 in ³
I _y =	7820.82 in ⁴	S _{left} =	638.43 in ³	I _y =	7372.38 in ⁴	S _{left} =	611.94 in ³
C _{right} =	12.2500 in	A =	72.2500 in ²	C _{right} =	12.4525 in	A =	67.1250 in ²
C _{left} =	12.2500 in	r _y =	10.4042 in	C _{left} =	12.0475 in	r _y =	10.4800 in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

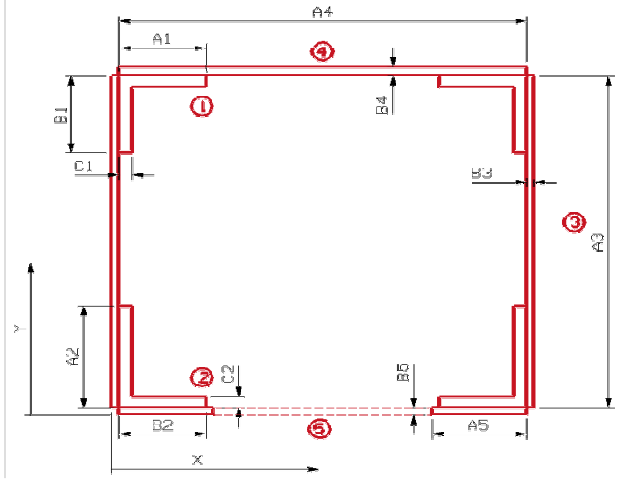
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.4375$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_f = 0.4375$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member U18-U19

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.2500	26.2813	137.9766	0.0837	12.1823	779.1420	779.2258
	Vertical Leg	6.6172	22.2813	147.4392	31.5372	8.1823	443.0190	474.5562
2	Horizontal Leg	5.2500	0.7188	3.7734	0.0837	13.3802	939.9087	939.9924
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	9.3802	582.2363	613.7735
3	Plate	22.7500	13.5000	307.1250	1281.5833	0.5990	8.1618	1289.7452
4	Plate	8.8125	26.6875	235.1836	0.1033	12.5885	1396.5270	1396.6303
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	13.8490	1150.7634	1150.8884
Total		61.30		864.22	1345.05		5299.76	6644.81
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.0990 in	S _{top} =	520.10 in ³	y-bar =	14.0990 in	S _{top} =	520.10 in ³
I _x =	6644.81 in ⁴	S _{bott.} =	471.30 in ³	I _x =	6644.81 in ⁴	S _{bott.} =	471.30 in ³
C _{top} =	12.7760 in	A =	61.2969 in ²	C _{top} =	12.7760 in	A =	61.2969 in ²
C _{bottom} =	14.0990 in	r _x =	10.4117 in	C _{bottom} =	14.0990 in	r _x =	10.4117 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.4375	9.0234	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	20.9375	54.9609	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.4375	9.0234	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	20.9375	54.9609	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.4375	10.3125	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.9375	62.8125	9.0000	8.7500	229.6875	238.6875	
Total		61.30		747.06	455.63		6282.01	6737.64	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	552.83 in ³	x-bar =	12.1875 in	S _{right} =	552.83 in ³
I _y =	6737.64 in ⁴	S _{left} =	552.83 in ³	I _y =	6737.64 in ⁴	S _{left} =	552.83 in ³
C _{right} =	12.1875 in	A =	61.2969 in ²	C _{right} =	12.1875 in	A =	61.2969 in ²
C _{left} =	12.1875 in	r _y =	10.4842 in	C _{left} =	12.1875 in	r _y =	10.4842 in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.4375$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.4375$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member U19-U20

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.2500	26.2813	137.9766	0.0837	12.1823	779.1420	779.2258
	Vertical Leg	6.6172	22.2813	147.4392	31.5372	8.1823	443.0190	474.5562
2	Horizontal Leg	5.2500	0.7188	3.7734	0.0837	13.3802	939.9087	939.9924
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	9.3802	582.2363	613.7735
3	Plate	22.7500	13.5000	307.1250	1281.5833	0.5990	8.1618	1289.7452
4	Plate	8.8125	26.6875	235.1836	0.1033	12.5885	1396.5270	1396.6303
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	13.8490	1150.7634	1150.8884
Total		61.30		864.22	1345.05		5299.76	6644.81
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.0990 in	S _{top} =	520.10 in ³	y-bar =	14.0990 in	S _{top} =	520.10 in ³
I _x =	6644.81 in ⁴	S _{bott.} =	471.30 in ³	I _x =	6644.81 in ⁴	S _{bott.} =	471.30 in ³
C _{top} =	12.7760 in	A =	61.2969 in ²	C _{top} =	12.7760 in	A =	61.2969 in ²
C _{bottom} =	14.0990 in	r _x =	10.4117 in	C _{bottom} =	14.0990 in	r _x =	10.4117 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.4375	9.0234	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	20.9375	54.9609	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.4375	9.0234	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	20.9375	54.9609	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.4375	10.3125	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.9375	62.8125	9.0000	8.7500	229.6875	238.6875	
Total		61.30		747.06	455.63		6282.01	6737.64	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	552.83 in ³	x-bar =	12.1875 in	S _{right} =	552.83 in ³
I _y =	6737.64 in ⁴	S _{left} =	552.83 in ³	I _y =	6737.64 in ⁴	S _{left} =	552.83 in ³
C _{right} =	12.1875 in	A =	61.2969 in ²	C _{right} =	12.1875 in	A =	61.2969 in ²
C _{left} =	12.1875 in	r _y =	10.4842 in	C _{left} =	12.1875 in	r _y =	10.4842 in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

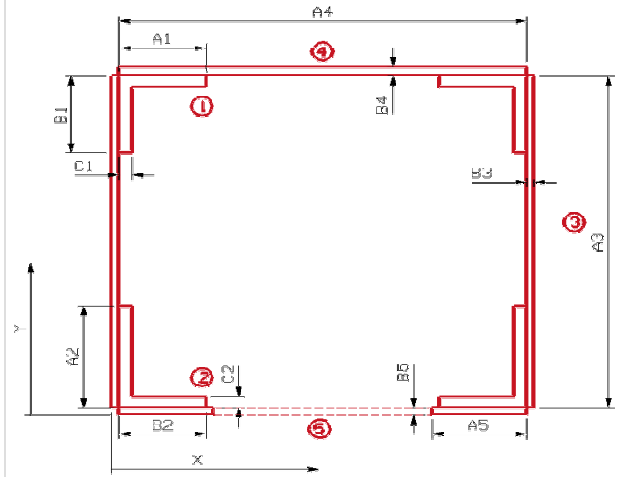
Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3750$ in

Bottom Angles:
 $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3750$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member U20-U21

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.0000	26.3125	78.9375	0.0352	12.0632	436.5636	436.5988
	Vertical Leg	2.7188	24.3125	66.0996	2.9772	10.0632	275.3233	278.3005
2	Horizontal Leg	3.0000	0.6875	2.0625	0.0352	13.5618	551.7658	551.8010
	Vertical Leg	2.7188	2.6875	7.3066	2.9772	11.5618	363.4284	366.4056
3	Plate	22.7500	13.5000	307.1250	1281.5833	0.7493	12.7724	1294.3557
4	Plate	8.8125	26.6875	235.1836	0.1033	12.4382	1363.3753	1363.4786
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	13.9993	1175.8795	1176.0045
Total		49.00		698.21	1287.84		4179.11	5466.94
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	14.2493	in	S _{top} =	433.00	in ³	y-bar =	14.2493	in	S _{top} =	433.00	in ³
I _x =	5466.94	in ⁴	S _{bott.} =	383.66	in ³	I _x =	5466.94	in ⁴	S _{bott.} =	383.66	in ³
C _{top} =	12.6257	in	A =	49.0000	in ²	C _{top} =	12.6257	in	A =	49.0000	in ²
C _{bottom} =	14.2493	in	r _x =	10.5627	in	C _{bottom} =	14.2493	in	r _x =	10.5627	in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.5000	2.4375	3.6563	2.0000	9.7500	142.5938	144.5938	
	Vertical Leg	1.3594	0.6250	0.8496	0.0159	11.5625	181.7368	181.7527	
1 (Right)	Horizontal Leg	1.5000	21.9375	32.9063	2.0000	9.7500	142.5938	144.5938	
	Vertical Leg	1.3594	23.7500	32.2852	0.0159	11.5625	181.7368	181.7527	
2 (Left)	Horizontal Leg	1.5000	2.4375	3.6563	2.0000	9.7500	142.5938	144.5938	
	Vertical Leg	1.3594	0.6250	0.8496	0.0159	11.5625	181.7368	181.7527	
2 (Right)	Horizontal Leg	1.5000	21.9375	32.9063	2.0000	9.7500	142.5938	144.5938	
	Vertical Leg	1.3594	23.7500	32.2852	0.0159	11.5625	181.7368	181.7527	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.4375	10.3125	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.9375	62.8125	9.0000	8.7500	229.6875	238.6875	
Total		49.00		597.19	431.99		5015.66	5447.64	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
x-bar =	12.1875	in	S _{right} =	446.99	in ³	x-bar =	12.1875	in	S _{right} =	446.99	in ³
I _y =	5447.64	in ⁴	S _{left} =	446.99	in ³	I _y =	5447.64	in ⁴	S _{left} =	446.99	in ³
C _{right} =	12.1875	in	A =	49.0000	in ²	C _{right} =	12.1875	in	A =	49.0000	in ²
C _{left} =	12.1875	in	r _y =	10.5440	in	C _{left} =	12.1875	in	r _y =	10.5440	in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

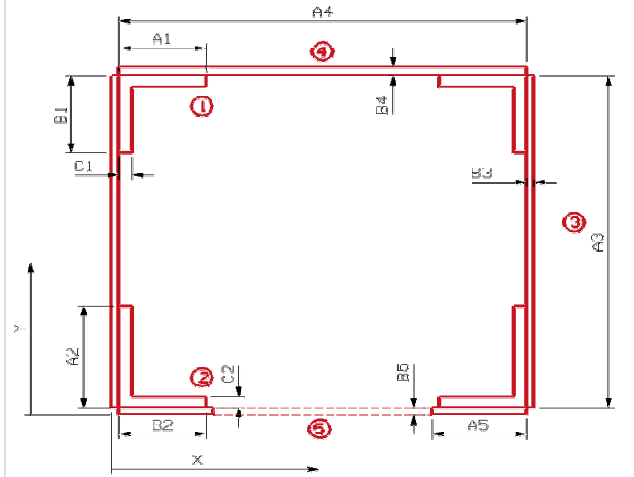
Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:
 $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member U21-U22

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5031	330.8057	330.8260
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5031	208.1357	210.7472
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.1844	502.9900	503.0104
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.1844	342.1506	344.7621
3	Plate	19.5000	13.3750	260.8125	1098.5000	1.3406	35.0460	1133.5460
4	Plate	8.8125	26.5625	234.0820	0.1033	11.8469	1236.8243	1236.9276
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.5281	949.7966	949.8493
Total		42.42		624.26	1103.92		3605.75	4709.67
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.7156 in	S _{top} =	391.35 in ³	y-bar =	14.7156 in	S _{top} =	391.35 in ³
I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³	I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³
C _{top} =	12.0344 in	A =	42.4219 in ²	C _{top} =	12.0344 in	A =	42.4219 in ²
C _{bottom} =	14.7156 in	r _x =	10.5366 in	C _{bottom} =	14.7156 in	r _x =	10.5366 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	9.7500	0.1875	1.8281	0.1143	11.9375	1389.4131	1389.5273	
3 (Right)	Plate	9.7500	24.0625	234.6094	0.1143	11.9375	1389.4131	1389.5273	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.3750	7.5938	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.8750	46.9688	6.7500	8.7500	172.2656	179.0156	
Total		42.42		514.37	425.99		4218.24	4644.23	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	383.03 in ³	x-bar =	12.1250 in	S _{right} =	383.03 in ³
I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³	I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³
C _{right} =	12.1250 in	A =	42.4219 in ²	C _{right} =	12.1250 in	A =	42.4219 in ²
C _{left} =	12.1250 in	r _y =	10.4631 in	C _{left} =	12.1250 in	r _y =	10.4631 in



Made By DWC
Checked By KMW

Date 1/30/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

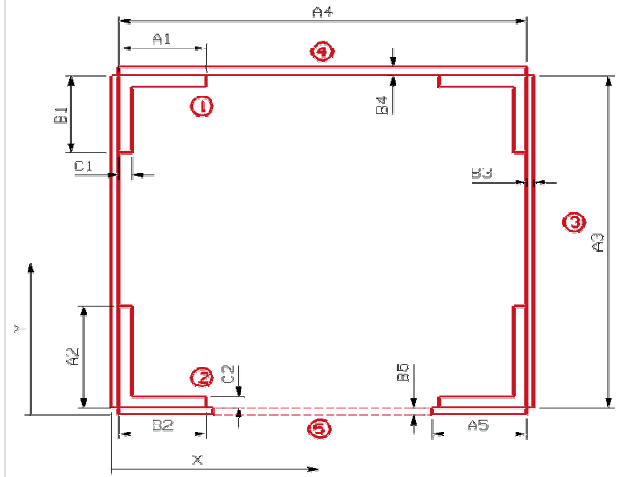
Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_f = 0.3125$ in

Bottom Angles:
 $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3125$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member U22-U23

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5031	330.8057	330.8260
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5031	208.1357	210.7472
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.1844	502.9900	503.0104
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.1844	342.1506	344.7621
3	Plate	19.5000	13.3750	260.8125	1098.5000	1.3406	35.0460	1133.5460
4	Plate	8.8125	26.5625	234.0820	0.1033	11.8469	1236.8243	1236.9276
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.5281	949.7966	949.8493
Total		42.42		624.26	1103.92		3605.75	4709.67
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	6.0000	0.2500	-1.5000	0.1250	-0.1875	-0.0078	16.7121	-418.9417
2	6.0000	0.2500	-1.5000	0.1250	-0.1875	-0.0078	16.7121	-418.9417
3	1.0000	0.1250	-0.1250	0.3125	-0.0391	-0.0002	16.5246	-34.1328
4	3.6875	0.2500	-0.9219	0.5625	-0.5186	-0.0048	16.2746	-244.1704
5	3.6875	0.2500	-0.9219	0.5625	-0.5186	-0.0048	16.2746	-244.1704
6	0.0625	18.0000	-1.1250	13.3750	-15.0469	-30.3750	3.4621	-13.4845
7	0.0625	18.0000	-1.1250	13.3750	-15.0469	-30.3750	3.4621	-13.4845
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-7.22	-31.54	-60.78		-1387.33	-1448.10



Made By DWC
Checked By KMW

Date 1/30/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.7156 in	S _{top} =	391.35 in ³	y-bar =	16.8371 in	S _{top} =	329.02 in ³
I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³	I _x =	3261.57 in ⁴	S _{bott.} =	193.71 in ³
C _{top} =	12.0344 in	A =	42.4219 in ²	C _{top} =	9.9129 in	A =	35.2031 in ²
C _{bottom} =	14.7156 in	r _x =	10.5366 in	C _{bottom} =	16.8371 in	r _x =	9.6255 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	9.7500	0.1875	1.8281	0.1143	11.9375	1389.4131	1389.5273	
3 (Right)	Plate	9.7500	24.0625	234.6094	0.1143	11.9375	1389.4131	1389.5273	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.3750	7.5938	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.8750	46.9688	6.7500	8.7500	172.2656	179.0156	
Total		42.42		514.37	425.99		4218.24	4644.23	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.2500	6.0000	-1.5000	3.3750	-5.0625	-4.5000	8.7278	-114.2619	-118.7619
2	0.2500	6.0000	-1.5000	20.8750	-31.3125	-4.5000	8.7722	-115.4270	-119.9270
3	0.1250	1.0000	-0.1250	18.3750	-2.2969	-0.0104	6.2722	-4.9176	-4.9280
4	0.2500	3.6875	-0.9219	2.5313	-2.3335	-1.0446	9.5716	-84.4573	-85.5019
5	0.2500	3.6875	-0.9219	21.7188	-20.0220	-1.0446	9.6159	-85.2424	-86.2870
6	18.0000	0.0625	-1.1250	0.3438	-0.3867	-0.0004	11.7591	-155.5599	-155.5602
7	18.0000	0.0625	-1.1250	23.9063	-26.8945	-0.0004	11.8034	-156.7364	-156.7368
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-7.22		-88.31	-11.10		-716.60	-727.70

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	383.03 in ³	x-bar =	12.1028 in	S _{right} =	322.42 in ³
I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³	I _y =	3916.53 in ⁴	S _{left} =	323.60 in ³
C _{right} =	12.1250 in	A =	42.4219 in ²	C _{right} =	12.1472 in	A =	35.2031 in ²
C _{left} =	12.1250 in	r _y =	10.4631 in	C _{left} =	12.1028 in	r _y =	10.5478 in



Made By DWC
Checked By KMW

Date 1/30/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

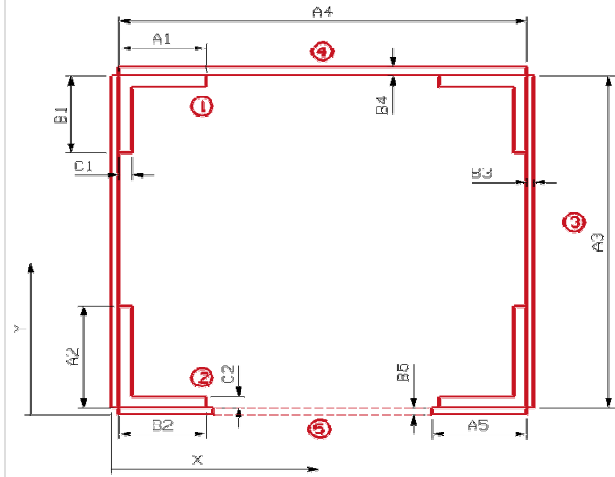
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member U23-U24

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5985	336.3153	336.3356
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5985	212.3354	214.9469
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.0890	496.2470	496.2674
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.0890	336.8139	339.4254
3	Plate	22.7500	13.3750	304.2813	1281.5833	1.2452	35.2750	1316.8583
4	Plate	8.8125	26.5625	234.0820	0.1033	11.9423	1256.8236	1256.9269
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.4327	937.3641	937.4168
Total		45.67		667.73	1287.00		3611.17	4898.18
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	23.5000	0.0625	-1.4688	26.7188	-39.2432	-0.0005	10.7543	-169.8686
2	0.0625	26.0000	-1.6250	13.3750	-21.7344	-91.5417	2.5894	-10.8959
3	0.0625	26.0000	-1.6250	13.3750	-21.7344	-91.5417	2.5894	-10.8959
4	6.0000	0.2500	-1.5000	0.1250	-0.1875	-0.0078	15.8394	-376.3317
5	6.0000	0.2500	-1.5000	0.1250	-0.1875	-0.0078	15.8394	-376.3317
6	3.6875	0.1875	-0.6914	0.5938	-0.4105	-0.0020	15.3707	-163.3503
7	3.6875	0.1875	-0.6914	0.5938	-0.4105	-0.0020	15.3707	-163.3503
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-9.10	-83.91	-183.10		-1271.02	-1454.13



Made By DWC
Checked By KMW

Date 1/30/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	14.6202	in	S _{top} =	403.81	in ³	y-bar =	15.9644	in	S _{top} =	319.32	in ³
I _x =	4898.18	in ⁴	S _{bott.} =	335.03	in ³	I _x =	3444.05	in ⁴	S _{bott.} =	215.73	in ³
C _{top} =	12.1298	in	A =	45.6719	in ²	C _{top} =	10.7856	in	A =	36.5703	in ²
C _{bottom} =	14.6202	in	r _x =	10.3560	in	C _{bottom} =	15.9644	in	r _x =	9.7044	in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.4375	7.7344	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.9375	47.1094	6.7500	8.7500	172.2656	179.0156	
Total		45.67		556.63	426.13		4698.37	5124.50	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0625	23.5000	-1.4688	12.1875	-17.9004	-67.5931	0.0000	0.0000	-67.5931
2	26.0000	0.0625	-1.6250	0.0313	-0.0508	-0.0005	12.1563	-240.1334	-240.1340
3	26.0000	0.0625	-1.6250	24.3438	-39.5586	-0.0005	12.1563	-240.1334	-240.1340
4	0.2500	6.0000	-1.5000	3.4375	-5.1563	-4.5000	8.7500	-114.8438	-119.3438
5	0.2500	6.0000	-1.5000	20.9375	-31.4063	-4.5000	8.7500	-114.8438	-119.3438
6	0.1875	3.6875	-0.6914	2.5938	-1.7933	-0.7835	9.5938	-63.6371	-64.4205
7	0.1875	3.6875	-0.6914	21.7813	-15.0597	-0.7835	9.5938	-63.6371	-64.4205
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-9.10		-110.93	-78.16		-837.23	-915.39

As-Built Section Properties				As-Inspected Section Properties							
x-bar =	12.1875	in	S _{right} =	420.47	in ³	x-bar =	12.1875	in	S _{right} =	345.36	in ³
I _y =	5124.50	in ⁴	S _{left} =	420.47	in ³	I _y =	4209.11	in ⁴	S _{left} =	345.36	in ³
C _{right} =	12.1875	in	A =	45.6719	in ²	C _{right} =	12.1875	in	A =	36.5703	in ²
C _{left} =	12.1875	in	r _y =	10.5926	in	C _{left} =	12.1875	in	r _y =	10.7283	in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

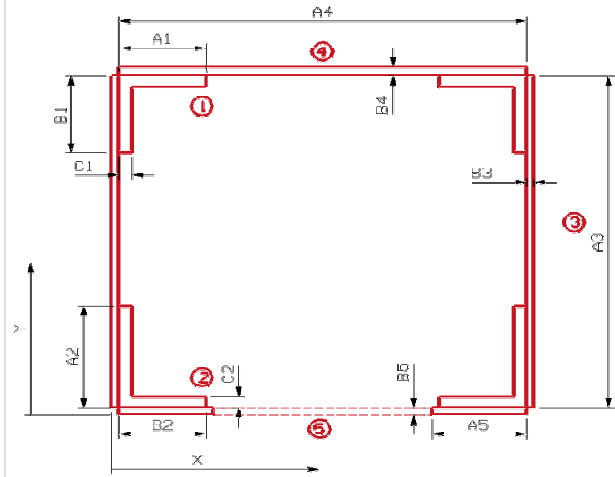
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.5625$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member U24-U25

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x, gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.7537	345.3724	345.3927
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.7537	219.2547	221.8662
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	13.9338	485.3785	485.3988
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	11.9338	328.2246	330.8361
3	Plate	29.2500	13.3750	391.2188	1647.7500	1.0901	34.7565	1682.5065
4	Plate	8.8125	26.5625	234.0820	0.1033	12.0974	1289.6897	1289.7930
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.2776	917.3208	917.3735
Total		52.17		754.67	1653.17		3620.00	5273.17
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.4651 in	S _{top} =	429.24 in ³	y-bar =	14.4651 in	S _{top} =	429.24 in ³
I _x =	5273.17 in ⁴	S _{bott.} =	364.54 in ³	I _x =	5273.17 in ⁴	S _{bott.} =	364.54 in ³
C _{top} =	12.2849 in	A =	52.1719 in ²	C _{top} =	12.2849 in	A =	52.1719 in ²
C _{bottom} =	14.4651 in	r _x =	10.0535 in	C _{bottom} =	14.4651 in	r _x =	10.0535 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.5625	3.2031	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.7188	0.8282	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	22.0625	27.5781	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.9063	27.5482	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.5625	3.2031	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.7188	0.8282	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	22.0625	27.5781	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.9063	27.5482	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	14.6250	0.2813	4.1133	0.3856	12.0313	2116.9830	2117.3687	
3 (Right)	Plate	14.6250	24.3438	356.0273	0.3856	12.0313	2116.9830	2117.3687	
4	Plate	8.8125	12.3125	108.5039	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.5625	8.0156	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	21.0625	47.3906	6.7500	8.7500	172.2656	179.0156	
Total		52.17		642.37	426.53		5673.38	6099.91	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3125 in	S _{right} =	495.42 in ³	x-bar =	12.3125 in	S _{right} =	495.42 in ³
I _y =	6099.91 in ⁴	S _{left} =	495.42 in ³	I _y =	6099.91 in ⁴	S _{left} =	495.42 in ³
C _{right} =	12.3125 in	A =	52.1719 in ²	C _{right} =	12.3125 in	A =	52.1719 in ²
C _{left} =	12.3125 in	r _y =	10.8129 in	C _{left} =	12.3125 in	r _y =	10.8129 in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.5625$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member U25-U26

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x, gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.7537	345.3724	345.3927
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.7537	219.2547	221.8662
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	13.9338	485.3785	485.3988
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	11.9338	328.2246	330.8361
3	Plate	29.2500	13.3750	391.2188	1647.7500	1.0901	34.7565	1682.5065
4	Plate	8.8125	26.5625	234.0820	0.1033	12.0974	1289.6897	1289.7930
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.2776	917.3208	917.3735
Total		52.17		754.67	1653.17		3620.00	5273.17
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.4651 in	S _{top} =	429.24 in ³	y-bar =	14.4651 in	S _{top} =	429.24 in ³
I _x =	5273.17 in ⁴	S _{bott.} =	364.54 in ³	I _x =	5273.17 in ⁴	S _{bott.} =	364.54 in ³
C _{top} =	12.2849 in	A =	52.1719 in ²	C _{top} =	12.2849 in	A =	52.1719 in ²
C _{bottom} =	14.4651 in	r _x =	10.0535 in	C _{bottom} =	14.4651 in	r _x =	10.0535 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.5625	3.2031	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.7188	0.8282	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	22.0625	27.5781	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.9063	27.5482	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.5625	3.2031	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.7188	0.8282	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	22.0625	27.5781	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.9063	27.5482	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	14.6250	0.2813	4.1133	0.3856	12.0313	2116.9830	2117.3687	
3 (Right)	Plate	14.6250	24.3438	356.0273	0.3856	12.0313	2116.9830	2117.3687	
4	Plate	8.8125	12.3125	108.5039	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.5625	8.0156	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	21.0625	47.3906	6.7500	8.7500	172.2656	179.0156	
Total		52.17		642.37	426.53		5673.38	6099.91	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3125 in	S _{right} =	495.42 in ³	x-bar =	12.3125 in	S _{right} =	495.42 in ³
I _y =	6099.91 in ⁴	S _{left} =	495.42 in ³	I _y =	6099.91 in ⁴	S _{left} =	495.42 in ³
C _{right} =	12.3125 in	A =	52.1719 in ²	C _{right} =	12.3125 in	A =	52.1719 in ²
C _{left} =	12.3125 in	r _y =	10.8129 in	C _{left} =	12.3125 in	r _y =	10.8129 in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.5625$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member U26-U27

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.7537	345.3724	345.3927
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.7537	219.2547	221.8662
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	13.9338	485.3785	485.3988
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	11.9338	328.2246	330.8361
3	Plate	29.2500	13.3750	391.2188	1647.7500	1.0901	34.7565	1682.5065
4	Plate	8.8125	26.5625	234.0820	0.1033	12.0974	1289.6897	1289.7930
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.2776	917.3208	917.3735
Total		52.17		754.67	1653.17		3620.00	5273.17
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.4651 in	S _{top} =	429.24 in ³	y-bar =	14.4651 in	S _{top} =	429.24 in ³
I _x =	5273.17 in ⁴	S _{bott.} =	364.54 in ³	I _x =	5273.17 in ⁴	S _{bott.} =	364.54 in ³
C _{top} =	12.2849 in	A =	52.1719 in ²	C _{top} =	12.2849 in	A =	52.1719 in ²
C _{bottom} =	14.4651 in	r _x =	10.0535 in	C _{bottom} =	14.4651 in	r _x =	10.0535 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.5625	3.2031	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.7188	0.8282	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	22.0625	27.5781	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.9063	27.5482	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.5625	3.2031	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.7188	0.8282	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	22.0625	27.5781	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.9063	27.5482	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	14.6250	0.2813	4.1133	0.3856	12.0313	2116.9830	2117.3687	
3 (Right)	Plate	14.6250	24.3438	356.0273	0.3856	12.0313	2116.9830	2117.3687	
4	Plate	8.8125	12.3125	108.5039	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.5625	8.0156	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	21.0625	47.3906	6.7500	8.7500	172.2656	179.0156	
Total		52.17		642.37	426.53		5673.38	6099.91	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3125 in	S _{right} =	495.42 in ³	x-bar =	12.3125 in	S _{right} =	495.42 in ³
I _y =	6099.91 in ⁴	S _{left} =	495.42 in ³	I _y =	6099.91 in ⁴	S _{left} =	495.42 in ³
C _{right} =	12.3125 in	A =	52.1719 in ²	C _{right} =	12.3125 in	A =	52.1719 in ²
C _{left} =	12.3125 in	r _y =	10.8129 in	C _{left} =	12.3125 in	r _y =	10.8129 in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

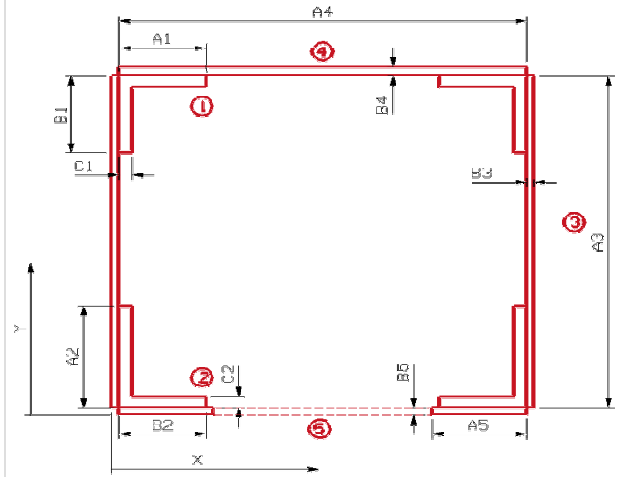
Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:
 $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member U27-U28

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5985	336.3153	336.3356
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5985	212.3354	214.9469
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.0890	496.2470	496.2674
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.0890	336.8139	339.4254
3	Plate	22.7500	13.3750	304.2813	1281.5833	1.2452	35.2750	1316.8583
4	Plate	8.8125	26.5625	234.0820	0.1033	11.9423	1256.8236	1256.9269
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.4327	937.3641	937.4168
Total		45.67		667.73	1287.00		3611.17	4898.18
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	14.6202	in	S _{top} =	403.81	in ³	y-bar =	14.6202	in	S _{top} =	403.81	in ³
I _x =	4898.18	in ⁴	S _{bott.} =	335.03	in ³	I _x =	4898.18	in ⁴	S _{bott.} =	335.03	in ³
C _{top} =	12.1298	in	A =	45.6719	in ²	C _{top} =	12.1298	in	A =	45.6719	in ²
C _{bottom} =	14.6202	in	r _x =	10.3560	in	C _{bottom} =	14.6202	in	r _x =	10.3560	in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.4375	7.7344	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.9375	47.1094	6.7500	8.7500	172.2656	179.0156	
Total		45.67		556.63	426.13		4698.37	5124.50	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.1875	in	S _{right} =	420.47	in ³	x-bar =	12.1875	in	S _{right} =	420.47	in ³
I _y =	5124.50	in ⁴	S _{left} =	420.47	in ³	I _y =	5124.50	in ⁴	S _{left} =	420.47	in ³
C _{right} =	12.1875	in	A =	45.6719	in ²	C _{right} =	12.1875	in	A =	45.6719	in ²
C _{left} =	12.1875	in	r _y =	10.5926	in	C _{left} =	12.1875	in	r _y =	10.5926	in



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

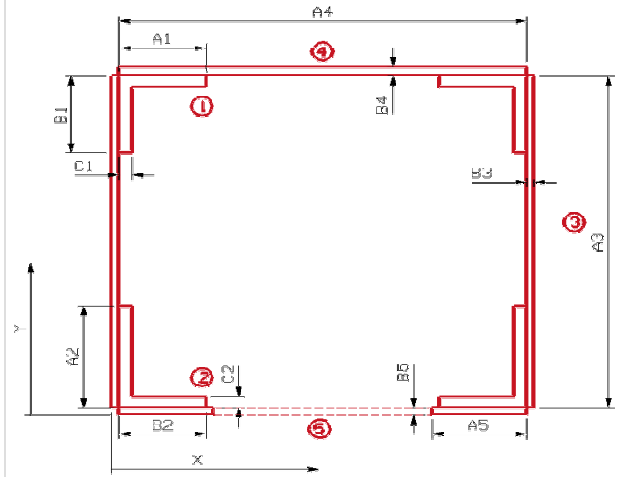
Top Angles: $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles: $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1: $A_3 = b = 26.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member U28-U29

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5031	330.8057	330.8260
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5031	208.1357	210.7472
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.1844	502.9900	503.0104
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.1844	342.1506	344.7621
3	Plate	19.5000	13.3750	260.8125	1098.5000	1.3406	35.0460	1133.5460
4	Plate	8.8125	26.5625	234.0820	0.1033	11.8469	1236.8243	1236.9276
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.5281	949.7966	949.8493
Total		42.42		624.26	1103.92		3605.75	4709.67
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.7156 in	S _{top} =	391.35 in ³	y-bar =	14.7156 in	S _{top} =	391.35 in ³
I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³	I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³
C _{top} =	12.0344 in	A =	42.4219 in ²	C _{top} =	12.0344 in	A =	42.4219 in ²
C _{bottom} =	14.7156 in	r _x =	10.5366 in	C _{bottom} =	14.7156 in	r _x =	10.5366 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	9.7500	0.1875	1.8281	0.1143	11.9375	1389.4131	1389.5273	
3 (Right)	Plate	9.7500	24.0625	234.6094	0.1143	11.9375	1389.4131	1389.5273	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.3750	7.5938	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.8750	46.9688	6.7500	8.7500	172.2656	179.0156	
Total		42.42		514.37	425.99		4218.24	4644.23	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	383.03 in ³	x-bar =	12.1250 in	S _{right} =	383.03 in ³
I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³	I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³
C _{right} =	12.1250 in	A =	42.4219 in ²	C _{right} =	12.1250 in	A =	42.4219 in ²
C _{left} =	12.1250 in	r _y =	10.4631 in	C _{left} =	12.1250 in	r _y =	10.4631 in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles: $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles: $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1: $A_3 = b = 26.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member U29-U30

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5031	330.8057	330.8260
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5031	208.1357	210.7472
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.1844	502.9900	503.0104
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.1844	342.1506	344.7621
3	Plate	19.5000	13.3750	260.8125	1098.5000	1.3406	35.0460	1133.5460
4	Plate	8.8125	26.5625	234.0820	0.1033	11.8469	1236.8243	1236.9276
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.5281	949.7966	949.8493
Total		42.42		624.26	1103.92		3605.75	4709.67
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.7156 in	S _{top} =	391.35 in ³	y-bar =	14.7156 in	S _{top} =	391.35 in ³
I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³	I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³
C _{top} =	12.0344 in	A =	42.4219 in ²	C _{top} =	12.0344 in	A =	42.4219 in ²
C _{bottom} =	14.7156 in	r _x =	10.5366 in	C _{bottom} =	14.7156 in	r _x =	10.5366 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	9.7500	0.1875	1.8281	0.1143	11.9375	1389.4131	1389.5273	
3 (Right)	Plate	9.7500	24.0625	234.6094	0.1143	11.9375	1389.4131	1389.5273	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.3750	7.5938	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.8750	46.9688	6.7500	8.7500	172.2656	179.0156	
Total		42.42		514.37	425.99		4218.24	4644.23	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	383.03 in ³	x-bar =	12.1250 in	S _{right} =	383.03 in ³
I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³	I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³
C _{right} =	12.1250 in	A =	42.4219 in ²	C _{right} =	12.1250 in	A =	42.4219 in ²
C _{left} =	12.1250 in	r _y =	10.4631 in	C _{left} =	12.1250 in	r _y =	10.4631 in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

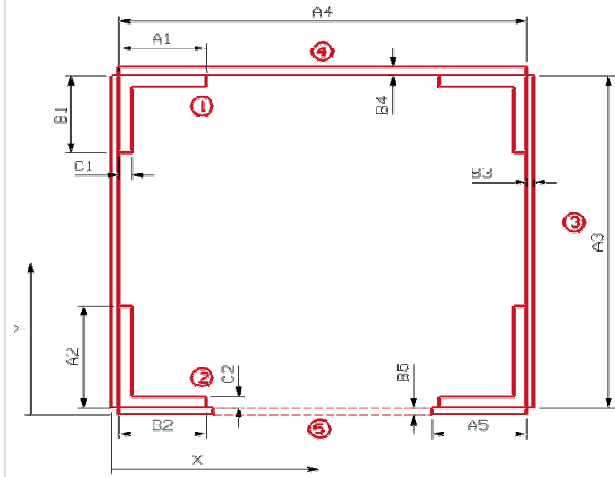
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member U30-U31

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5985	336.3153	336.3356
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5985	212.3354	214.9469
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.0890	496.2470	496.2674
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.0890	336.8139	339.4254
3	Plate	22.7500	13.3750	304.2813	1281.5833	1.2452	35.2750	1316.8583
4	Plate	8.8125	26.5625	234.0820	0.1033	11.9423	1256.8236	1256.9269
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.4327	937.3641	937.4168
Total		45.67		667.73	1287.00		3611.17	4898.18
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.6202 in	S _{top} =	403.81 in ³	y-bar =	14.6202 in	S _{top} =	403.81 in ³
I _x =	4898.18 in ⁴	S _{bott.} =	335.03 in ³	I _x =	4898.18 in ⁴	S _{bott.} =	335.03 in ³
C _{top} =	12.1298 in	A =	45.6719 in ²	C _{top} =	12.1298 in	A =	45.6719 in ²
C _{bottom} =	14.6202 in	r _x =	10.3560 in	C _{bottom} =	14.6202 in	r _x =	10.3560 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.4375	7.7344	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.9375	47.1094	6.7500	8.7500	172.2656	179.0156	
Total		45.67		556.63	426.13		4698.37	5124.50	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	420.47 in ³	x-bar =	12.1875 in	S _{right} =	420.47 in ³
I _y =	5124.50 in ⁴	S _{left} =	420.47 in ³	I _y =	5124.50 in ⁴	S _{left} =	420.47 in ³
C _{right} =	12.1875 in	A =	45.6719 in ²	C _{right} =	12.1875 in	A =	45.6719 in ²
C _{left} =	12.1875 in	r _y =	10.5926 in	C _{left} =	12.1875 in	r _y =	10.5926 in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

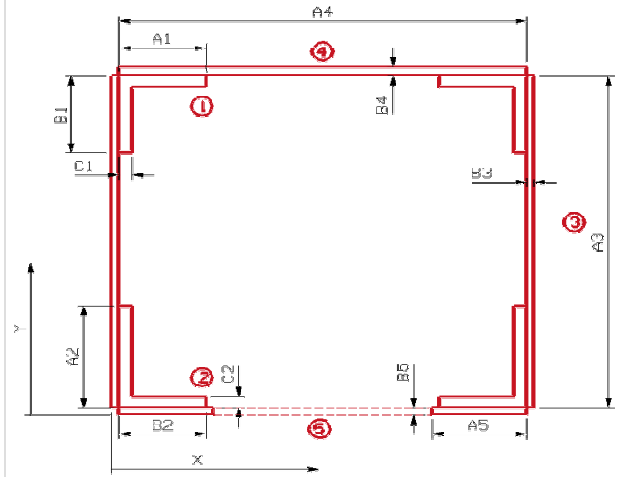
Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:
 $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member U31-U32

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x, gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5985	336.3153	336.3356
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5985	212.3354	214.9469
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.0890	496.2470	496.2674
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.0890	336.8139	339.4254
3	Plate	22.7500	13.3750	304.2813	1281.5833	1.2452	35.2750	1316.8583
4	Plate	8.8125	26.5625	234.0820	0.1033	11.9423	1256.8236	1256.9269
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.4327	937.3641	937.4168
Total		45.67		667.73	1287.00		3611.17	4898.18
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	14.6202	in	S _{top} =	403.81	in ³	y-bar =	14.6202	in	S _{top} =	403.81	in ³
I _x =	4898.18	in ⁴	S _{bott.} =	335.03	in ³	I _x =	4898.18	in ⁴	S _{bott.} =	335.03	in ³
C _{top} =	12.1298	in	A =	45.6719	in ²	C _{top} =	12.1298	in	A =	45.6719	in ²
C _{bottom} =	14.6202	in	r _x =	10.3560	in	C _{bottom} =	14.6202	in	r _x =	10.3560	in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.4375	7.7344	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.9375	47.1094	6.7500	8.7500	172.2656	179.0156	
Total		45.67		556.63	426.13		4698.37	5124.50	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
x-bar =	12.1875	in	S _{right} =	420.47	in ³	x-bar =	12.1875	in	S _{right} =	420.47	in ³
I _y =	5124.50	in ⁴	S _{left} =	420.47	in ³	I _y =	5124.50	in ⁴	S _{left} =	420.47	in ³
C _{right} =	12.1875	in	A =	45.6719	in ²	C _{right} =	12.1875	in	A =	45.6719	in ²
C _{left} =	12.1875	in	r _y =	10.5926	in	C _{left} =	12.1875	in	r _y =	10.5926	in



Made By DWC
Checked By KMW

Date 1/31/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

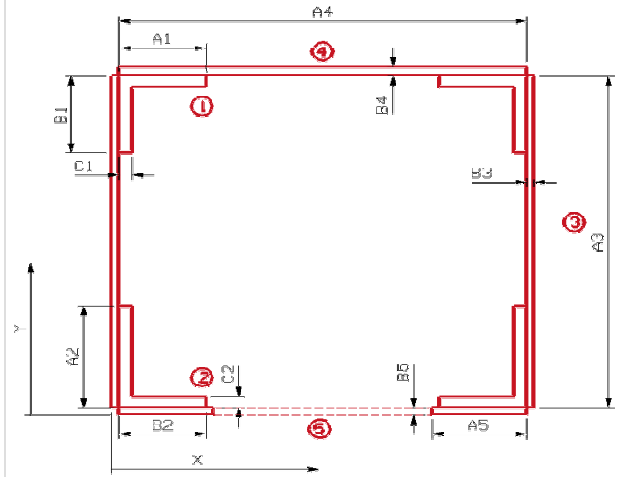
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.4375$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.4375$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.4375$ in

Web Plate 1:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.5625$ in



Member U32-U33

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	5.2500	26.3438	138.3047	0.0837	12.0530	762.6896	762.7733	
	Vertical Leg	6.6172	22.3438	147.8528	31.5372	8.0530	429.1273	460.6645	
2	Horizontal Leg	5.2500	0.7813	4.1016	0.0837	13.5095	958.1631	958.2469	
	Vertical Leg	6.6172	4.7813	31.6384	31.5372	9.5095	598.3993	629.9365	
3	Plate	22.7500	13.5625	308.5469	1281.5833	0.7283	12.0662	1293.6496	
4	Plate	10.2813	26.7813	275.3447	0.1640	12.4905	1603.9980	1604.1620	
5	Perforated Plate	6.7500	0.2813	1.8984	0.1780	14.0095	1324.8008	1324.9788	
Total		63.52		907.69	1345.17		5689.24	7034.41	
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	
1	0.0625	13.0000	-0.8125	7.0625	-5.7383	-11.4427	7.4181	-44.7099	-56.1527
2	0.0625	13.0000	-0.8125	7.0625	-5.7383	-11.4427	7.4181	-44.7099	-56.1527
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.63	-11.48	-22.89		-89.42	-112.31	



Made By DWC
Checked By KMW

Date 1/31/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	14.2908	in	S _{top} =	553.49	in ³	y-bar =	14.4806	in	S _{top} =	552.91	in ³
I _x =	7034.41	in ⁴	S _{bott.} =	492.23	in ³	I _x =	6922.11	in ⁴	S _{bott.} =	478.03	in ³
C _{top} =	12.7092	in	A =	63.5156	in ²	C _{top} =	12.5194	in	A =	61.8906	in ²
C _{bottom} =	14.2908	in	r _x =	10.5238	in	C _{bottom} =	14.4806	in	r _x =	10.5756	in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.4375	9.0234	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	20.9375	54.9609	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.4375	9.0234	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	20.9375	54.9609	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	10.2813	12.1875	125.3027	473.1517	0.0000	0.0000	473.1517	
5 (Left)	Perforated Plate	3.3750	3.4375	11.6016	10.1250	8.7500	258.3984	268.5234	
5 (Right)	Perforated Plate	3.3750	20.9375	70.6641	10.1250	8.7500	258.3984	268.5234	
Total		63.52		774.10	525.48		6339.43	6864.91	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	13.0000	0.0625	-0.8125	0.0313	-0.0254	-0.0003	12.1563	-120.0667	-120.0670
2	13.0000	0.0625	-0.8125	24.3438	-19.7793	-0.0003	12.1563	-120.0667	-120.0670
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.63		-19.80	0.00		-240.13	-240.13

As-Built Section Properties				As-Inspected Section Properties							
x-bar =	12.1875	in	S _{right} =	563.27	in ³	x-bar =	12.1875	in	S _{right} =	543.57	in ³
I _y =	6864.91	in ⁴	S _{left} =	563.27	in ³	I _y =	6624.78	in ⁴	S _{left} =	543.57	in ³
C _{right} =	12.1875	in	A =	63.5156	in ²	C _{right} =	12.1875	in	A =	61.8906	in ²
C _{left} =	12.1875	in	r _y =	10.3963	in	C _{left} =	12.1875	in	r _y =	10.3460	in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

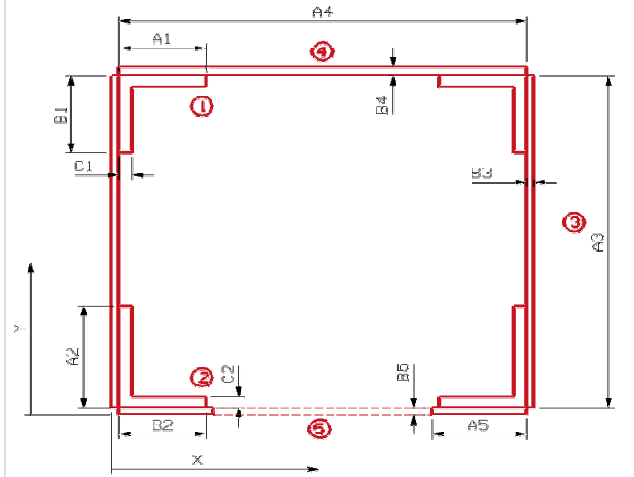
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.4375$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.4375$ in

Top Cover Plate:
 $A_4 = b = 22.0000$ in
 $B_4 = t = 0.5625$ in

Web Plate 1:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.9375$ in

Perforated Cover Plate
 $A_5 = b = 5.2500$ in
 $B_5 = t = 0.6250$ in



Member U33-U34

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.2500	26.4063	138.6328	0.0837	11.9391	748.3443	748.4281
	Vertical Leg	6.6172	22.4063	148.2664	31.5372	7.9391	417.0753	448.6125
2	Horizontal Leg	5.2500	0.8438	4.4297	0.0837	13.6234	974.3864	974.4701
	Vertical Leg	6.6172	4.8438	32.0520	31.5372	9.6234	612.8183	644.3555
3	Plate	48.7500	13.6250	664.2188	2746.2500	0.8422	34.5754	2780.8254
4	Plate	12.3750	26.9063	332.9648	0.3263	12.4391	1914.7945	1915.1208
5	Perforated Plate	6.5625	0.3125	2.0508	0.2136	14.1547	1314.8264	1315.0401
Total		91.42		1322.62	2810.03		6016.82	8826.85
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00	0.00	0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.4672 in	S _{top} =	693.92 in ³	y-bar =	14.4672 in	S _{top} =	693.92 in ³
I _x =	8826.85 in ⁴	S _{bott.} =	610.13 in ³	I _x =	8826.85 in ⁴	S _{bott.} =	610.13 in ³
C _{top} =	12.7203 in	A =	91.4219 in ²	C _{top} =	12.7203 in	A =	91.4219 in ²
C _{bottom} =	14.4672 in	r _x =	9.8260 in	C _{bottom} =	14.4672 in	r _x =	9.8260 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.9375	10.3359	7.8750	8.0000	168.0000	175.8750	
	Vertical Leg	3.3086	1.1563	3.8256	0.0528	10.7813	384.5756	384.6283	
1 (Right)	Horizontal Leg	2.6250	19.9375	52.3359	7.8750	8.0000	168.0000	175.8750	
	Vertical Leg	3.3086	22.7188	75.1671	0.0528	10.7813	384.5756	384.6283	
2 (Left)	Horizontal Leg	2.6250	3.9375	10.3359	7.8750	8.0000	168.0000	175.8750	
	Vertical Leg	3.3086	1.1563	3.8256	0.0528	10.7813	384.5756	384.6283	
2 (Right)	Horizontal Leg	2.6250	19.9375	52.3359	7.8750	8.0000	168.0000	175.8750	
	Vertical Leg	3.3086	22.7188	75.1671	0.0528	10.7813	384.5756	384.6283	
3 (Left)	Plate	24.3750	0.4688	11.4258	1.7853	11.4688	3206.0980	3207.8833	
3 (Right)	Plate	24.3750	23.4063	570.5273	1.7853	11.4688	3206.0980	3207.8833	
4	Plate	12.3750	11.9375	147.7266	499.1250	0.0000	0.0000	499.1250	
5 (Left)	Perforated Plate	3.2813	3.5625	11.6895	7.5366	8.3750	230.1489	237.6855	
5 (Right)	Perforated Plate	3.2813	20.3125	66.6504	7.5366	8.3750	230.1489	237.6855	
Total		91.42		1091.35	549.48		9082.80	9632.28	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	11.9375 in	S _{right} =	806.89 in ³	x-bar =	11.9375 in	S _{right} =	806.89 in ³
I _y =	9632.28 in ⁴	S _{left} =	806.89 in ³	I _y =	9632.28 in ⁴	S _{left} =	806.89 in ³
C _{right} =	11.9375 in	A =	91.4219 in ²	C _{right} =	11.9375 in	A =	91.4219 in ²
C _{left} =	11.9375 in	r _y =	10.2645 in	C _{left} =	11.9375 in	r _y =	10.2645 in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6875$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6875$ in

Top Cover Plate:

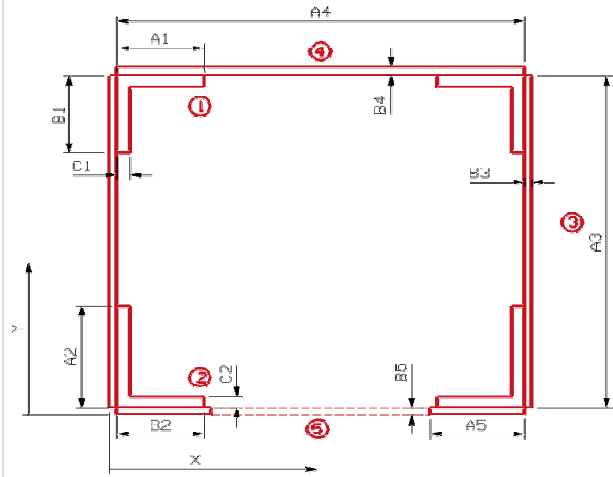
$A_4 = b = 22.0000$ in
 $B_4 = t = 0.5625$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.8750$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.6875$ in



Member U34-U35

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg		8.2500	26.3438	217.3359	0.3250	11.9873	1185.4946	1185.8195
	Vertical Leg		10.0547	22.3438	224.6594	44.8042	7.9873	641.4649	686.2691
2	Horizontal Leg		8.2500	1.0313	8.5078	0.3250	13.3252	1464.8692	1465.1941
	Vertical Leg		10.0547	5.0313	50.5876	44.8042	9.3252	874.3417	919.1459
3	Plate		45.5000	13.6875	622.7813	2563.1667	0.6689	20.3586	2583.5252
4	Plate		12.3750	26.9688	333.7383	0.3263	12.6123	1968.5050	1968.8313
5	Perforated Plate		7.2188	0.3438	2.4814	0.2843	14.0127	1417.4351	1417.7195
Total			101.70		1460.09	2654.04		7572.47	10226.50
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.3564 in	S _{top} =	793.15 in ³	y-bar =	14.3564 in	S _{top} =	793.15 in ³
I _x =	10226.50 in ⁴	S _{bott.} =	712.33 in ³	I _x =	10226.50 in ⁴	S _{bott.} =	712.33 in ³
C _{top} =	12.8936 in	A =	101.7031 in ²	C _{top} =	12.8936 in	A =	101.7031 in ²
C _{bottom} =	14.3564 in	r _x =	10.0276 in	C _{bottom} =	14.3564 in	r _x =	10.0276 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	3.8750	15.9844	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.2188	6.1271	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	19.8750	81.9844	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.5313	113.2723	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	3.8750	15.9844	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.2188	6.1271	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	19.8750	81.9844	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.5313	113.2723	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	22.7500	0.4375	9.9531	1.4515	11.4375	2976.0732	2977.5247	
3 (Right)	Plate	22.7500	23.3125	530.3594	1.4515	11.4375	2976.0732	2977.5247	
4	Plate	12.3750	11.8750	146.9531	499.1250	0.0000	0.0000	499.1250	
5 (Left)	Perforated Plate	3.6094	3.5000	12.6328	8.2903	8.3750	253.1638	261.4541	
5 (Right)	Perforated Plate	3.6094	20.2500	73.0898	8.2903	8.3750	253.1638	261.4541	
Total		101.70		1207.72	568.90		9798.01	10366.91	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	11.8750 in	S _{right} =	873.00 in ³	x-bar =	11.8750 in	S _{right} =	873.00 in ³
I _y =	10366.91 in ⁴	S _{left} =	873.00 in ³	I _y =	10366.91 in ⁴	S _{left} =	873.00 in ³
C _{right} =	11.8750 in	A =	101.7031 in ²	C _{right} =	11.8750 in	A =	101.7031 in ²
C _{left} =	11.8750 in	r _y =	10.0962 in	C _{left} =	11.8750 in	r _y =	10.0962 in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

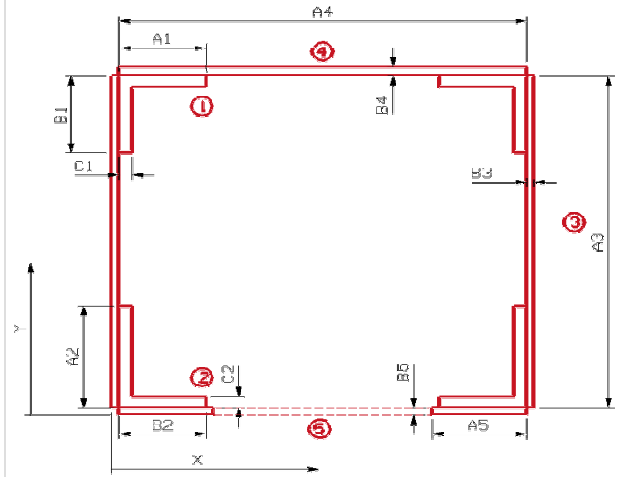
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6875$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6875$ in

Top Cover Plate:
 $A_4 = b = 22.0000$ in
 $B_4 = t = 0.5625$ in

Web Plate 1:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.8750$ in

Perforated Cover Plate
 $A_5 = b = 5.2500$ in
 $B_5 = t = 0.6875$ in



Member U35-U36

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg		8.2500	26.3438	217.3359	0.3250	11.9873	1185.4946	1185.8195
	Vertical Leg		10.0547	22.3438	224.6594	44.8042	7.9873	641.4649	686.2691
2	Horizontal Leg		8.2500	1.0313	8.5078	0.3250	13.3252	1464.8692	1465.1941
	Vertical Leg		10.0547	5.0313	50.5876	44.8042	9.3252	874.3417	919.1459
3	Plate		45.5000	13.6875	622.7813	2563.1667	0.6689	20.3586	2583.5252
4	Plate		12.3750	26.9688	333.7383	0.3263	12.6123	1968.5050	1968.8313
5	Perforated Plate		7.2188	0.3438	2.4814	0.2843	14.0127	1417.4351	1417.7195
Total			101.70		1460.09	2654.04		7572.47	10226.50
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.3564 in	S _{top} =	793.15 in ³	y-bar =	14.3564 in	S _{top} =	793.15 in ³
I _x =	10226.50 in ⁴	S _{bottom} =	712.33 in ³	I _x =	10226.50 in ⁴	S _{bottom} =	712.33 in ³
C _{top} =	12.8936 in	A =	101.7031 in ²	C _{top} =	12.8936 in	A =	101.7031 in ²
C _{bottom} =	14.3564 in	r _x =	10.0276 in	C _{bottom} =	14.3564 in	r _x =	10.0276 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	3.8750	15.9844	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.2188	6.1271	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	19.8750	81.9844	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.5313	113.2723	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	3.8750	15.9844	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.2188	6.1271	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	19.8750	81.9844	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.5313	113.2723	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	22.7500	0.4375	9.9531	1.4515	11.4375	2976.0732	2977.5247	
3 (Right)	Plate	22.7500	23.3125	530.3594	1.4515	11.4375	2976.0732	2977.5247	
4	Plate	12.3750	11.8750	146.9531	499.1250	0.0000	0.0000	499.1250	
5 (Left)	Perforated Plate	3.6094	3.5000	12.6328	8.2903	8.3750	253.1638	261.4541	
5 (Right)	Perforated Plate	3.6094	20.2500	73.0898	8.2903	8.3750	253.1638	261.4541	
Total		101.70		1207.72	568.90		9798.01	10366.91	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	11.8750 in	S _{right} =	873.00 in ³	x-bar =	11.8750 in	S _{right} =	873.00 in ³
I _y =	10366.91 in ⁴	S _{left} =	873.00 in ³	I _y =	10366.91 in ⁴	S _{left} =	873.00 in ³
C _{right} =	11.8750 in	A =	101.7031 in ²	C _{right} =	11.8750 in	A =	101.7031 in ²
C _{left} =	11.8750 in	r _y =	10.0962 in	C _{left} =	11.8750 in	r _y =	10.0962 in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

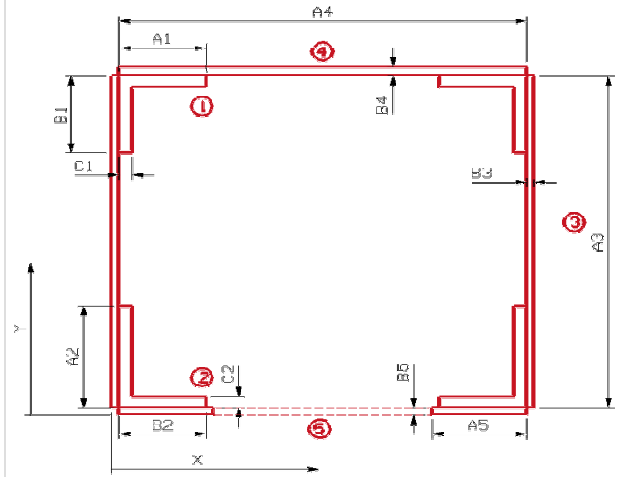
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.4375$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_f = 0.4375$ in

Top Cover Plate:
 $A_4 = b = 22.0000$ in
 $B_4 = t = 0.5000$ in

Web Plate 1:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.8750$ in

Perforated Cover Plate
 $A_5 = b = 5.2500$ in
 $B_5 = t = 0.6250$ in



Member U36-U37

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.2500	26.4063	138.6328	0.0837	12.1086	769.7414	769.8252
	Vertical Leg	6.6172	22.4063	148.2664	31.5372	8.1086	435.0726	466.6098
2	Horizontal Leg	5.2500	0.8438	4.4297	0.0837	13.4539	950.2935	950.3773
	Vertical Leg	6.6172	4.8438	32.0520	31.5372	9.4539	591.4233	622.9605
3	Plate	45.5000	13.6250	619.9375	2563.1667	0.6727	20.5888	2583.7555
4	Plate	11.0000	26.8750	295.6250	0.2292	12.5773	1740.0781	1740.3073
5	Perforated Plate	6.5625	0.3125	2.0508	0.2136	13.9852	1283.5287	1283.7423
Total		86.80		1240.99	2626.85		5790.73	8417.58
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.2977 in	S _{top} =	656.22 in ³	y-bar =	14.2977 in	S _{top} =	656.22 in ³
I _x =	8417.58 in ⁴	S _{bott.} =	588.74 in ³	I _x =	8417.58 in ⁴	S _{bott.} =	588.74 in ³
C _{top} =	12.8273 in	A =	86.7969 in ²	C _{top} =	12.8273 in	A =	86.7969 in ²
C _{bottom} =	14.2977 in	r _x =	9.8479 in	C _{bottom} =	14.2977 in	r _x =	9.8479 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.8750	10.1719	7.8750	8.0000	168.0000	175.8750	
	Vertical Leg	3.3086	1.0938	3.6188	0.0528	10.7813	384.5756	384.6283	
1 (Right)	Horizontal Leg	2.6250	19.8750	52.1719	7.8750	8.0000	168.0000	175.8750	
	Vertical Leg	3.3086	22.6563	74.9603	0.0528	10.7813	384.5756	384.6283	
2 (Left)	Horizontal Leg	2.6250	3.8750	10.1719	7.8750	8.0000	168.0000	175.8750	
	Vertical Leg	3.3086	1.0938	3.6188	0.0528	10.7813	384.5756	384.6283	
2 (Right)	Horizontal Leg	2.6250	19.8750	52.1719	7.8750	8.0000	168.0000	175.8750	
	Vertical Leg	3.3086	22.6563	74.9603	0.0528	10.7813	384.5756	384.6283	
3 (Left)	Plate	22.7500	0.4375	9.9531	1.4515	11.4375	2976.0732	2977.5247	
3 (Right)	Plate	22.7500	23.3125	530.3594	1.4515	11.4375	2976.0732	2977.5247	
4	Plate	11.0000	11.8750	130.6250	443.6667	0.0000	0.0000	443.6667	
5 (Left)	Perforated Plate	3.2813	3.5000	11.4844	7.5366	8.3750	230.1489	237.6855	
5 (Right)	Perforated Plate	3.2813	20.2500	66.4453	7.5366	8.3750	230.1489	237.6855	
Total		86.80		1030.71	493.35		8622.75	9116.10	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	11.8750 in	S _{right} =	767.67 in ³	x-bar =	11.8750 in	S _{right} =	767.67 in ³
I _y =	9116.10 in ⁴	S _{left} =	767.67 in ³	I _y =	9116.10 in ⁴	S _{left} =	767.67 in ³
C _{right} =	11.8750 in	A =	86.7969 in ²	C _{right} =	11.8750 in	A =	86.7969 in ²
C _{left} =	11.8750 in	r _y =	10.2483 in	C _{left} =	11.8750 in	r _y =	10.2483 in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.4375$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_f = 0.4375$ in

Top Cover Plate:

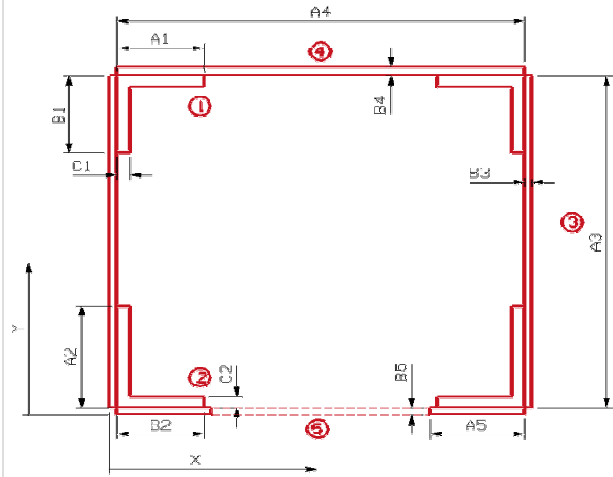
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.4375$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member U37-U38

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.2500	26.2813	137.9766	0.0837	11.8826	741.2781	741.3618
	Vertical Leg	6.6172	22.2813	147.4392	31.5372	7.8826	411.1599	442.6971
2	Horizontal Leg	5.2500	0.7188	3.7734	0.0837	13.6799	982.4854	982.5691
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	9.6799	620.0355	651.5727
3	Plate	22.7500	13.5000	307.1250	1281.5833	0.8987	18.3729	1299.9562
4	Plate	10.2813	26.7188	274.7021	0.1640	12.3201	1560.5343	1560.6983
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	14.1487	1201.1083	1201.2333
Total		62.77		903.74	1345.11		5534.97	6880.09
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.3987 in	S _{top} =	548.70 in ³	y-bar =	14.3987 in	S _{top} =	548.70 in ³
I _x =	6880.09 in ⁴	S _{bott.} =	477.83 in ³	I _x =	6880.09 in ⁴	S _{bott.} =	477.83 in ³
C _{top} =	12.5388 in	A =	62.7656 in ²	C _{top} =	12.5388 in	A =	62.7656 in ²
C _{bottom} =	14.3987 in	r _x =	10.4697 in	C _{bottom} =	14.3987 in	r _x =	10.4697 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.4375	9.0234	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	20.9375	54.9609	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.4375	9.0234	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	20.9375	54.9609	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	10.2813	12.1875	125.3027	473.1517	0.0000	0.0000	473.1517	
5 (Left)	Perforated Plate	3.0000	3.4375	10.3125	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.9375	62.8125	9.0000	8.7500	229.6875	238.6875	
Total		62.77		764.96	523.23		6282.01	6805.24	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	558.38 in ³	x-bar =	12.1875 in	S _{right} =	558.38 in ³
I _y =	6805.24 in ⁴	S _{left} =	558.38 in ³	I _y =	6805.24 in ⁴	S _{left} =	558.38 in ³
C _{right} =	12.1875 in	A =	62.7656 in ²	C _{right} =	12.1875 in	A =	62.7656 in ²
C _{left} =	12.1875 in	r _y =	10.4126 in	C _{left} =	12.1875 in	r _y =	10.4126 in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

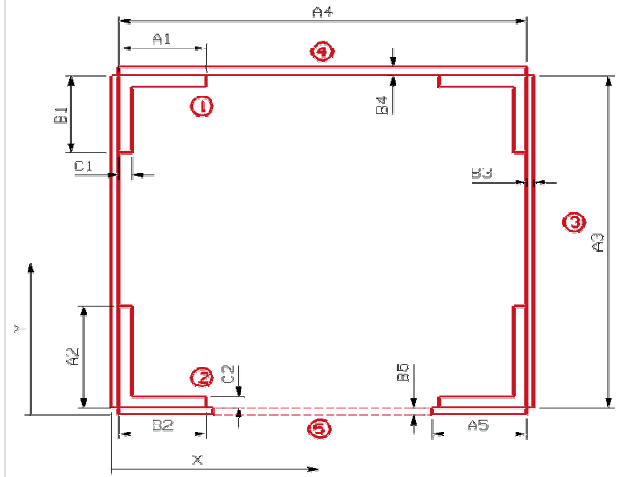
Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:
 $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate
 $A_5 = b = 23.5000$ in
 $B_5 = t = 0.3750$ in



Member U38-U39

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	14.8203	549.1031	549.1234
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	12.8203	378.7985	381.4101
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	10.8672	295.2402	295.2605
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	8.8672	181.2113	183.8228
3	Plate	22.7500	13.3750	304.2813	1281.5833	1.9765	88.8784	1370.4617
4	Plate	8.8125	26.5625	234.0820	0.1033	15.1640	2026.4198	2026.5231
5	Perforated Plate	17.6250	0.1875	3.3047	0.2065	11.2110	2215.2060	2215.4125
Total		58.80		670.19	1287.16		5734.86	7022.01
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	11.3985 in	S _{top} =	457.41 in ³	y-bar =	11.3985 in	S _{top} =	457.41 in ³
I _x =	7022.01 in ⁴	S _{bottom} =	616.05 in ³	I _x =	7022.01 in ⁴	S _{bottom} =	616.05 in ³
C _{top} =	15.3515 in	A =	58.7969 in ²	C _{top} =	15.3515 in	A =	58.7969 in ²
C _{bottom} =	11.3985 in	r _x =	10.9283 in	C _{bottom} =	11.3985 in	r _x =	10.9283 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Right)	Perforated Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
Total		58.80		716.59	1223.74		4353.84	5577.58	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	457.65 in ³	x-bar =	12.1875 in	S _{right} =	457.65 in ³
I _y =	5577.58 in ⁴	S _{left} =	457.65 in ³	I _y =	5577.58 in ⁴	S _{left} =	457.65 in ³
C _{right} =	12.1875 in	A =	58.7969 in ²	C _{right} =	12.1875 in	A =	58.7969 in ²
C _{left} =	12.1875 in	r _y =	9.7397 in	C _{left} =	12.1875 in	r _y =	9.7397 in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 23.5000$ in
 $B_5 = t = 0.3750$ in



Member U39-U40

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	14.8203	549.1031	549.1234
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	12.8203	378.7985	381.4101
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	10.8672	295.2402	295.2605
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	8.8672	181.2113	183.8228
3	Plate	22.7500	13.3750	304.2813	1281.5833	1.9765	88.8784	1370.4617
4	Plate	8.8125	26.5625	234.0820	0.1033	15.1640	2026.4198	2026.5231
5	Perforated Plate	17.6250	0.1875	3.3047	0.2065	11.2110	2215.2060	2215.4125
Total		58.80		670.19	1287.16		5734.86	7022.01
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	11.3985 in	S _{top} =	457.41 in ³	y-bar =	11.3985 in	S _{top} =	457.41 in ³
I _x =	7022.01 in ⁴	S _{bott.} =	616.05 in ³	I _x =	7022.01 in ⁴	S _{bott.} =	616.05 in ³
C _{top} =	15.3515 in	A =	58.7969 in ²	C _{top} =	15.3515 in	A =	58.7969 in ²
C _{bottom} =	11.3985 in	r _x =	10.9283 in	C _{bottom} =	11.3985 in	r _x =	10.9283 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Right)	Perforated Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
Total		58.80		716.59	1223.74		4353.84	5577.58	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	457.65 in ³	x-bar =	12.1875 in	S _{right} =	457.65 in ³
I _y =	5577.58 in ⁴	S _{left} =	457.65 in ³	I _y =	5577.58 in ⁴	S _{left} =	457.65 in ³
C _{right} =	12.1875 in	A =	58.7969 in ²	C _{right} =	12.1875 in	A =	58.7969 in ²
C _{left} =	12.1875 in	r _y =	9.7397 in	C _{left} =	12.1875 in	r _y =	9.7397 in



Made By DWC
Checked By SFH

Date 1/31/2012
Date 2/14/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

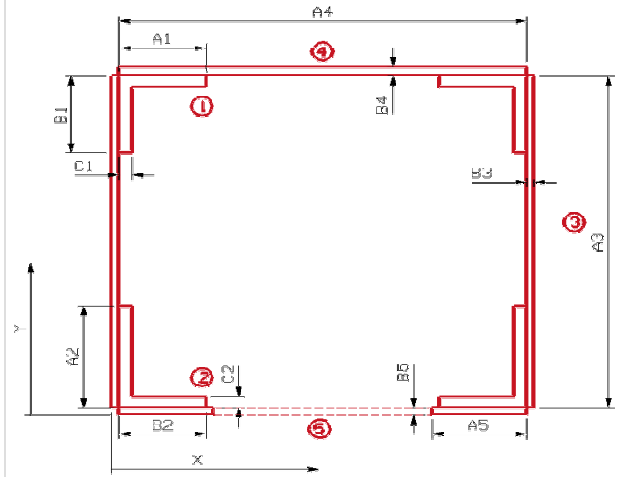
Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:
 $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member U40-U41

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5031	330.8057	330.8260
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5031	208.1357	210.7472
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.1844	502.9900	503.0104
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.1844	342.1506	344.7621
3	Plate	19.5000	13.3750	260.8125	1098.5000	1.3406	35.0460	1133.5460
4	Plate	8.8125	26.5625	234.0820	0.1033	11.8469	1236.8243	1236.9276
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.5281	949.7966	949.8493
Total		42.42		624.26	1103.92		3605.75	4709.67
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	4.0000	0.1875	-0.7500	26.6563	-19.9922	-0.0022	12.7216	-121.3797
2	4.0000	0.4688	-1.8750	26.5156	-49.7168	-0.0343	12.5810	-296.7777
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.63	-69.71	-0.04		-418.16	-418.19



Made By DWC
Checked By SFH

Date 1/31/2012
Date 2/14/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.7156 in	S _{top} =	391.35 in ³	y-bar =	13.9346 in	S _{top} =	334.87 in ³
I _x =	4709.67 in ⁴	S _{bottom} =	320.05 in ³	I _x =	4291.47 in ⁴	S _{bottom} =	307.97 in ³
C _{top} =	12.0344 in	A =	42.4219 in ²	C _{top} =	12.8154 in	A =	39.7969 in ²
C _{bottom} =	14.7156 in	r _x =	10.5366 in	C _{bottom} =	13.9346 in	r _x =	10.3843 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	9.7500	0.1875	1.8281	0.1143	11.9375	1389.4131	1389.5273	
3 (Right)	Plate	9.7500	24.0625	234.6094	0.1143	11.9375	1389.4131	1389.5273	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.3750	7.5938	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.8750	46.9688	6.7500	8.7500	172.2656	179.0156	
Total		42.42		514.37	425.99		4218.24	4644.23	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1875	4.0000	-0.7500	2.3750	-1.7813	-1.0000	9.4744	-67.3229	-68.3229
2	0.4688	4.0000	-1.8750	21.8750	-41.0156	-2.5000	10.0256	-188.4619	-190.9619
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.63		-42.80	-3.50		-255.78	-259.28

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	383.03 in ³	x-bar =	11.8494 in	S _{right} =	353.61 in ³
I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³	I _y =	4384.95 in ⁴	S _{left} =	370.06 in ³
C _{right} =	12.1250 in	A =	42.4219 in ²	C _{right} =	12.4006 in	A =	39.7969 in ²
C _{left} =	12.1250 in	r _y =	10.4631 in	C _{left} =	11.8494 in	r _y =	10.4968 in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member U41-U42

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5031	330.8057	330.8260
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5031	208.1357	210.7472
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.1844	502.9900	503.0104
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.1844	342.1506	344.7621
3	Plate	19.5000	13.3750	260.8125	1098.5000	1.3406	35.0460	1133.5460
4	Plate	8.8125	26.5625	234.0820	0.1033	11.8469	1236.8243	1236.9276
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.5281	949.7966	949.8493
Total		42.42		624.26	1103.92		3605.75	4709.67
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.7156 in	S _{top} =	391.35 in ³	y-bar =	14.7156 in	S _{top} =	391.35 in ³
I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³	I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³
C _{top} =	12.0344 in	A =	42.4219 in ²	C _{top} =	12.0344 in	A =	42.4219 in ²
C _{bottom} =	14.7156 in	r _x =	10.5366 in	C _{bottom} =	14.7156 in	r _x =	10.5366 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	9.7500	0.1875	1.8281	0.1143	11.9375	1389.4131	1389.5273	
3 (Right)	Plate	9.7500	24.0625	234.6094	0.1143	11.9375	1389.4131	1389.5273	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.3750	7.5938	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.8750	46.9688	6.7500	8.7500	172.2656	179.0156	
Total		42.42		514.37	425.99		4218.24	4644.23	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	383.03 in ³	x-bar =	12.1250 in	S _{right} =	383.03 in ³
I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³	I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³
C _{right} =	12.1250 in	A =	42.4219 in ²	C _{right} =	12.1250 in	A =	42.4219 in ²
C _{left} =	12.1250 in	r _y =	10.4631 in	C _{left} =	12.1250 in	r _y =	10.4631 in



Made By DWC
Checked By KMW

Date 2/1/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

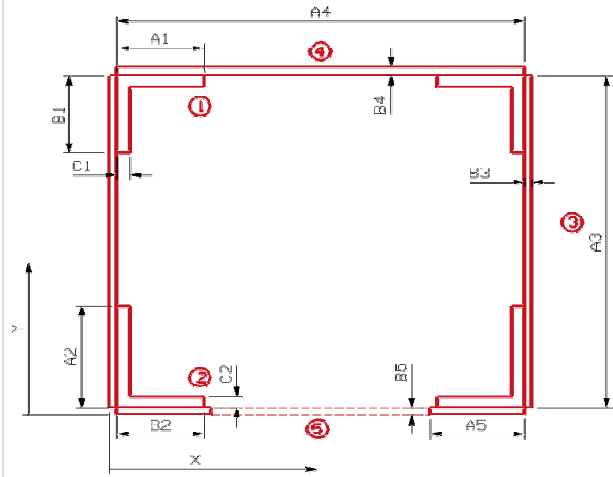
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member U42-U43

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x, gross}$	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5985	336.3153	336.3356	
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5985	212.3354	214.9469	
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.0890	496.2470	496.2674	
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.0890	336.8139	339.4254	
3	Plate	22.7500	13.3750	304.2813	1281.5833	1.2452	35.2750	1316.8583	
4	Plate	8.8125	26.5625	234.0820	0.1033	11.9423	1256.8236	1256.9269	
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.4327	937.3641	937.4168	
Total		45.67		667.73	1287.00		3611.17	4898.18	
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x, loss}$	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	
1	0.1563	13.0000	-2.0313	17.3750	-35.2930	-28.6068	2.8169	-16.1182	-44.7250
2	0.0938	26.0000	-2.4375	13.3750	-32.6016	-137.3125	1.1831	-3.4116	-140.7241
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-4.47	-67.89	-165.92		-19.53	-185.45	



Made By DWC
Checked By KMW

Date 2/1/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	14.6202	in	S _{top} =	403.81	in ³	y-bar =	14.5581	in	S _{top} =	386.54	in ³
I _x =	4898.18	in ⁴	S _{bott.} =	335.03	in ³	I _x =	4712.73	in ⁴	S _{bott.} =	323.72	in ³
C _{top} =	12.1298	in	A =	45.6719	in ²	C _{top} =	12.1919	in	A =	41.2031	in ²
C _{bottom} =	14.6202	in	r _x =	10.3560	in	C _{bottom} =	14.5581	in	r _x =	10.6948	in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.4375	7.7344	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.9375	47.1094	6.7500	8.7500	172.2656	179.0156	
Total		45.67		556.63	426.13		4698.37	5124.50	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	13.0000	0.1563	-2.0313	26.7969	-54.4312	-0.0041	14.6114	-433.6564	-433.6605
2	26.0000	0.0938	-2.4375	0.0469	-0.1143	-0.0018	12.1386	-359.1562	-359.1580
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-4.47		-54.55	-0.01		-792.81	-792.82

As-Built Section Properties				As-Inspected Section Properties							
x-bar =	12.1875	in	S _{right} =	420.47	in ³	x-bar =	12.1855	in	S _{right} =	355.36	in ³
I _y =	5124.50	in ⁴	S _{left} =	420.47	in ³	I _y =	4331.68	in ⁴	S _{left} =	355.48	in ³
C _{right} =	12.1875	in	A =	45.6719	in ²	C _{right} =	12.1895	in	A =	41.2031	in ²
C _{left} =	12.1875	in	r _y =	10.5926	in	C _{left} =	12.1855	in	r _y =	10.2533	in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.4375$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.4375$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member U43-U44

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg		3.5000	26.1563	91.5469	0.0558	11.7711	484.9517	485.0075
	Vertical Leg		6.6172	22.1563	146.6121	31.5372	7.7711	399.6068	431.1440
2	Horizontal Leg		3.5000	0.5938	2.0781	0.0558	13.7914	665.7143	665.7701
	Vertical Leg		6.6172	4.5938	30.3977	31.5372	9.7914	634.4062	665.9434
3	Plate		22.7500	13.3750	304.2813	1281.5833	1.0102	23.2165	1304.7998
4	Plate		8.8125	26.5625	234.0820	0.1033	12.1773	1306.7760	1306.8793
5	Perforated Plate		4.5000	0.1875	0.8438	0.0527	14.1977	907.0861	907.1388
Total			56.30		809.84	1344.93		4421.76	5766.68
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.3852 in	S _{top} =	466.38 in ³	y-bar =	14.3852 in	S _{top} =	466.38 in ³
I _x =	5766.68 in ⁴	S _{bott.} =	400.88 in ³	I _x =	5766.68 in ⁴	S _{bott.} =	400.88 in ³
C _{top} =	12.3648 in	A =	56.2969 in ²	C _{top} =	12.3648 in	A =	56.2969 in ²
C _{bottom} =	14.3852 in	r _x =	10.1209 in	C _{bottom} =	14.3852 in	r _x =	10.1209 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.7500	2.4375	4.2656	2.3333	9.7500	166.3594	168.6927	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	1.7500	21.9375	38.3906	2.3333	9.7500	166.3594	168.6927	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	1.7500	2.4375	4.2656	2.3333	9.7500	166.3594	168.6927	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	1.7500	21.9375	38.3906	2.3333	9.7500	166.3594	168.6927	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.4375	7.7344	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.9375	47.1094	6.7500	8.7500	172.2656	179.0156	
Total		56.30		686.12	428.97		6028.70	6457.67	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	529.86 in ³	x-bar =	12.1875 in	S _{right} =	529.86 in ³
I _y =	6457.67 in ⁴	S _{left} =	529.86 in ³	I _y =	6457.67 in ⁴	S _{left} =	529.86 in ³
C _{right} =	12.1875 in	A =	56.2969 in ²	C _{right} =	12.1875 in	A =	56.2969 in ²
C _{left} =	12.1875 in	r _y =	10.7102 in	C _{left} =	12.1875 in	r _y =	10.7102 in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.4375$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_f = 0.4375$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.4375$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member U44-U45

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg		5.2500	26.2813	137.9766	0.0837	11.8826	741.2781	741.3618
	Vertical Leg		6.6172	22.2813	147.4392	31.5372	7.8826	411.1599	442.6971
2	Horizontal Leg		5.2500	0.7188	3.7734	0.0837	13.6799	982.4854	982.5691
	Vertical Leg		6.6172	4.7188	31.2249	31.5372	9.6799	620.0355	651.5727
3	Plate		22.7500	13.5000	307.1250	1281.5833	0.8987	18.3729	1299.9562
4	Plate		10.2813	26.7188	274.7021	0.1640	12.3201	1560.5343	1560.6983
5	Perforated Plate		6.0000	0.2500	1.5000	0.1250	14.1487	1201.1083	1201.2333
Total			62.77		903.74	1345.11		5534.97	6880.09
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.3987 in	S _{top} =	548.70 in ³	y-bar =	14.3987 in	S _{top} =	548.70 in ³
I _x =	6880.09 in ⁴	S _{bott.} =	477.83 in ³	I _x =	6880.09 in ⁴	S _{bott.} =	477.83 in ³
C _{top} =	12.5388 in	A =	62.7656 in ²	C _{top} =	12.5388 in	A =	62.7656 in ²
C _{bottom} =	14.3987 in	r _x =	10.4697 in	C _{bottom} =	14.3987 in	r _x =	10.4697 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.4375	9.0234	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	20.9375	54.9609	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.4375	9.0234	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	20.9375	54.9609	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	10.2813	12.1875	125.3027	473.1517	0.0000	0.0000	473.1517	
5 (Left)	Perforated Plate	3.0000	3.4375	10.3125	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.9375	62.8125	9.0000	8.7500	229.6875	238.6875	
Total		62.77		764.96	523.23		6282.01	6805.24	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	558.38 in ³	x-bar =	12.1875 in	S _{right} =	558.38 in ³
I _y =	6805.24 in ⁴	S _{left} =	558.38 in ³	I _y =	6805.24 in ⁴	S _{left} =	558.38 in ³
C _{right} =	12.1875 in	A =	62.7656 in ²	C _{right} =	12.1875 in	A =	62.7656 in ²
C _{left} =	12.1875 in	r _y =	10.4126 in	C _{left} =	12.1875 in	r _y =	10.4126 in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.4375$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_f = 0.4375$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.4375$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member U45-U46

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.2500	26.2813	137.9766	0.0837	11.8826	741.2781	741.3618
	Vertical Leg	6.6172	22.2813	147.4392	31.5372	7.8826	411.1599	442.6971
2	Horizontal Leg	5.2500	0.7188	3.7734	0.0837	13.6799	982.4854	982.5691
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	9.6799	620.0355	651.5727
3	Plate	22.7500	13.5000	307.1250	1281.5833	0.8987	18.3729	1299.9562
4	Plate	10.2813	26.7188	274.7021	0.1640	12.3201	1560.5343	1560.6983
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	14.1487	1201.1083	1201.2333
Total		62.77		903.74	1345.11		5534.97	6880.09
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.3987 in	S _{top} =	548.70 in ³	y-bar =	14.3987 in	S _{top} =	548.70 in ³
I _x =	6880.09 in ⁴	S _{bott.} =	477.83 in ³	I _x =	6880.09 in ⁴	S _{bott.} =	477.83 in ³
C _{top} =	12.5388 in	A =	62.7656 in ²	C _{top} =	12.5388 in	A =	62.7656 in ²
C _{bottom} =	14.3987 in	r _x =	10.4697 in	C _{bottom} =	14.3987 in	r _x =	10.4697 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.4375	9.0234	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	20.9375	54.9609	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.4375	9.0234	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	20.9375	54.9609	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	10.2813	12.1875	125.3027	473.1517	0.0000	0.0000	473.1517	
5 (Left)	Perforated Plate	3.0000	3.4375	10.3125	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.9375	62.8125	9.0000	8.7500	229.6875	238.6875	
Total		62.77		764.96	523.23		6282.01	6805.24	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	558.38 in ³	x-bar =	12.1875 in	S _{right} =	558.38 in ³
I _y =	6805.24 in ⁴	S _{left} =	558.38 in ³	I _y =	6805.24 in ⁴	S _{left} =	558.38 in ³
C _{right} =	12.1875 in	A =	62.7656 in ²	C _{right} =	12.1875 in	A =	62.7656 in ²
C _{left} =	12.1875 in	r _y =	10.4126 in	C _{left} =	12.1875 in	r _y =	10.4126 in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.4375$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.4375$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member U46-U47

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg		3.5000	26.1563	91.5469	0.0558	11.7711	484.9517	485.0075
	Vertical Leg		6.6172	22.1563	146.6121	31.5372	7.7711	399.6068	431.1440
2	Horizontal Leg		3.5000	0.5938	2.0781	0.0558	13.7914	665.7143	665.7701
	Vertical Leg		6.6172	4.5938	30.3977	31.5372	9.7914	634.4062	665.9434
3	Plate		22.7500	13.3750	304.2813	1281.5833	1.0102	23.2165	1304.7998
4	Plate		8.8125	26.5625	234.0820	0.1033	12.1773	1306.7760	1306.8793
5	Perforated Plate		4.5000	0.1875	0.8438	0.0527	14.1977	907.0861	907.1388
Total			56.30		809.84	1344.93		4421.76	5766.68
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.3852 in	S _{top} =	466.38 in ³	y-bar =	14.3852 in	S _{top} =	466.38 in ³
I _x =	5766.68 in ⁴	S _{bott.} =	400.88 in ³	I _x =	5766.68 in ⁴	S _{bott.} =	400.88 in ³
C _{top} =	12.3648 in	A =	56.2969 in ²	C _{top} =	12.3648 in	A =	56.2969 in ²
C _{bottom} =	14.3852 in	r _x =	10.1209 in	C _{bottom} =	14.3852 in	r _x =	10.1209 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.7500	2.4375	4.2656	2.3333	9.7500	166.3594	168.6927	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	1.7500	21.9375	38.3906	2.3333	9.7500	166.3594	168.6927	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	1.7500	2.4375	4.2656	2.3333	9.7500	166.3594	168.6927	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	1.7500	21.9375	38.3906	2.3333	9.7500	166.3594	168.6927	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.4375	7.7344	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.9375	47.1094	6.7500	8.7500	172.2656	179.0156	
Total		56.30		686.12	428.97		6028.70	6457.67	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	529.86 in ³	x-bar =	12.1875 in	S _{right} =	529.86 in ³
I _y =	6457.67 in ⁴	S _{left} =	529.86 in ³	I _y =	6457.67 in ⁴	S _{left} =	529.86 in ³
C _{right} =	12.1875 in	A =	56.2969 in ²	C _{right} =	12.1875 in	A =	56.2969 in ²
C _{left} =	12.1875 in	r _y =	10.7102 in	C _{left} =	12.1875 in	r _y =	10.7102 in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

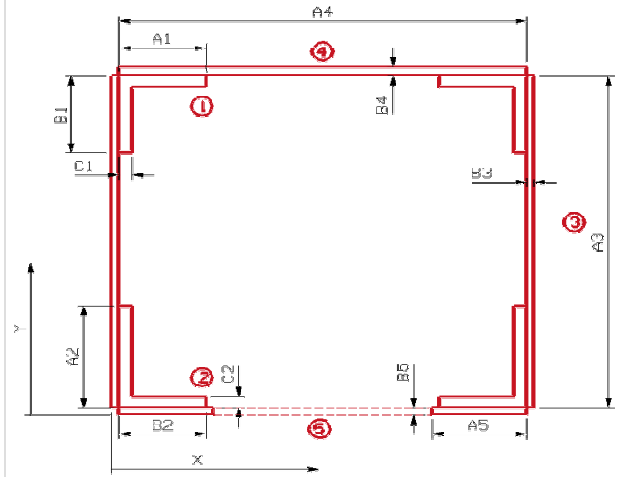
Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_f = 0.3125$ in

Bottom Angles:
 $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3125$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member U47-U48

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5985	336.3153	336.3356
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5985	212.3354	214.9469
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.0890	496.2470	496.2674
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.0890	336.8139	339.4254
3	Plate	22.7500	13.3750	304.2813	1281.5833	1.2452	35.2750	1316.8583
4	Plate	8.8125	26.5625	234.0820	0.1033	11.9423	1256.8236	1256.9269
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.4327	937.3641	937.4168
Total		45.67		667.73	1287.00		3611.17	4898.18
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	14.6202	in	S _{top} =	403.81	in ³	y-bar =	14.6202	in	S _{top} =	403.81	in ³
I _x =	4898.18	in ⁴	S _{bott.} =	335.03	in ³	I _x =	4898.18	in ⁴	S _{bott.} =	335.03	in ³
C _{top} =	12.1298	in	A =	45.6719	in ²	C _{top} =	12.1298	in	A =	45.6719	in ²
C _{bottom} =	14.6202	in	r _x =	10.3560	in	C _{bottom} =	14.6202	in	r _x =	10.3560	in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.4375	7.7344	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.9375	47.1094	6.7500	8.7500	172.2656	179.0156	
Total		45.67		556.63	426.13		4698.37	5124.50	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
x-bar =	12.1875	in	S _{right} =	420.47	in ³	x-bar =	12.1875	in	S _{right} =	420.47	in ³
I _y =	5124.50	in ⁴	S _{left} =	420.47	in ³	I _y =	5124.50	in ⁴	S _{left} =	420.47	in ³
C _{right} =	12.1875	in	A =	45.6719	in ²	C _{right} =	12.1875	in	A =	45.6719	in ²
C _{left} =	12.1875	in	r _y =	10.5926	in	C _{left} =	12.1875	in	r _y =	10.5926	in



Made By DWC
Checked By KMW

Date 2/1/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

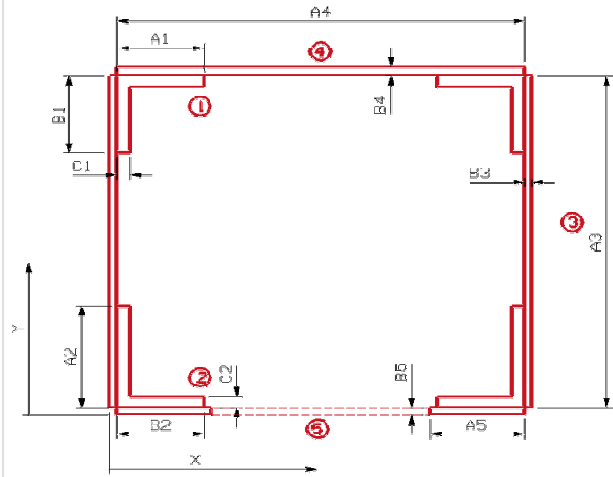
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member U48-U49

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5031	330.8057	330.8260	
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5031	208.1357	210.7472	
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.1844	502.9900	503.0104	
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.1844	342.1506	344.7621	
3	Plate	19.5000	13.3750	260.8125	1098.5000	1.3406	35.0460	1133.5460	
4	Plate	8.8125	26.5625	234.0820	0.1033	11.8469	1236.8243	1236.9276	
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.5281	949.7966	949.8493	
Total		42.42		624.26	1103.92		3605.75	4709.67	
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	
1	0.2500	26.0000	-6.5000	13.3750	-86.9375	-366.1667	0.8907	-5.1565	-371.3232
2	0.2500	26.0000	-6.5000	13.3750	-86.9375	-366.1667	0.8907	-5.1565	-371.3232
3	23.5000	0.2500	-5.8750	26.6250	-156.4219	-0.0306	14.1407	-1174.7576	-1174.7882
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-18.88		-330.30	-732.36		-1185.07	-1917.43



Made By DWC
Checked By KMW

Date 2/1/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.7156 in	S _{top} =	391.35 in ³	y-bar =	12.4843 in	S _{top} =	195.73 in ³
I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³	I _x =	2792.23 in ⁴	S _{bott.} =	223.66 in ³
C _{top} =	12.0344 in	A =	42.4219 in ²	C _{top} =	14.2657 in	A =	23.5469 in ²
C _{bottom} =	14.7156 in	r _x =	10.5366 in	C _{bottom} =	12.4843 in	r _x =	10.8895 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	9.7500	0.1875	1.8281	0.1143	11.9375	1389.4131	1389.5273	
3 (Right)	Plate	9.7500	24.0625	234.6094	0.1143	11.9375	1389.4131	1389.5273	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.3750	7.5938	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.8750	46.9688	6.7500	8.7500	172.2656	179.0156	
Total		42.42		514.37	425.99		4218.24	4644.23	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	26.0000	0.2500	-6.5000	0.1250	-0.8125	-0.0339	12.0000	-936.0000	-936.0339
2	26.0000	0.2500	-6.5000	24.1250	-156.8125	-0.0339	12.0000	-936.0000	-936.0339
3	0.2500	23.5000	-5.8750	12.1250	-71.2344	-270.3724	0.0000	0.0000	-270.3724
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-18.88		-228.86	-270.44		-1872.00	-2142.44

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	383.03 in ³	x-bar =	12.1250 in	S _{right} =	206.33 in ³
I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³	I _y =	2501.79 in ⁴	S _{left} =	206.33 in ³
C _{right} =	12.1250 in	A =	42.4219 in ²	C _{right} =	12.1250 in	A =	23.5469 in ²
C _{left} =	12.1250 in	r _y =	10.4631 in	C _{left} =	12.1250 in	r _y =	10.3076 in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_f = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3125$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member U49-U50

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5031	330.8057	330.8260
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5031	208.1357	210.7472
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.1844	502.9900	503.0104
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.1844	342.1506	344.7621
3	Plate	19.5000	13.3750	260.8125	1098.5000	1.3406	35.0460	1133.5460
4	Plate	8.8125	26.5625	234.0820	0.1033	11.8469	1236.8243	1236.9276
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.5281	949.7966	949.8493
Total		42.42		624.26	1103.92		3605.75	4709.67
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.7156 in	S _{top} =	391.35 in ³	y-bar =	14.7156 in	S _{top} =	391.35 in ³
I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³	I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³
C _{top} =	12.0344 in	A =	42.4219 in ²	C _{top} =	12.0344 in	A =	42.4219 in ²
C _{bottom} =	14.7156 in	r _x =	10.5366 in	C _{bottom} =	14.7156 in	r _x =	10.5366 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	9.7500	0.1875	1.8281	0.1143	11.9375	1389.4131	1389.5273	
3 (Right)	Plate	9.7500	24.0625	234.6094	0.1143	11.9375	1389.4131	1389.5273	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.3750	7.5938	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.8750	46.9688	6.7500	8.7500	172.2656	179.0156	
Total		42.42		514.37	425.99		4218.24	4644.23	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	383.03 in ³	x-bar =	12.1250 in	S _{right} =	383.03 in ³
I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³	I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³
C _{right} =	12.1250 in	A =	42.4219 in ²	C _{right} =	12.1250 in	A =	42.4219 in ²
C _{left} =	12.1250 in	r _y =	10.4631 in	C _{left} =	12.1250 in	r _y =	10.4631 in



Made By DWC
Checked By KMW

Date 2/2/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

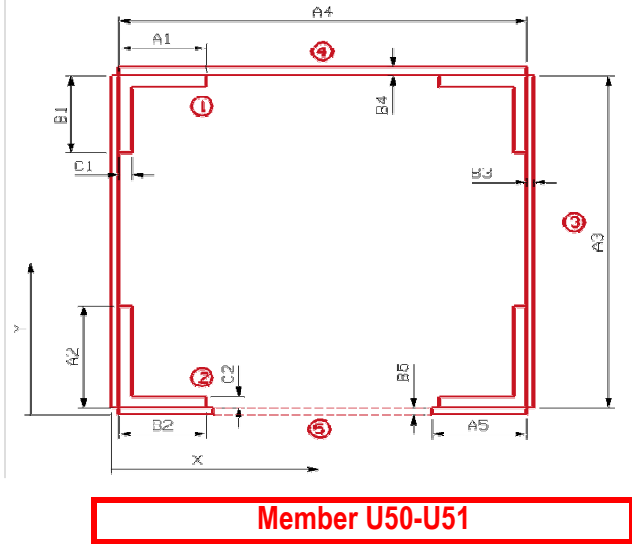
Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:
 $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate
 $A_5 = b = 23.5000$ in
 $B_5 = t = 0.3750$ in



X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg		2.5000	26.2188	65.5469	0.0203	14.8203	549.1031	549.1234
	Vertical Leg		2.3047	24.2188	55.8167	2.6115	12.8203	378.7985	381.4101
2	Horizontal Leg		2.5000	0.5313	1.3281	0.0203	10.8672	295.2402	295.2605
	Vertical Leg		2.3047	2.5313	5.8337	2.6115	8.8672	181.2113	183.8228
3	Plate		22.7500	13.3750	304.2813	1281.5833	1.9765	88.8784	1370.4617
4	Plate		8.8125	26.5625	234.0820	0.1033	15.1640	2026.4198	2026.5231
5	Perforated Plate		17.6250	0.1875	3.3047	0.2065	11.2110	2215.2060	2215.4125
Total			58.80		670.19	1287.16		5734.86	7022.01
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.5000	4.0000	-2.0000	2.3750	-4.7500	-2.6667	9.4242	-177.6296	-180.2963
2	0.1250	4.0000	-0.5000	2.3750	-1.1875	-0.6667	9.4242	-44.4074	-45.0741
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.50		-5.94	-3.33		-222.04	-225.37



Made By DWC
Checked By KMW

Date 2/2/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	11.3985 in	S _{top} =	457.41 in ³	y-bar =	11.7992 in	S _{top} =	454.60 in ³
I _x =	7022.01 in ⁴	S _{bott.} =	616.05 in ³	I _x =	6796.64 in ⁴	S _{bott.} =	576.03 in ³
C _{top} =	15.3515 in	A =	58.7969 in ²	C _{top} =	14.9508 in	A =	56.2969 in ²
C _{bottom} =	11.3985 in	r _x =	10.9283 in	C _{bottom} =	11.7992 in	r _x =	10.9877 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Right)	Perforated Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
Total		58.80		716.59	1223.74		4353.84	5577.58	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	4.0000	0.5000	-2.0000	0.2500	-0.5000	-0.0417	12.2572	-300.4795	-300.5212
2	4.0000	0.1250	-0.5000	23.9375	-11.9688	-0.0007	11.4303	-65.3255	-65.3261
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.50		-12.47	-0.04		-365.81	-365.85

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	457.65 in ³	x-bar =	12.5072 in	S _{right} =	439.15 in ³
I _y =	5577.58 in ⁴	S _{left} =	457.65 in ³	I _y =	5211.74 in ⁴	S _{left} =	416.70 in ³
C _{right} =	12.1875 in	A =	58.7969 in ²	C _{right} =	11.8678 in	A =	56.2969 in ²
C _{left} =	12.1875 in	r _y =	9.7397 in	C _{left} =	12.5072 in	r _y =	9.6216 in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

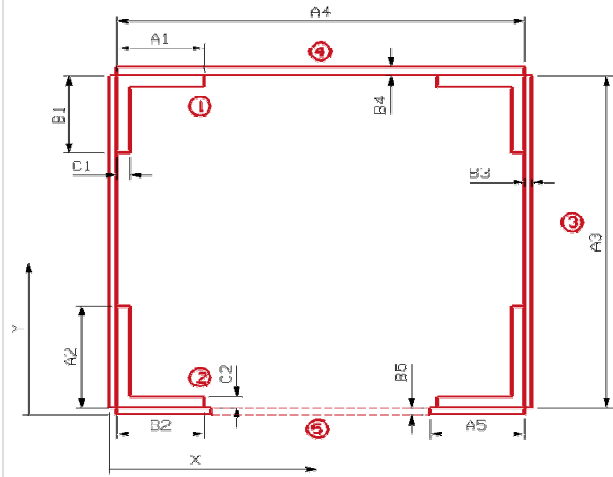
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 23.5000$ in
 $B_5 = t = 0.3750$ in



Member U51-U52

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	14.8203	549.1031	549.1234
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	12.8203	378.7985	381.4101
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	10.8672	295.2402	295.2605
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	8.8672	181.2113	183.8228
3	Plate	22.7500	13.3750	304.2813	1281.5833	1.9765	88.8784	1370.4617
4	Plate	8.8125	26.5625	234.0820	0.1033	15.1640	2026.4198	2026.5231
5	Perforated Plate	17.6250	0.1875	3.3047	0.2065	11.2110	2215.2060	2215.4125
Total		58.80		670.19	1287.16		5734.86	7022.01
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	11.3985 in	S _{top} =	457.41 in ³	y-bar =	11.3985 in	S _{top} =	457.41 in ³
I _x =	7022.01 in ⁴	S _{bott.} =	616.05 in ³	I _x =	7022.01 in ⁴	S _{bott.} =	616.05 in ³
C _{top} =	15.3515 in	A =	58.7969 in ²	C _{top} =	15.3515 in	A =	58.7969 in ²
C _{bottom} =	11.3985 in	r _x =	10.9283 in	C _{bottom} =	11.3985 in	r _x =	10.9283 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Right)	Perforated Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
Total		58.80		716.59	1223.74		4353.84	5577.58	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	457.65 in ³	x-bar =	12.1875 in	S _{right} =	457.65 in ³
I _y =	5577.58 in ⁴	S _{left} =	457.65 in ³	I _y =	5577.58 in ⁴	S _{left} =	457.65 in ³
C _{right} =	12.1875 in	A =	58.7969 in ²	C _{right} =	12.1875 in	A =	58.7969 in ²
C _{left} =	12.1875 in	r _y =	9.7397 in	C _{left} =	12.1875 in	r _y =	9.7397 in



Made By DWC
Checked By KMW

Date 2/2/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.5625$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.5625$ in

Top Cover Plate:

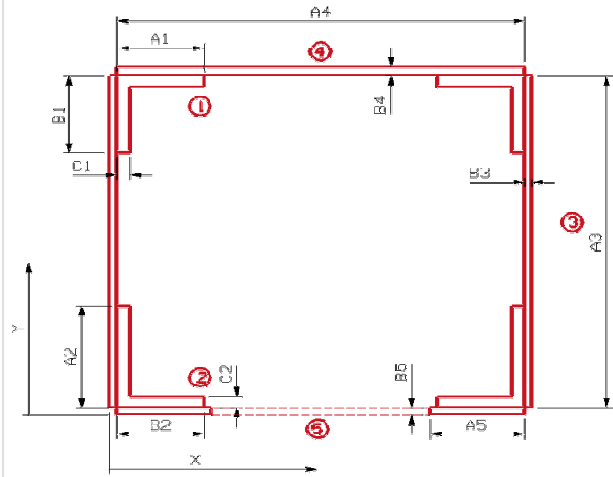
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.5000$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.6250$ in



Member U52-U53

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	6.7500	26.3438	177.8203	0.1780	11.9457	963.2167	963.3947	
	Vertical Leg	8.3672	22.3438	186.9543	38.5702	7.9457	528.2498	566.8200	
2	Horizontal Leg	6.7500	0.9063	6.1172	0.1780	13.4918	1228.7010	1228.8790	
	Vertical Leg	8.3672	4.9063	41.0515	38.5702	9.4918	753.8421	792.4124	
3	Plate	22.7500	13.6250	309.9688	1281.5833	0.7731	13.5970	1295.1803	
4	Plate	11.7500	26.8750	315.7813	0.2448	12.4769	1829.1608	1829.4056	
5	Perforated Plate	7.5000	0.3125	2.3438	0.2441	14.0856	1488.0291	1488.2732	
Total		72.23		1040.04	1359.57		6804.80	8164.37	
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	
1	0.1875	26.0000	-4.8750	13.6250	-66.4219	-274.6250	0.8290	-3.3506	-277.9756
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Total			-4.88	-66.42	-274.63		-3.35	-277.98	



Made By DWC
Checked By KMW

Date 2/2/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.3981 in	S _{top} =	641.50 in ³	y-bar =	14.4540 in	S _{top} =	622.40 in ³
I _x =	8164.37 in ⁴	S _{bottom} =	567.04 in ³	I _x =	7886.39 in ⁴	S _{bottom} =	545.62 in ³
C _{top} =	12.7269 in	A =	72.2344 in ²	C _{top} =	12.6710 in	A =	67.3594 in ²
C _{bottom} =	14.3981 in	r _x =	10.6314 in	C _{bottom} =	14.4540 in	r _x =	10.8203 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.3750	3.4375	11.6016	10.1250	8.7500	258.3984	268.5234	
	Vertical Leg	4.1836	0.7188	3.0070	0.1103	11.4688	550.2774	550.3877	
1 (Right)	Horizontal Leg	3.3750	20.9375	70.6641	10.1250	8.7500	258.3984	268.5234	
	Vertical Leg	4.1836	23.6563	98.9681	0.1103	11.4688	550.2774	550.3877	
2 (Left)	Horizontal Leg	3.3750	3.4375	11.6016	10.1250	8.7500	258.3984	268.5234	
	Vertical Leg	4.1836	0.7188	3.0070	0.1103	11.4688	550.2774	550.3877	
2 (Right)	Horizontal Leg	3.3750	20.9375	70.6641	10.1250	8.7500	258.3984	268.5234	
	Vertical Leg	4.1836	23.6563	98.9681	0.1103	11.4688	550.2774	550.3877	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	11.7500	12.1875	143.2031	540.7448	0.0000	0.0000	540.7448	
5 (Left)	Perforated Plate	3.7500	3.4375	12.8906	11.2500	8.7500	287.1094	298.3594	
5 (Right)	Perforated Plate	3.7500	20.9375	78.5156	11.2500	8.7500	287.1094	298.3594	
Total		72.23		880.36	604.55		7067.88	7672.43	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	26.0000	0.1875	-4.8750	0.0938	-0.4570	-0.0143	12.9690	-819.9518	-819.9661
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-4.88		-0.46	-0.01		-819.95	-819.97

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	629.53 in ³	x-bar =	13.0628 in	S _{right} =	605.76 in ³
I _y =	7672.43 in ⁴	S _{left} =	629.53 in ³	I _y =	6852.46 in ⁴	S _{left} =	524.58 in ³
C _{right} =	12.1875 in	A =	72.2344 in ²	C _{right} =	11.3122 in	A =	67.3594 in ²
C _{left} =	12.1875 in	r _y =	10.3061 in	C _{left} =	13.0628 in	r _y =	10.0861 in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.7500$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.7500$ in

Top Cover Plate:
 $A_4 = b = 22.0000$ in
 $B_4 = t = 0.6250$ in

Web Plate 1:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 1.0000$ in

Perforated Cover Plate
 $A_5 = b = 5.2500$ in
 $B_5 = t = 0.7500$ in



Member U53-U54

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	9.0000	26.3750	237.3750	0.4219	11.9395	1282.9646	1283.3865
	Vertical Leg	10.8750	22.3750	243.3281	47.6348	7.9395	685.5125	733.1473
2	Horizontal Leg	9.0000	1.1250	10.1250	0.4219	13.3105	1594.5251	1594.9470
	Vertical Leg	10.8750	5.1250	55.7344	47.6348	9.3105	942.7042	990.3389
3	Plate	52.0000	13.7500	715.0000	2929.3333	0.6855	24.4355	2953.7688
4	Plate	13.7500	27.0625	372.1094	0.4476	12.6270	2192.3149	2192.7625
5	Perforated Plate	7.8750	0.3750	2.9531	0.3691	14.0605	1556.8694	1557.2386
Total		113.38		1636.63	3026.26		8279.33	11305.59
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00	0.00	0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	14.4355	in	S _{top} =	873.73	in ³	y-bar =	14.4355	in	S _{top} =	873.73	in ³
I _x =	11305.59	in ⁴	S _{bott.} =	783.18	in ³	I _x =	11305.59	in ⁴	S _{bott.} =	783.18	in ³
C _{top} =	12.9395	in	A =	113.3750	in ²	C _{top} =	12.9395	in	A =	113.3750	in ²
C _{bottom} =	14.4355	in	r _x =	9.9859	in	C _{bottom} =	14.4355	in	r _x =	9.9859	in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.5000	4.0000	18.0000	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	1.3750	7.4766	0.2549	10.6250	613.8428	614.0977	
1 (Right)	Horizontal Leg	4.5000	20.0000	90.0000	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	22.6250	123.0234	0.2549	10.6250	613.8428	614.0977	
2 (Left)	Horizontal Leg	4.5000	4.0000	18.0000	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	1.3750	7.4766	0.2549	10.6250	613.8428	614.0977	
2 (Right)	Horizontal Leg	4.5000	20.0000	90.0000	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	22.6250	123.0234	0.2549	10.6250	613.8428	614.0977	
3 (Left)	Plate	26.0000	0.5000	13.0000	2.1667	11.5000	3438.5000	3440.6667	
3 (Right)	Plate	26.0000	23.5000	611.0000	2.1667	11.5000	3438.5000	3440.6667	
4	Plate	13.7500	12.0000	165.0000	554.5833	0.0000	0.0000	554.5833	
5 (Left)	Perforated Plate	3.9375	3.6250	14.2734	9.0439	8.3750	276.1787	285.2227	
5 (Right)	Perforated Plate	3.9375	20.3750	80.2266	9.0439	8.3750	276.1787	285.2227	
Total		113.38		1360.50	632.02		11036.73	11668.75	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
x-bar =	12.0000	in	S _{right} =	972.40	in ³	x-bar =	12.0000	in	S _{right} =	972.40	in ³
I _y =	11668.75	in ⁴	S _{left} =	972.40	in ³	I _y =	11668.75	in ⁴	S _{left} =	972.40	in ³
C _{right} =	12.0000	in	A =	113.3750	in ²	C _{right} =	12.0000	in	A =	113.3750	in ²
C _{left} =	12.0000	in	r _y =	10.1450	in	C _{left} =	12.0000	in	r _y =	10.1450	in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.7500$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.7500$ in

Top Cover Plate:

$A_4 = b = 22.0000$ in
 $B_4 = t = 0.6250$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 1.7500$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.7500$ in



Member U54-U55

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg		9.0000	26.3750	237.3750	0.4219	12.1150	1320.9483	1321.3702
	Vertical Leg		10.8750	22.3750	243.3281	47.6348	8.1150	716.1451	763.7799
2	Horizontal Leg		9.0000	1.1250	10.1250	0.4219	13.1350	1552.7657	1553.1875
	Vertical Leg		10.8750	5.1250	55.7344	47.6348	9.1350	907.5092	955.1440
3	Plate		91.0000	13.7500	1251.2500	5126.3333	0.5100	23.6737	5150.0070
4	Plate		13.7500	27.0625	372.1094	0.4476	12.8025	2253.6628	2254.1103
5	Perforated Plate		7.8750	0.3750	2.9531	0.3691	13.8850	1518.2574	1518.6266
Total			152.38		2172.88	5223.26		8292.96	13516.23
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.2600 in	S _{top} =	1030.60 in ³	y-bar =	14.2600 in	S _{top} =	1030.60 in ³
I _x =	13516.23 in ⁴	S _{bott.} =	947.84 in ³	I _x =	13516.23 in ⁴	S _{bott.} =	947.84 in ³
C _{top} =	13.1150 in	A =	152.3750 in ²	C _{top} =	13.1150 in	A =	152.3750 in ²
C _{bottom} =	14.2600 in	r _x =	9.4183 in	C _{bottom} =	14.2600 in	r _x =	9.4183 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.5000	4.7500	21.3750	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	2.1250	11.5547	0.2549	10.6250	613.8428	614.0977	
1 (Right)	Horizontal Leg	4.5000	20.7500	93.3750	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	23.3750	127.1016	0.2549	10.6250	613.8428	614.0977	
2 (Left)	Horizontal Leg	4.5000	4.7500	21.3750	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	2.1250	11.5547	0.2549	10.6250	613.8428	614.0977	
2 (Right)	Horizontal Leg	4.5000	20.7500	93.3750	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	23.3750	127.1016	0.2549	10.6250	613.8428	614.0977	
3 (Left)	Plate	45.5000	0.8750	39.8125	11.6120	11.8750	6416.2109	6427.8229	
3 (Right)	Plate	45.5000	24.6250	1120.4375	11.6120	11.8750	6416.2109	6427.8229	
4	Plate	13.7500	12.7500	175.3125	554.5833	0.0000	0.0000	554.5833	
5 (Left)	Perforated Plate	3.9375	4.3750	17.2266	9.0439	8.3750	276.1787	285.2227	
5 (Right)	Perforated Plate	3.9375	21.1250	83.1797	9.0439	8.3750	276.1787	285.2227	
Total		152.38		1942.78	650.91		16992.15	17643.07	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.7500 in	S _{right} =	1383.77 in ³	x-bar =	12.7500 in	S _{right} =	1383.77 in ³
I _y =	17643.07 in ⁴	S _{left} =	1383.77 in ³	I _y =	17643.07 in ⁴	S _{left} =	1383.77 in ³
C _{right} =	12.7500 in	A =	152.3750 in ²	C _{right} =	12.7500 in	A =	152.3750 in ²
C _{left} =	12.7500 in	r _y =	10.7604 in	C _{left} =	12.7500 in	r _y =	10.7604 in



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_l = 0.7500$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_l = 0.7500$ in

Top Cover Plate: PL

$A_6 = b = 22.0000$ in
 $B_6 = t = 0.3750$ in

Side Plate 1: PL

$A_3 = b = 10.0000$ in
 $B_3 = t = 0.7500$ in

Web Plate 1: PL

$A_4 = b = 26.0000$ in
 $B_4 = t = 0.7500$ in

Side Plate 2: PL

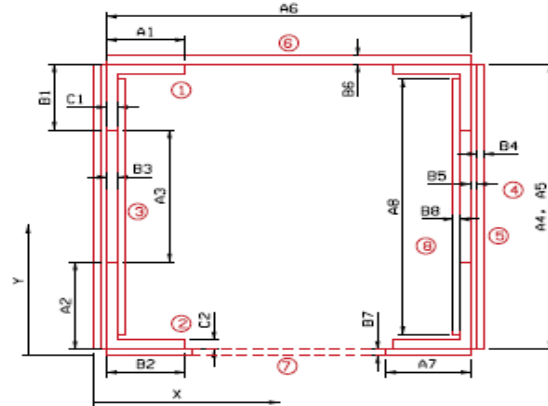
$A_8 = b = 24.0000$ in
 $B_8 = t = 0.3750$ in

Web Plate 2: PL

$A_5 = b = 26.0000$ in
 $B_5 = t = 1.0000$ in

Perforated Bottom Cover Plate: PL

$A_7 = b = 5.2500$ in
 $B_7 = t = 0.7500$ in



Member L55-L56

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	9.0000	26.3750	237.3750	0.4219	12.6057	1430.1366	1430.5585
	Vertical Leg	10.8750	22.3750	243.3281	47.6348	8.6057	805.3845	853.0193
2	Horizontal Leg	9.0000	1.1250	10.1250	0.4219	12.6443	1438.9013	1439.3232
	Vertical Leg	10.8750	5.1250	55.7344	47.6348	8.6443	812.6197	860.2545
3	Plate	15.0000	13.7500	206.2500	125.0000	0.0193	0.0056	125.0056
4	Plate	39.0000	13.7500	536.2500	2197.0000	0.0193	0.0145	2197.0145
5	Plate	52.0000	13.7500	715.0000	2929.3333	0.0193	0.0193	2929.3527
6	Plate	8.2500	26.9375	222.2344	0.0967	13.1682	1430.5657	1430.6624
7	Perforated Plate	7.8750	0.3750	2.9531	0.3691	13.3943	1412.8289	1413.1981
8	Plate	18.0000	13.7500	247.5000	864.0000	0.0193	0.0067	864.0067
Total		179.88		2476.75	6211.91		7330.48	13542.40
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 13.7693 in	S _{top} = 1013.98 in ³			y-bar = 13.7693 in	S _{top} = 1013.98 in ³		
I _x = 13542.40 in ⁴	S _{bott.} = 983.52 in ³			I _x = 13542.40 in ⁴	S _{bott.} = 983.52 in ³		
C _{top} = 13.3557 in	A = 179.8750 in ²			C _{top} = 13.3557 in	A = 179.8750 in ²		
C _{bottom} = 13.7693 in	r _x = 8.6769 in			C _{bottom} = 13.7693 in	r _x = 8.6769 in		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y, gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.5000	4.7500	21.3750	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	2.1250	11.5547	0.2549	10.6250	613.8428	614.0977	
1 (Right)	Horizontal Leg	4.5000	20.7500	93.3750	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	23.3750	127.1016	0.2549	10.6250	613.8428	614.0977	
2 (Left)	Horizontal Leg	4.5000	4.7500	21.3750	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	2.1250	11.5547	0.2549	10.6250	613.8428	614.0977	
2 (Right)	Horizontal Leg	4.5000	20.7500	93.3750	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	23.3750	127.1016	0.2549	10.6250	613.8428	614.0977	
3 (Left)	Plate	7.5000	2.1250	15.9375	0.3516	10.6250	846.6797	847.0313	
3 (Right)	Plate	7.5000	23.3750	175.3125	0.3516	10.6250	846.6797	847.0313	
4 (Left)	Plate	19.5000	0.3750	7.3125	0.9141	12.3750	2986.2422	2987.1563	
4 (Right)	Plate	19.5000	25.1250	489.9375	0.9141	12.3750	2986.2422	2987.1563	
5 (Left)	Plate	26.0000	1.2500	32.5000	2.1667	11.5000	3438.5000	3440.6667	
5 (Right)	Plate	26.0000	24.2500	630.5000	2.1667	11.5000	3438.5000	3440.6667	
6	Plate	8.2500	12.7500	105.1875	332.7500	0.0000	0.0000	332.7500	
7 (Left)	Perforated Plate	3.9375	4.3750	17.2266	9.0439	8.3750	276.1787	285.2227	
7 (Right)	Perforated Plate	3.9375	21.1250	83.1797	9.0439	8.3750	276.1787	285.2227	
8 (Left)	Plate	9.0000	2.6875	24.1875	0.1055	10.0625	911.2852	911.3906	
8 (Right)	Plate	9.0000	22.8125	205.3125	0.1055	10.0625	911.2852	911.3906	
Total		179.88		2293.41	412.93		20525.14	20938.08	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 12.7500 in	S _{right} = 1642.20 in ³			x-bar = 12.7500 in	S _{right} = 1642.20 in ³		
I _y = 20938.08 in ⁴	S _{left} = 1642.20 in ³			I _y = 20938.08 in ⁴	S _{left} = 1642.20 in ³		
C _{right} = 12.7500 in	A = 179.8750 in ²			C _{right} = 12.7500 in	A = 179.8750 in ²		
C _{left} = 12.7500 in	r _y = 10.7890 in			C _{left} = 12.7500 in	r _y = 10.7890 in		



Made By DWC
Checked By KMW

Date 2/2/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_l = 0.7500$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_l = 0.7500$ in

Top Cover Plate: PL

$A_6 = b = 22.0000$ in
 $B_6 = t = 0.3750$ in

Side Plate 1: PL

$A_3 = b = 10.0000$ in
 $B_3 = t = 0.7500$ in

Web Plate 1: PL

$A_4 = b = 26.0000$ in
 $B_4 = t = 0.7500$ in

Side Plate 2: PL

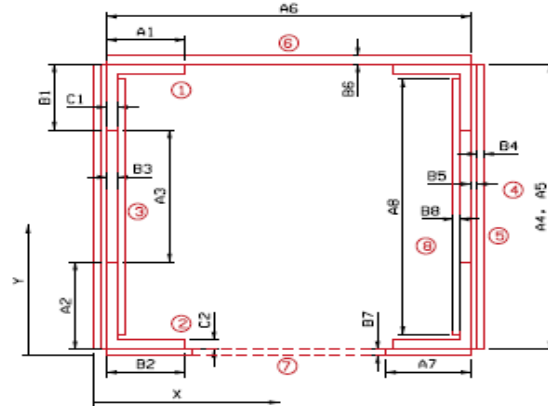
$A_8 = b = 24.0000$ in
 $B_8 = t = 0.3750$ in

Web Plate 2: PL

$A_5 = b = 26.0000$ in
 $B_5 = t = 1.0000$ in

Perforated Bottom Cover Plate: PL

$A_7 = b = 5.2500$ in
 $B_7 = t = 0.7500$ in



Member L56-L57

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	9.0000	26.3750	237.3750	0.4219	12.6057	1430.1366	1430.5585	
	Vertical Leg	10.8750	22.3750	243.3281	47.6348	8.6057	805.3845	853.0193	
2	Horizontal Leg	9.0000	1.1250	10.1250	0.4219	12.6443	1438.9013	1439.3232	
	Vertical Leg	10.8750	5.1250	55.7344	47.6348	8.6443	812.6197	860.2545	
3	Plate	15.0000	13.7500	206.2500	125.0000	0.0193	0.0056	125.0056	
4	Plate	39.0000	13.7500	536.2500	2197.0000	0.0193	0.0145	2197.0145	
5	Plate	52.0000	13.7500	715.0000	2929.3333	0.0193	0.0193	2929.3527	
6	Plate	8.2500	26.9375	222.2344	0.0967	13.1682	1430.5657	1430.6624	
7	Perforated Plate	7.8750	0.3750	2.9531	0.3691	13.3943	1412.8289	1413.1981	
8	Plate	18.0000	13.7500	247.5000	864.0000	0.0193	0.0067	864.0067	
Total		179.88		2476.75	6211.91		7330.48	13542.40	
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	
1	0.0625	26.0000	-1.6250	13.7500	-22.3438	-91.5417	0.0337	-0.0018	-91.5435
2	0.0625	26.0000	-1.6250	13.7500	-22.3438	-91.5417	0.0337	-0.0018	-91.5435
3	22.0000	0.0625	-1.3750	27.0938	-37.2539	-0.0004	13.3774	-246.0631	-246.0635
4	5.2500	0.0625	-0.3281	0.0313	-0.0103	-0.0001	13.6851	-61.4518	-61.4520
5	5.2500	0.0625	-0.3281	0.0313	-0.0103	-0.0001	13.6851	-61.4518	-61.4520
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-5.28		-81.96	-183.08		-368.97	-552.05



Made By DWC
Checked By KMW

Date 2/2/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	13.7693 in	S _{top} =	1013.98 in ³	y-bar =	13.7163 in	S _{top} =	968.80 in ³
I _x =	13542.40 in ⁴	S _{bott.} =	983.52 in ³	I _x =	12990.34 in ⁴	S _{bott.} =	947.07 in ³
C _{top} =	13.3557 in	A =	179.8750 in ²	C _{top} =	13.4087 in	A =	174.5938 in ²
C _{bottom} =	13.7693 in	r _x =	8.6769 in	C _{bottom} =	13.7163 in	r _x =	8.6257 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1 (Left)	Horizontal Leg	4.5000	4.7500	21.3750	13.5000	8.0000	288.0000	301.5000
	Vertical Leg	5.4375	2.1250	11.5547	0.2549	10.6250	613.8428	614.0977
1 (Right)	Horizontal Leg	4.5000	20.7500	93.3750	13.5000	8.0000	288.0000	301.5000
	Vertical Leg	5.4375	23.3750	127.1016	0.2549	10.6250	613.8428	614.0977
2 (Left)	Horizontal Leg	4.5000	4.7500	21.3750	13.5000	8.0000	288.0000	301.5000
	Vertical Leg	5.4375	2.1250	11.5547	0.2549	10.6250	613.8428	614.0977
2 (Right)	Horizontal Leg	4.5000	20.7500	93.3750	13.5000	8.0000	288.0000	301.5000
	Vertical Leg	5.4375	23.3750	127.1016	0.2549	10.6250	613.8428	614.0977
3 (Left)	Plate	7.5000	2.1250	15.9375	0.3516	10.6250	846.6797	847.0313
3 (Right)	Plate	7.5000	23.3750	175.3125	0.3516	10.6250	846.6797	847.0313
4 (Left)	Plate	19.5000	0.3750	7.3125	0.9141	12.3750	2986.2422	2987.1563
4 (Right)	Plate	19.5000	25.1250	489.9375	0.9141	12.3750	2986.2422	2987.1563
5 (Left)	Plate	26.0000	1.2500	32.5000	2.1667	11.5000	3438.5000	3440.6667
5 (Right)	Plate	26.0000	24.2500	630.5000	2.1667	11.5000	3438.5000	3440.6667
6	Plate	8.2500	12.7500	105.1875	332.7500	0.0000	0.0000	332.7500
7 (Left)	Perforated Plate	3.9375	4.3750	17.2266	9.0439	8.3750	276.1787	285.2227
7 (Right)	Perforated Plate	3.9375	21.1250	83.1797	9.0439	8.3750	276.1787	285.2227
8 (Left)	Plate	9.0000	2.6875	24.1875	0.1055	10.0625	911.2852	911.3906
8 (Right)	Plate	9.0000	22.8125	205.3125	0.1055	10.0625	911.2852	911.3906
Total		179.88		2293.41	412.93		20525.14	20938.08
Section Losses		A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	26.0000	0.0625	-1.6250	0.0313	-0.0508	-0.0005	12.7188	-262.8707
2	26.0000	0.0625	-1.6250	25.4688	-41.3867	-0.0005	12.7188	-262.8707
3	0.0625	22.0000	-1.3750	12.7500	-17.5313	-55.4583	0.0000	-55.4583
4	0.0625	5.2500	-0.3281	4.3750	-1.4355	-0.7537	8.3750	-23.0149
5	0.0625	5.2500	-0.3281	21.1250	-6.9316	-0.7537	8.3750	-23.0149
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-5.28	-67.34	-56.97		-571.77	-628.74

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.7500 in	S _{right} =	1642.20 in ³	x-bar =	12.7500 in	S _{right} =	1592.89 in ³
I _y =	20938.08 in ⁴	S _{left} =	1642.20 in ³	I _y =	20309.34 in ⁴	S _{left} =	1592.89 in ³
C _{right} =	12.7500 in	A =	179.8750 in ²	C _{right} =	12.7500 in	A =	174.5938 in ²
C _{left} =	12.7500 in	r _y =	10.7890 in	C _{left} =	12.7500 in	r _y =	10.7853 in



Made By DWC
Checked By KMW

Date 2/2/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6875$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6875$ in

Top Cover Plate:

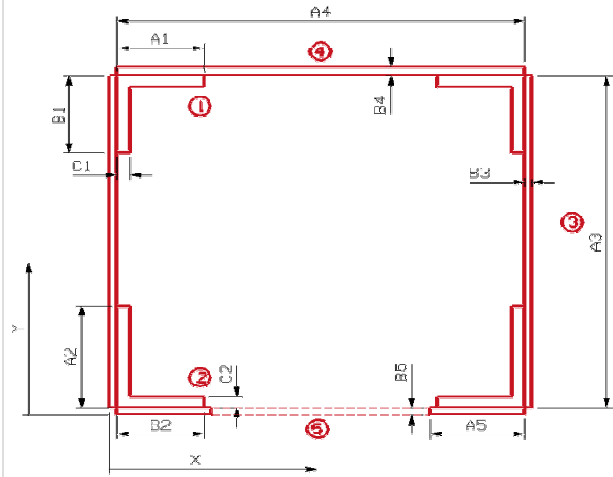
$A_4 = b = 22.0000$ in
 $B_4 = t = 0.6250$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 1.7500$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.7500$ in



Member U57-U58

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	8.2500	26.4063	217.8516	0.3250	12.1355	1214.9738	1215.2988	
	Vertical Leg	10.0547	22.4063	225.2878	44.8042	8.1355	665.4777	710.2820	
2	Horizontal Leg	8.2500	1.0938	9.0234	0.3250	13.1770	1432.4822	1432.8071	
	Vertical Leg	10.0547	5.0938	51.2161	44.8042	9.1770	846.7850	891.5893	
3	Plate	91.0000	13.7500	1251.2500	5126.3333	0.5208	24.6806	5151.0139	
4	Plate	13.7500	27.0625	372.1094	0.4476	12.7917	2249.8853	2250.3329	
5	Perforated Plate	7.8750	0.3750	2.9531	0.3691	13.8958	1520.6057	1520.9749	
Total		149.23		2129.69	5217.41		7954.89	13172.30	
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	
1	0.0625	26.0000	-1.6250	13.7500	-22.3438	-91.5417	0.2049	-0.0683	-91.6099
2	0.0625	26.0000	-1.6250	13.7500	-22.3438	-91.5417	0.2049	-0.0683	-91.6099
3	22.0000	0.0625	-1.3750	48.7188	-66.9883	-0.0004	34.7638	-1661.7181	-1661.7186
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-4.63	-111.68	-183.08		-1661.85	-1844.94	



Made By DWC
Checked By KMW

Date 2/2/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.2708 in	S _{top} =	1005.20 in ³	y-bar =	13.9549 in	S _{top} =	844.06 in ³
I _x =	13172.30 in ⁴	S _{bot.} =	923.03 in ³	I _x =	11327.36 in ⁴	S _{bot.} =	811.71 in ³
C _{top} =	13.1042 in	A =	149.2344 in ²	C _{top} =	13.4201 in	A =	144.6094 in ²
C _{bottom} =	14.2708 in	r _x =	9.3950 in	C _{bottom} =	13.9549 in	r _x =	8.8505 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	4.7500	19.5938	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	2.0938	10.5260	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	20.7500	85.5938	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	23.4063	117.6713	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	4.7500	19.5938	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	2.0938	10.5260	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	20.7500	85.5938	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	23.4063	117.6713	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	45.5000	0.8750	39.8125	11.6120	11.8750	6416.2109	6427.8229	
3 (Right)	Plate	45.5000	24.6250	1120.4375	11.6120	11.8750	6416.2109	6427.8229	
4	Plate	13.7500	12.7500	175.3125	554.5833	0.0000	0.0000	554.5833	
5 (Left)	Perforated Plate	3.9375	4.3750	17.2266	9.0439	8.3750	276.1787	285.2227	
5 (Right)	Perforated Plate	3.9375	21.1250	83.1797	9.0439	8.3750	276.1787	285.2227	
Total		149.23		1902.74	646.19		16724.31	17370.50	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	26.0000	0.0625	-1.6250	0.0313	-0.0508	-0.0005	12.7188	-262.8707	-262.8713
2	26.0000	0.0625	-1.6250	25.4688	-41.3867	-0.0005	12.7188	-262.8707	-262.8713
3	0.0625	22.0000	-1.3750	12.7500	-17.5313	-55.4583	0.0000	0.0000	-55.4583
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-4.63		-58.97	-55.46		-525.74	-581.20

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.7500 in	S _{right} =	1362.39 in ³	x-bar =	12.7500 in	S _{right} =	1316.81 in ³
I _y =	17370.50 in ⁴	S _{left} =	1362.39 in ³	I _y =	16789.30 in ⁴	S _{left} =	1316.81 in ³
C _{right} =	12.7500 in	A =	149.2344 in ²	C _{right} =	12.7500 in	A =	144.6094 in ²
C _{left} =	12.7500 in	r _y =	10.7888 in	C _{left} =	12.7500 in	r _y =	10.7750 in



Made By DWC
Checked By KMW

Date 2/2/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6875$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6875$ in

Top Cover Plate:

$A_4 = b = 22.0000$ in
 $B_4 = t = 0.6250$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 1.0000$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.7500$ in



Member U58-U59

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	8.2500	26.4063	217.8516	0.3250	11.9512	1178.3608	1178.6858	
	Vertical Leg	10.0547	22.4063	225.2878	44.8042	7.9512	635.6761	680.4804	
2	Horizontal Leg	8.2500	1.0938	9.0234	0.3250	13.3613	1472.8218	1473.1467	
	Vertical Leg	10.0547	5.0938	51.2161	44.8042	9.3613	881.1284	925.9327	
3	Plate	52.0000	13.7500	715.0000	2929.3333	0.7050	25.8476	2955.1810	
4	Plate	13.7500	27.0625	372.1094	0.4476	12.6075	2185.5385	2185.9861	
5	Perforated Plate	7.8750	0.3750	2.9531	0.3691	14.0800	1561.1975	1561.5666	
Total		110.23		1593.44	3020.41		7940.57	10960.98	
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	
1	0.0625	26.0000	-1.6250	13.7500	-22.3438	-91.5417	0.7156	-0.8321	-92.3738
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.63	-22.34	-91.54		-0.83	-92.37	



Made By DWC
Checked By KMW

Date 2/2/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.4550 in	S _{top} =	848.38 in ³	y-bar =	14.4656 in	S _{top} =	841.91 in ³
I _x =	10960.98 in ⁴	S _{bott.} =	758.28 in ³	I _x =	10868.61 in ⁴	S _{bott.} =	751.34 in ³
C _{top} =	12.9200 in	A =	110.2344 in ²	C _{top} =	12.9094 in	A =	108.6094 in ²
C _{bottom} =	14.4550 in	r _x =	9.9716 in	C _{bottom} =	14.4656 in	r _x =	10.0035 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	4.0000	16.5000	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.3438	6.7555	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	20.0000	82.5000	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.6563	113.9008	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	4.0000	16.5000	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.3438	6.7555	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	20.0000	82.5000	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.6563	113.9008	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	26.0000	0.5000	13.0000	2.1667	11.5000	3438.5000	3440.6667	
3 (Right)	Plate	26.0000	23.5000	611.0000	2.1667	11.5000	3438.5000	3440.6667	
4	Plate	13.7500	12.0000	165.0000	554.5833	0.0000	0.0000	554.5833	
5 (Left)	Perforated Plate	3.9375	3.6250	14.2734	9.0439	8.3750	276.1787	285.2227	
5 (Right)	Perforated Plate	3.9375	20.3750	80.2266	9.0439	8.3750	276.1787	285.2227	
Total		110.23		1322.81	627.30		10768.89	11396.19	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	26.0000	0.0625	-1.6250	0.0313	-0.0508	-0.0005	12.1478	-239.8007	-239.8012
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.63		-0.05	0.00		-239.80	-239.80

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.0000 in	S _{right} =	949.68 in ³	x-bar =	12.1791 in	S _{right} =	943.78 in ³
I _y =	11396.19 in ⁴	S _{left} =	949.68 in ³	I _y =	11156.39 in ⁴	S _{left} =	916.03 in ³
C _{right} =	12.0000 in	A =	110.2344 in ²	C _{right} =	11.8209 in	A =	108.6094 in ²
C _{left} =	12.0000 in	r _y =	10.1677 in	C _{left} =	12.1791 in	r _y =	10.1351 in



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.4375$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.4375$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.5000$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.6250$ in



Member U59-U60

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.2500	26.4063	138.6328	0.0837	11.9317	747.4204	747.5041
	Vertical Leg	6.6172	22.4063	148.2664	31.5372	7.9317	416.3010	447.8382
2	Horizontal Leg	5.2500	0.8438	4.4297	0.0837	13.6308	975.4413	975.5250
	Vertical Leg	6.6172	4.8438	32.0520	31.5372	9.6308	613.7577	645.2949
3	Plate	22.7500	13.6250	309.9688	1281.5833	0.8495	16.4190	1298.0023
4	Plate	11.7500	26.8750	315.7813	0.2448	12.4005	1806.8151	1807.0599
5	Perforated Plate	7.5000	0.3125	2.3438	0.2441	14.1620	1504.2246	1504.4687
Total		65.73		951.47	1345.31		6080.38	7425.69
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.4745 in	S _{top} =	586.99 in ³	y-bar =	14.4745 in	S _{top} =	586.99 in ³
I _x =	7425.69 in ⁴	S _{bott.} =	513.02 in ³	I _x =	7425.69 in ⁴	S _{bott.} =	513.02 in ³
C _{top} =	12.6505 in	A =	65.7344 in ²	C _{top} =	12.6505 in	A =	65.7344 in ²
C _{bottom} =	14.4745 in	r _x =	10.6285 in	C _{bottom} =	14.4745 in	r _x =	10.6285 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.4375	9.0234	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	20.9375	54.9609	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.4375	9.0234	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	20.9375	54.9609	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	11.7500	12.1875	143.2031	540.7448	0.0000	0.0000	540.7448	
5 (Left)	Perforated Plate	3.7500	3.4375	12.8906	11.2500	8.7500	287.1094	298.3594	
5 (Right)	Perforated Plate	3.7500	20.9375	78.5156	11.2500	8.7500	287.1094	298.3594	
Total		65.73		801.14	595.32		6396.86	6992.17	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	573.72 in ³	x-bar =	12.1875 in	S _{right} =	573.72 in ³
I _y =	6992.17 in ⁴	S _{left} =	573.72 in ³	I _y =	6992.17 in ⁴	S _{left} =	573.72 in ³
C _{right} =	12.1875 in	A =	65.7344 in ²	C _{right} =	12.1875 in	A =	65.7344 in ²
C _{left} =	12.1875 in	r _y =	10.3136 in	C _{left} =	12.1875 in	r _y =	10.3136 in



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

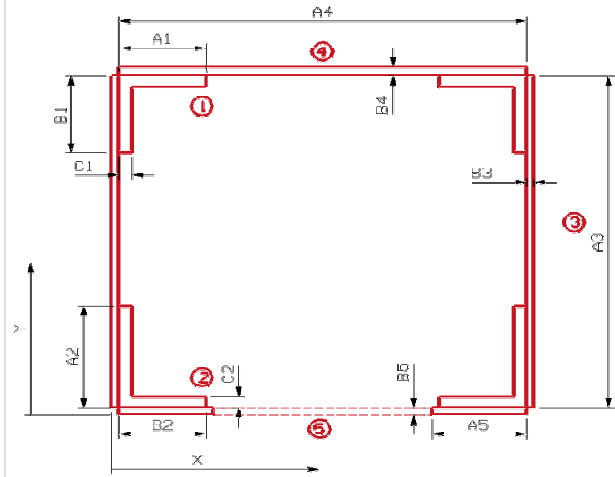
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3760$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member U60-U61

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5923	335.9536	335.9740
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5923	212.0595	214.6710
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.0952	496.6866	496.7069
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.0952	337.1616	339.7731
3	Plate	22.7500	13.3750	304.2813	1281.5833	1.2514	35.6293	1317.2127
4	Plate	8.8360	26.5630	234.7107	0.1041	11.9366	1258.9644	1259.0685
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.4389	938.1746	938.2273
Total		45.70		668.36	1287.00		3614.63	4901.63
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties					
y-bar =	14.6264	in	$S_{top} = 404.27$	in^3	y-bar =	14.6264	in	$S_{top} = 404.27$	in^3
$I_x =$	4901.63	in^4	$S_{bott.} = 335.12$	in^3	$I_x =$	4901.63	in^4	$S_{bott.} = 335.12$	in^3
$C_{top} =$	12.1246	in	$A = 45.6954$	in^2	$C_{top} =$	12.1246	in	$A = 45.6954$	in^2
$C_{bottom} =$	14.6264	in	$r_x = 10.3570$	in	$C_{bottom} =$	14.6264	in	$r_x = 10.3570$	in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I_o	d	Ad^2	$I_{y,gross}$	
Element	Description	(in^2)	(in)	(in^3)	(in^4)	(in)	(in^4)	(in^4)	
1 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8360	12.1875	107.6888	406.6401	0.0000	0.0000	406.6401	
5 (Left)	Perforated Plate	2.2500	3.4375	7.7344	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.9375	47.1094	6.7500	8.7500	172.2656	179.0156	
Total		45.70		556.91	427.21		4698.37	5125.58	
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y,loss}$
Loss #	b (in)	h (in)	(in^2)	(in)	(in^3)	(in^4)	(in)	(in^4)	(in^4)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties					
x-bar =	12.1875	in	$S_{right} = 420.56$	in^3	x-bar =	12.1875	in	$S_{right} = 420.56$	in^3
$I_y =$	5125.58	n^4	$S_{left} = 420.56$	in^3	$I_y =$	5125.58	n^4	$S_{left} = 420.56$	in^3
$C_{right} =$	12.1875	in	$A = 45.6954$	in^2	$C_{right} =$	12.1875	in	$A = 45.6954$	in^2
$C_{left} =$	12.1875	in	$r_y = 10.5910$	in	$C_{left} =$	12.1875	in	$r_y = 10.5910$	in



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

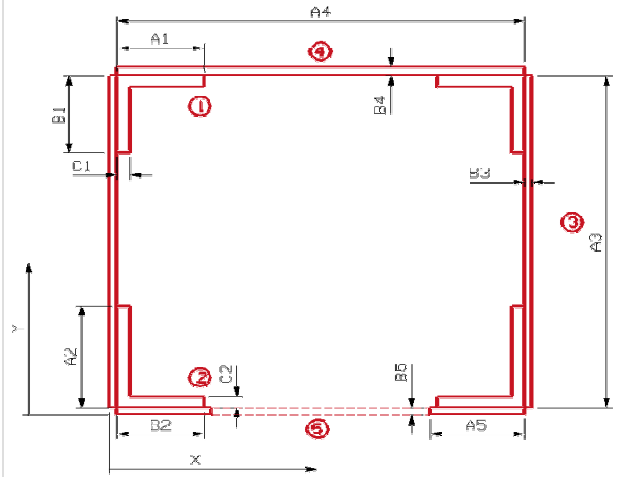
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.3125$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x, gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.3919	324.4393	324.4597
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.3919	203.2920	205.9036
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.2956	510.9094	510.9297
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.2956	348.4259	351.0374
3	Plate	16.2500	13.3750	217.3438	915.4167	1.4518	34.2521	949.6688
4	Plate	8.8125	26.5625	234.0820	0.1033	11.7357	1213.7089	1213.8122
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.6393	964.3956	964.4483
Total		39.17		580.79	920.84		3599.42	4520.26
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.8268 in	S _{top} =	379.12 in ³	y-bar =	14.8268 in	S _{top} =	379.12 in ³
I _x =	4520.26 in ⁴	S _{bottom} =	304.87 in ³	I _x =	4520.26 in ⁴	S _{bottom} =	304.87 in ³
C _{top} =	11.9232 in	A =	39.1719 in ²	C _{top} =	11.9232 in	A =	39.1719 in ²
C _{bottom} =	14.8268 in	r _x =	10.7422 in	C _{bottom} =	14.8268 in	r _x =	10.7422 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.3125	2.8906	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.4688	0.5402	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.8125	27.2656	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.6563	27.2601	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.3125	2.8906	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.4688	0.5402	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.8125	27.2656	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.6563	27.2601	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	8.1250	0.1563	1.2695	0.0661	11.9063	1151.7902	1151.8563	
3 (Right)	Plate	8.1250	23.9688	194.7461	0.0661	11.9063	1151.7902	1151.8563	
4	Plate	8.8125	12.0625	106.3008	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.3125	7.4531	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.8125	46.8281	6.7500	8.7500	172.2656	179.0156	
Total		39.17		472.51	425.90		3742.99	4168.89	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.0625 in	S _{right} =	345.61 in ³	x-bar =	12.0625 in	S _{right} =	345.61 in ³
I _y =	4168.89 in ⁴	S _{left} =	345.61 in ³	I _y =	4168.89 in ⁴	S _{left} =	345.61 in ³
C _{right} =	12.0625 in	A =	39.1719 in ²	C _{right} =	12.0625 in	A =	39.1719 in ²
C _{left} =	12.0625 in	r _y =	10.3163 in	C _{left} =	12.0625 in	r _y =	10.3163 in



Made By KMW
Checked By DWC

Date 2/3/2012
Date 2/21/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

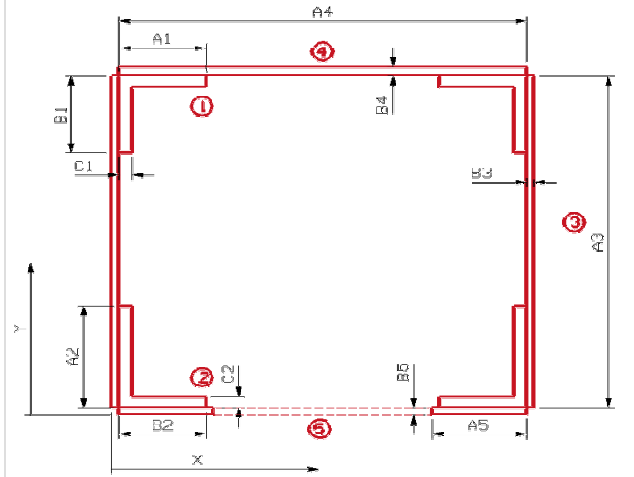
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.4375$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.4375$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member U62-U63

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	5.2500	26.2813	137.9766	0.0837	12.1823	779.1420	779.2258	
	Vertical Leg	6.6172	22.2813	147.4392	31.5372	8.1823	443.0190	474.5562	
2	Horizontal Leg	5.2500	0.7188	3.7734	0.0837	13.3802	939.9087	939.9924	
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	9.3802	582.2363	613.7735	
3	Plate	22.7500	13.5000	307.1250	1281.5833	0.5990	8.1618	1289.7452	
4	Plate	8.8125	26.6875	235.1836	0.1033	12.5885	1396.5270	1396.6303	
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	13.8490	1150.7634	1150.8884	
Total		61.30		864.22	1345.05		5299.76	6644.81	
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	
1	0.1250	6.5000	-0.8125	23.2500	-18.8906	-2.8607	9.5251	-73.7155	-76.5762
2	2.5000	0.1250	-0.3125	26.5000	-8.2813	-0.0004	12.7751	-51.0007	-51.0011
3	2.5000	0.1250	-0.3125	26.5000	-8.2813	-0.0004	12.7751	-51.0007	-51.0011
4	0.1250	2.5000	-0.3125	25.2500	-7.8906	-0.1628	11.5251	-41.5084	-41.6712
5	0.1250	2.5000	-0.3125	25.2500	-7.8906	-0.1628	11.5251	-41.5084	-41.6712
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.06	-51.23	-3.19		-258.73	-261.92	



Made By KMW
Checked By DWC

Date 2/3/2012
Date 2/21/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.0990 in	S _{top} =	520.10 in ³	y-bar =	13.7249 in	S _{top} =	485.39 in ³
I _x =	6644.81 in ⁴	S _{bott.} =	471.30 in ³	I _x =	6382.89 in ⁴	S _{bott.} =	465.06 in ³
C _{top} =	12.7760 in	A =	61.2969 in ²	C _{top} =	13.1501 in	A =	59.2344 in ²
C _{bottom} =	14.0990 in	r _x =	10.4117 in	C _{bottom} =	13.7249 in	r _x =	10.3806 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.4375	9.0234	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	20.9375	54.9609	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.4375	9.0234	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	20.9375	54.9609	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.4375	10.3125	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.9375	62.8125	9.0000	8.7500	229.6875	238.6875	
Total		61.30		747.06	455.63		6282.01	6737.64	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	6.5000	0.1250	-0.8125	0.0625	-0.0508	-0.0011	12.2913	-122.7496	-122.7507
2	0.1250	2.5000	-0.3125	1.6875	-0.5273	-0.1628	10.6663	-35.5532	-35.7160
3	0.1250	2.5000	-0.3125	22.6875	-7.0898	-0.1628	10.3337	-33.3703	-33.5331
4	2.5000	0.1250	-0.3125	0.4375	-0.1367	-0.0004	11.9163	-44.3746	-44.3750
5	2.5000	0.1250	-0.3125	23.9375	-7.4805	-0.0004	11.5837	-41.9318	-41.9322
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.06		-15.29	-0.33		-277.98	-278.31

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	552.83 in ³	x-bar =	12.3538 in	S _{right} =	537.33 in ³
I _y =	6737.64 in ⁴	S _{left} =	552.83 in ³	I _y =	6459.34 in ⁴	S _{left} =	522.86 in ³
C _{right} =	12.1875 in	A =	61.2969 in ²	C _{right} =	12.0212 in	A =	59.2344 in ²
C _{left} =	12.1875 in	r _y =	10.4842 in	C _{left} =	12.3538 in	r _y =	10.4426 in



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

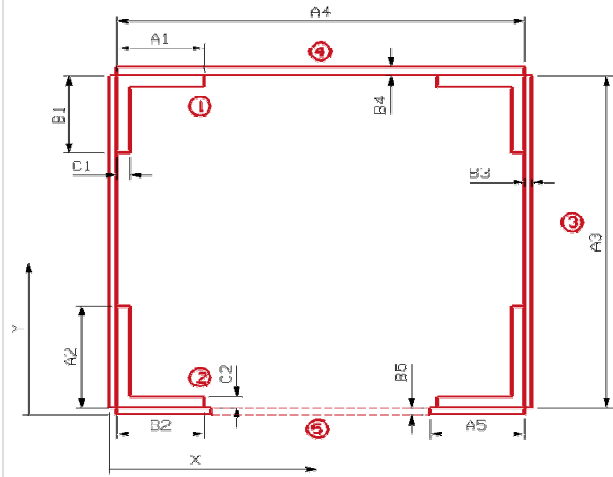
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member U63-U64

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5031	330.8057	330.8260
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5031	208.1357	210.7472
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.1844	502.9900	503.0104
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.1844	342.1506	344.7621
3	Plate	19.5000	13.3750	260.8125	1098.5000	1.3406	35.0460	1133.5460
4	Plate	8.8125	26.5625	234.0820	0.1033	11.8469	1236.8243	1236.9276
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.5281	949.7966	949.8493
Total		42.42		624.26	1103.92		3605.75	4709.67
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.7156 in	S _{top} =	391.35 in ³	y-bar =	14.7156 in	S _{top} =	391.35 in ³
I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³	I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³
C _{top} =	12.0344 in	A =	42.4219 in ²	C _{top} =	12.0344 in	A =	42.4219 in ²
C _{bottom} =	14.7156 in	r _x =	10.5366 in	C _{bottom} =	14.7156 in	r _x =	10.5366 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	9.7500	0.1875	1.8281	0.1143	11.9375	1389.4131	1389.5273	
3 (Right)	Plate	9.7500	24.0625	234.6094	0.1143	11.9375	1389.4131	1389.5273	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.3750	7.5938	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.8750	46.9688	6.7500	8.7500	172.2656	179.0156	
Total		42.42		514.37	425.99		4218.24	4644.23	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	383.03 in ³	x-bar =	12.1250 in	S _{right} =	383.03 in ³
I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³	I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³
C _{right} =	12.1250 in	A =	42.4219 in ²	C _{right} =	12.1250 in	A =	42.4219 in ²
C _{left} =	12.1250 in	r _y =	10.4631 in	C _{left} =	12.1250 in	r _y =	10.4631 in



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_f = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3125$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member U64-U65

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5031	330.8057	330.8260
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5031	208.1357	210.7472
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.1844	502.9900	503.0104
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.1844	342.1506	344.7621
3	Plate	19.5000	13.3750	260.8125	1098.5000	1.3406	35.0460	1133.5460
4	Plate	8.8125	26.5625	234.0820	0.1033	11.8469	1236.8243	1236.9276
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.5281	949.7966	949.8493
Total		42.42		624.26	1103.92		3605.75	4709.67
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.7156 in	S _{top} =	391.35 in ³	y-bar =	14.7156 in	S _{top} =	391.35 in ³
I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³	I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³
C _{top} =	12.0344 in	A =	42.4219 in ²	C _{top} =	12.0344 in	A =	42.4219 in ²
C _{bottom} =	14.7156 in	r _x =	10.5366 in	C _{bottom} =	14.7156 in	r _x =	10.5366 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	9.7500	0.1875	1.8281	0.1143	11.9375	1389.4131	1389.5273	
3 (Right)	Plate	9.7500	24.0625	234.6094	0.1143	11.9375	1389.4131	1389.5273	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.3750	7.5938	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.8750	46.9688	6.7500	8.7500	172.2656	179.0156	
Total		42.42		514.37	425.99		4218.24	4644.23	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	383.03 in ³	x-bar =	12.1250 in	S _{right} =	383.03 in ³
I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³	I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³
C _{right} =	12.1250 in	A =	42.4219 in ²	C _{right} =	12.1250 in	A =	42.4219 in ²
C _{left} =	12.1250 in	r _y =	10.4631 in	C _{left} =	12.1250 in	r _y =	10.4631 in



Made By KMW
Checked By DWC

Date 2/7/2012
Date 2/21/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.5000$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member U65-U66

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	10.8618	294.9441	294.9644	
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	8.8618	180.9885	183.6001	
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.8257	549.5071	549.5275	
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.8257	379.1207	381.7323	
3	Plate	22.7500	13.3750	304.2813	1281.5833	1.9820	89.3693	1370.9526	
4	Plate	11.7500	26.6250	312.8438	0.2448	11.2680	1491.8721	1492.1169	
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	15.1695	1035.5117	1035.5644	
Total		48.61		746.49	1287.14		4021.31	5308.46	
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	
1	0.1250	26.0000	-3.2500	13.3750	-43.4688	-183.0833	2.6712	-23.1892	-206.2725
2	23.5000	0.1250	-2.9375	26.8125	-78.7617	-0.0038	10.7663	-340.4972	-340.5010
3	0.1250	26.0000	-3.2500	13.3750	-43.4688	-183.0833	2.6712	-23.1892	-206.2725
4	6.0000	0.2500	-1.5000	0.1250	-0.1875	-0.0078	15.9212	-380.2253	-380.2331
5	6.0000	0.2500	-1.5000	0.1250	-0.1875	-0.0078	15.9212	-380.2253	-380.2331
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-12.44		-166.07	-366.19		-1147.33	-1513.51



Made By KMW
Checked By DWC

Date 2/7/2012
Date 2/21/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	15.3570 in	S _{top} =	460.88 in ³	y-bar =	16.0462 in	S _{top} =	350.45 in ³
I _x =	5308.46 in ⁴	S _{bott.} =	345.67 in ³	I _x =	3794.95 in ⁴	S _{bott.} =	236.50 in ³
C _{top} =	11.5180 in	A =	48.6094 in ²	C _{top} =	10.8288 in	A =	36.1719 in ²
C _{bottom} =	15.3570 in	r _x =	10.4502 in	C _{bottom} =	16.0462 in	r _x =	10.2428 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	11.7500	12.1875	143.2031	540.7448	0.0000	0.0000	540.7448	
5 (Left)	Perforated Plate	2.2500	3.4375	7.7344	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.9375	47.1094	6.7500	8.7500	172.2656	179.0156	
Total		48.61		592.43	561.31		4698.37	5259.68	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	26.0000	0.1250	-3.2500	0.0625	-0.2031	-0.0042	12.1250	-477.8008	-477.8050
2	0.1250	23.5000	-2.9375	12.1875	-35.8008	-135.1862	0.0000	0.0000	-135.1862
3	26.0000	0.1250	-3.2500	24.3125	-79.0156	-0.0042	12.1250	-477.8008	-477.8050
4	0.2500	6.0000	-1.5000	3.4375	-5.1563	-4.5000	8.7500	-114.8438	-119.3438
5	0.2500	6.0000	-1.5000	20.9375	-31.4063	-4.5000	8.7500	-114.8438	-119.3438
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-12.44		-151.58	-144.19		-1185.29	-1329.48

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	431.56 in ³	x-bar =	12.1875 in	S _{right} =	322.48 in ³
I _y =	5259.68 in ⁴	S _{left} =	431.56 in ³	I _y =	3930.20 in ⁴	S _{left} =	322.48 in ³
C _{right} =	12.1875 in	A =	48.6094 in ²	C _{right} =	12.1875 in	A =	36.1719 in ²
C _{left} =	12.1875 in	r _y =	10.4021 in	C _{left} =	12.1875 in	r _y =	10.4237 in



Made By KMW
Checked By DWC

Date 2/3/2012
Date 2/21/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member U66-U67

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x, gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.7214	343.4786	343.4990
	Vertical Leg	4.8047	22.2188	106.7542	23.6621	7.7214	286.4563	310.1184
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	13.9661	487.6292	487.6495
	Vertical Leg	4.8047	4.5313	21.7712	23.6621	9.9661	477.2158	500.8779
3	Plate	22.7500	13.3750	304.2813	1281.5833	1.1223	28.6570	1310.2403
4	Plate	8.8125	26.5625	234.0820	0.1033	12.0652	1282.8187	1282.9219
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.3098	921.4719	921.5246
Total		50.67		734.61	1329.10		3827.73	5156.83
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	23.5000	0.0625	-1.4688	26.7188	-39.2432	-0.0005	12.5945	-232.9753
2	0.0625	13.0000	-0.8125	19.8750	-16.1484	-11.4427	5.7508	-26.8703
3	0.0625	6.5000	-0.4063	3.6250	-1.4727	-1.4303	10.4992	-44.7826
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.69	-56.86	-12.87		-304.63	-317.50



Made By KMW
Checked By DWC

Date 2/3/2012
Date 2/21/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	14.4973	in	S _{top} =	420.87	in ³	y-bar =	14.1242	in	S _{top} =	383.29	in ³
I _x =	5156.83	in ⁴	S _{bott.} =	355.71	in ³	I _x =	4839.33	in ⁴	S _{bott.} =	342.63	in ³
C _{top} =	12.2527	in	A =	50.6719	in ²	C _{top} =	12.6258	in	A =	47.9844	in ²
C _{bottom} =	14.4973	in	r _x =	10.0881	in	C _{bottom} =	14.1242	in	r _x =	10.0425	in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	2.4023	0.5938	1.4264	0.0196	11.5938	322.9111	322.9307	
1 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	2.4023	23.7813	57.1307	0.0196	11.5938	322.9111	322.9307	
2 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	2.4023	0.5938	1.4264	0.0196	11.5938	322.9111	322.9307	
2 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	2.4023	23.7813	57.1307	0.0196	11.5938	322.9111	322.9307	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.4375	7.7344	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.9375	47.1094	6.7500	8.7500	172.2656	179.0156	
Total		50.67		617.56	426.17		5370.45	5796.61	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0625	23.5000	-1.4688	12.1875	-17.9004	-67.5931	0.3088	-0.1400	-67.7331
2	13.0000	0.0625	-0.8125	0.0313	-0.0254	-0.0003	12.4650	-126.2433	-126.2436
3	6.5000	0.0625	-0.4063	0.0313	-0.0127	-0.0001	12.4650	-63.1216	-63.1218
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.69		-17.94	-67.59		-189.50	-257.10

As-Built Section Properties				As-Inspected Section Properties							
x-bar =	12.1875	in	S _{right} =	475.62	in ³	x-bar =	12.4963	in	S _{right} =	466.34	in ³
I _y =	5796.61	in ⁴	S _{left} =	475.62	in ³	I _y =	5539.52	in ⁴	S _{left} =	443.29	in ³
C _{right} =	12.1875	in	A =	50.6719	in ²	C _{right} =	11.8787	in	A =	47.9844	in ²
C _{left} =	12.1875	in	r _y =	10.6956	in	C _{left} =	12.4963	in	r _y =	10.7445	in



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.4375$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_f = 0.4375$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.2500	26.2813	137.9766	0.0837	12.1823	779.1420	779.2258
	Vertical Leg	6.6172	22.2813	147.4392	31.5372	8.1823	443.0190	474.5562
2	Horizontal Leg	5.2500	0.7188	3.7734	0.0837	13.3802	939.9087	939.9924
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	9.3802	582.2363	613.7735
3	Plate	22.7500	13.5000	307.1250	1281.5833	0.5990	8.1618	1289.7452
4	Plate	8.8125	26.6875	235.1836	0.1033	12.5885	1396.5270	1396.6303
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	13.8490	1150.7634	1150.8884
Total		61.30		864.22	1345.05		5299.76	6644.81
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.0990 in	S _{top} =	520.10 in ³	y-bar =	14.0990 in	S _{top} =	520.10 in ³
I _x =	6644.81 in ⁴	S _{bott.} =	471.30 in ³	I _x =	6644.81 in ⁴	S _{bott.} =	471.30 in ³
C _{top} =	12.7760 in	A =	61.2969 in ²	C _{top} =	12.7760 in	A =	61.2969 in ²
C _{bottom} =	14.0990 in	r _x =	10.4117 in	C _{bottom} =	14.0990 in	r _x =	10.4117 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.4375	9.0234	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	20.9375	54.9609	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.4375	9.0234	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	20.9375	54.9609	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.4375	10.3125	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.9375	62.8125	9.0000	8.7500	229.6875	238.6875	
Total		61.30		747.06	455.63		6282.01	6737.64	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	552.83 in ³	x-bar =	12.1875 in	S _{right} =	552.83 in ³
I _y =	6737.64 in ⁴	S _{left} =	552.83 in ³	I _y =	6737.64 in ⁴	S _{left} =	552.83 in ³
C _{right} =	12.1875 in	A =	61.2969 in ²	C _{right} =	12.1875 in	A =	61.2969 in ²
C _{left} =	12.1875 in	r _y =	10.4842 in	C _{left} =	12.1875 in	r _y =	10.4842 in



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.4375$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.4375$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member U68-U69

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg		5.2500	26.2813	137.9766	0.0837	12.1823	779.1420	779.2258
	Vertical Leg		6.6172	22.2813	147.4392	31.5372	8.1823	443.0190	474.5562
2	Horizontal Leg		5.2500	0.7188	3.7734	0.0837	13.3802	939.9087	939.9924
	Vertical Leg		6.6172	4.7188	31.2249	31.5372	9.3802	582.2363	613.7735
3	Plate		22.7500	13.5000	307.1250	1281.5833	0.5990	8.1618	1289.7452
4	Plate		8.8125	26.6875	235.1836	0.1033	12.5885	1396.5270	1396.6303
5	Perforated Plate		6.0000	0.2500	1.5000	0.1250	13.8490	1150.7634	1150.8884
Total			61.30		864.22	1345.05		5299.76	6644.81
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.0990 in	S _{top} =	520.10 in ³	y-bar =	14.0990 in	S _{top} =	520.10 in ³
I _x =	6644.81 in ⁴	S _{bott.} =	471.30 in ³	I _x =	6644.81 in ⁴	S _{bott.} =	471.30 in ³
C _{top} =	12.7760 in	A =	61.2969 in ²	C _{top} =	12.7760 in	A =	61.2969 in ²
C _{bottom} =	14.0990 in	r _x =	10.4117 in	C _{bottom} =	14.0990 in	r _x =	10.4117 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.4375	9.0234	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	20.9375	54.9609	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.4375	9.0234	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	20.9375	54.9609	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.4375	10.3125	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.9375	62.8125	9.0000	8.7500	229.6875	238.6875	
Total		61.30		747.06	455.63		6282.01	6737.64	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	552.83 in ³	x-bar =	12.1875 in	S _{right} =	552.83 in ³
I _y =	6737.64 in ⁴	S _{left} =	552.83 in ³	I _y =	6737.64 in ⁴	S _{left} =	552.83 in ³
C _{right} =	12.1875 in	A =	61.2969 in ²	C _{right} =	12.1875 in	A =	61.2969 in ²
C _{left} =	12.1875 in	r _y =	10.4842 in	C _{left} =	12.1875 in	r _y =	10.4842 in



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

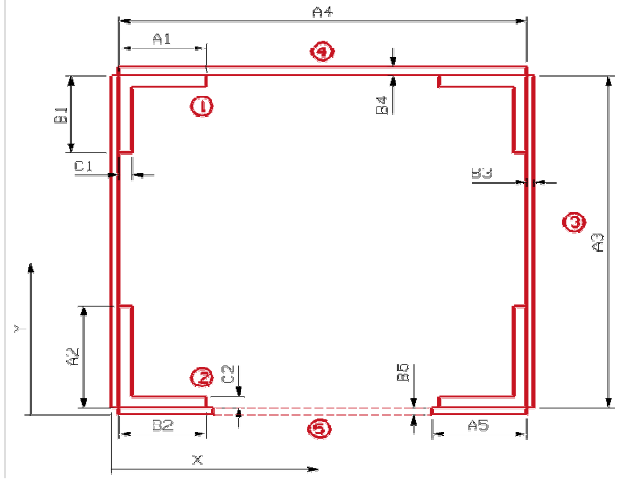
Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.4375$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.4375$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member U69-U70

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.5000	26.1563	91.5469	0.0558	11.7711	484.9517	485.0075
	Vertical Leg	6.6172	22.1563	146.6121	31.5372	7.7711	399.6068	431.1440
2	Horizontal Leg	3.5000	0.5938	2.0781	0.0558	13.7914	665.7143	665.7701
	Vertical Leg	6.6172	4.5938	30.3977	31.5372	9.7914	634.4062	665.9434
3	Plate	22.7500	13.3750	304.2813	1281.5833	1.0102	23.2165	1304.7998
4	Plate	8.8125	26.5625	234.0820	0.1033	12.1773	1306.7760	1306.8793
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.1977	907.0861	907.1388
Total		56.30		809.84	1344.93		4421.76	5766.68
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.3852 in	S _{top} =	466.38 in ³	y-bar =	14.3852 in	S _{top} =	466.38 in ³
I _x =	5766.68 in ⁴	S _{bott.} =	400.88 in ³	I _x =	5766.68 in ⁴	S _{bott.} =	400.88 in ³
C _{top} =	12.3648 in	A =	56.2969 in ²	C _{top} =	12.3648 in	A =	56.2969 in ²
C _{bottom} =	14.3852 in	r _x =	10.1209 in	C _{bottom} =	14.3852 in	r _x =	10.1209 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.7500	2.4375	4.2656	2.3333	9.7500	166.3594	168.6927	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	1.7500	21.9375	38.3906	2.3333	9.7500	166.3594	168.6927	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	1.7500	2.4375	4.2656	2.3333	9.7500	166.3594	168.6927	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	1.7500	21.9375	38.3906	2.3333	9.7500	166.3594	168.6927	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.4375	7.7344	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.9375	47.1094	6.7500	8.7500	172.2656	179.0156	
Total		56.30		686.12	428.97		6028.70	6457.67	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	529.86 in ³	x-bar =	12.1875 in	S _{right} =	529.86 in ³
I _y =	6457.67 in ⁴	S _{left} =	529.86 in ³	I _y =	6457.67 in ⁴	S _{left} =	529.86 in ³
C _{right} =	12.1875 in	A =	56.2969 in ²	C _{right} =	12.1875 in	A =	56.2969 in ²
C _{left} =	12.1875 in	r _y =	10.7102 in	C _{left} =	12.1875 in	r _y =	10.7102 in



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

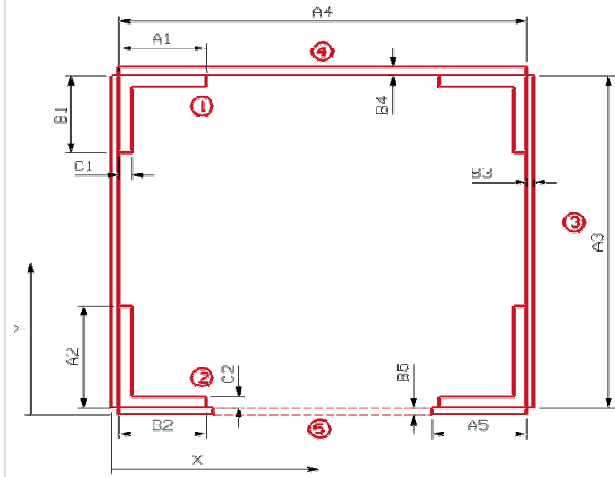
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member U70-U71

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5985	336.3153	336.3356
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5985	212.3354	214.9469
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.0890	496.2470	496.2674
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.0890	336.8139	339.4254
3	Plate	22.7500	13.3750	304.2813	1281.5833	1.2452	35.2750	1316.8583
4	Plate	8.8125	26.5625	234.0820	0.1033	11.9423	1256.8236	1256.9269
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.4327	937.3641	937.4168
Total		45.67		667.73	1287.00		3611.17	4898.18
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	14.6202	in	S _{top} =	403.81	in ³	y-bar =	14.6202	in	S _{top} =	403.81	in ³
I _x =	4898.18	in ⁴	S _{bott.} =	335.03	in ³	I _x =	4898.18	in ⁴	S _{bott.} =	335.03	in ³
C _{top} =	12.1298	in	A =	45.6719	in ²	C _{top} =	12.1298	in	A =	45.6719	in ²
C _{bottom} =	14.6202	in	r _x =	10.3560	in	C _{bottom} =	14.6202	in	r _x =	10.3560	in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.4375	7.7344	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.9375	47.1094	6.7500	8.7500	172.2656	179.0156	
Total		45.67		556.63	426.13		4698.37	5124.50	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
x-bar =	12.1875	in	S _{right} =	420.47	in ³	x-bar =	12.1875	in	S _{right} =	420.47	in ³
I _y =	5124.50	in ⁴	S _{left} =	420.47	in ³	I _y =	5124.50	in ⁴	S _{left} =	420.47	in ³
C _{right} =	12.1875	in	A =	45.6719	in ²	C _{right} =	12.1875	in	A =	45.6719	in ²
C _{left} =	12.1875	in	r _y =	10.5926	in	C _{left} =	12.1875	in	r _y =	10.5926	in



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

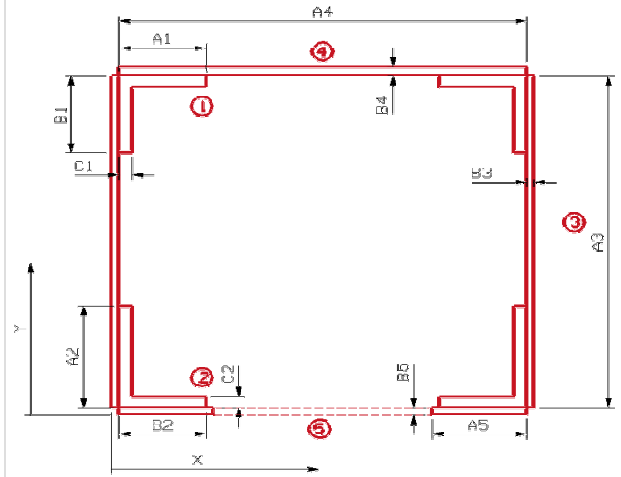
Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:
 $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member U71-U72

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5031	330.8057	330.8260
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5031	208.1357	210.7472
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.1844	502.9900	503.0104
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.1844	342.1506	344.7621
3	Plate	19.5000	13.3750	260.8125	1098.5000	1.3406	35.0460	1133.5460
4	Plate	8.8125	26.5625	234.0820	0.1033	11.8469	1236.8243	1236.9276
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.5281	949.7966	949.8493
Total		42.42		624.26	1103.92		3605.75	4709.67
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.7156 in	S _{top} =	391.35 in ³	y-bar =	14.7156 in	S _{top} =	391.35 in ³
I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³	I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³
C _{top} =	12.0344 in	A =	42.4219 in ²	C _{top} =	12.0344 in	A =	42.4219 in ²
C _{bottom} =	14.7156 in	r _x =	10.5366 in	C _{bottom} =	14.7156 in	r _x =	10.5366 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	9.7500	0.1875	1.8281	0.1143	11.9375	1389.4131	1389.5273	
3 (Right)	Plate	9.7500	24.0625	234.6094	0.1143	11.9375	1389.4131	1389.5273	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.3750	7.5938	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.8750	46.9688	6.7500	8.7500	172.2656	179.0156	
Total		42.42		514.37	425.99		4218.24	4644.23	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	383.03 in ³	x-bar =	12.1250 in	S _{right} =	383.03 in ³
I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³	I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³
C _{right} =	12.1250 in	A =	42.4219 in ²	C _{right} =	12.1250 in	A =	42.4219 in ²
C _{left} =	12.1250 in	r _y =	10.4631 in	C _{left} =	12.1250 in	r _y =	10.4631 in



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_f = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3125$ in

Top Cover Plate:

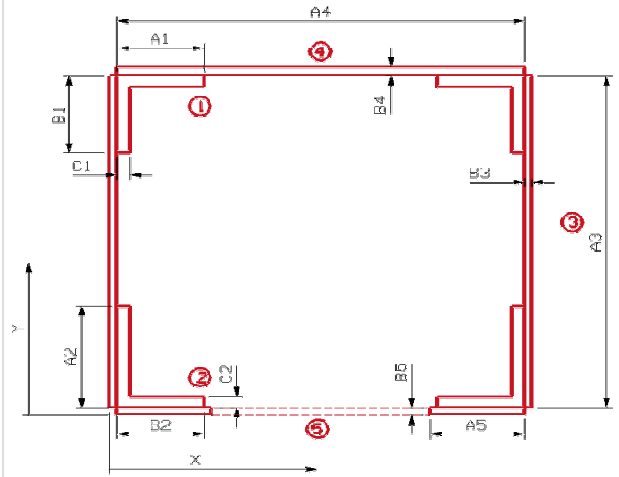
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member U72-U73

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5031	330.8057	330.8260
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5031	208.1357	210.7472
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.1844	502.9900	503.0104
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.1844	342.1506	344.7621
3	Plate	19.5000	13.3750	260.8125	1098.5000	1.3406	35.0460	1133.5460
4	Plate	8.8125	26.5625	234.0820	0.1033	11.8469	1236.8243	1236.9276
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.5281	949.7966	949.8493
Total		42.42		624.26	1103.92		3605.75	4709.67
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.7156 in	S _{top} =	391.35 in ³	y-bar =	14.7156 in	S _{top} =	391.35 in ³
I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³	I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³
C _{top} =	12.0344 in	A =	42.4219 in ²	C _{top} =	12.0344 in	A =	42.4219 in ²
C _{bottom} =	14.7156 in	r _x =	10.5366 in	C _{bottom} =	14.7156 in	r _x =	10.5366 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	9.7500	0.1875	1.8281	0.1143	11.9375	1389.4131	1389.5273	
3 (Right)	Plate	9.7500	24.0625	234.6094	0.1143	11.9375	1389.4131	1389.5273	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.3750	7.5938	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.8750	46.9688	6.7500	8.7500	172.2656	179.0156	
Total		42.42		514.37	425.99		4218.24	4644.23	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	383.03 in ³	x-bar =	12.1250 in	S _{right} =	383.03 in ³
I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³	I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³
C _{right} =	12.1250 in	A =	42.4219 in ²	C _{right} =	12.1250 in	A =	42.4219 in ²
C _{left} =	12.1250 in	r _y =	10.4631 in	C _{left} =	12.1250 in	r _y =	10.4631 in



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.6250$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.6250$ in

Top Cover Plate:

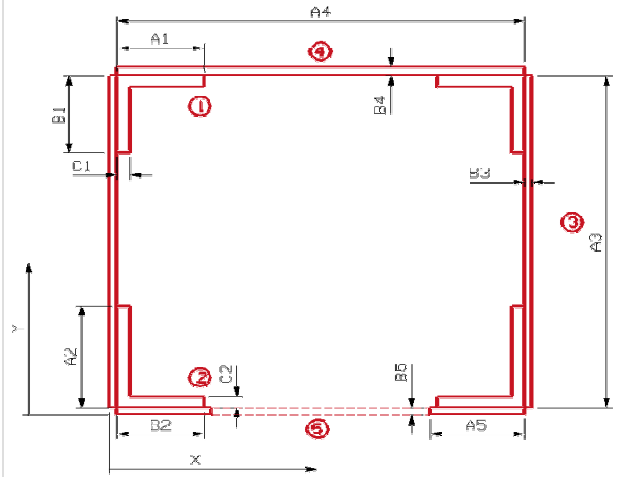
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3125$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.5000$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member U73-U74

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.0000	26.1875	130.9375	0.1628	12.3913	767.7186	767.8813
	Vertical Leg	4.2188	24.1875	102.0410	4.0045	10.3913	455.5348	459.5393
2	Horizontal Leg	5.0000	0.8125	4.0625	0.1628	12.9837	842.8855	843.0482
	Vertical Leg	4.2188	2.8125	11.8652	4.0045	10.9837	508.9593	512.9638
3	Plate	26.0000	13.5000	351.0000	1464.6667	0.2962	2.2815	1466.9481
4	Plate	7.3438	26.6563	195.7568	0.0598	12.8600	1214.5113	1214.5711
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	13.5462	1101.0012	1101.1262
Total		57.78		797.16	1473.19		4892.89	6366.08
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	13.7962 in	S _{top} =	489.09 in ³	y-bar =	13.7962 in	S _{top} =	489.09 in ³
I _x =	6366.08 in ⁴	S _{bott.} =	461.44 in ³	I _x =	6366.08 in ⁴	S _{bott.} =	461.44 in ³
C _{top} =	13.0163 in	A =	57.7813 in ²	C _{top} =	13.0163 in	A =	57.7813 in ²
C _{bottom} =	13.7962 in	r _x =	10.4965 in	C _{bottom} =	13.7962 in	r _x =	10.4965 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.5000	2.5000	6.2500	3.3333	9.7500	237.6563	240.9896	
	Vertical Leg	2.1094	0.8125	1.7139	0.0687	11.4375	275.9409	276.0095	
1 (Right)	Horizontal Leg	2.5000	22.0000	55.0000	3.3333	9.7500	237.6563	240.9896	
	Vertical Leg	2.1094	23.6875	49.9658	0.0687	11.4375	275.9409	276.0095	
2 (Left)	Horizontal Leg	2.5000	2.5000	6.2500	3.3333	9.7500	237.6563	240.9896	
	Vertical Leg	2.1094	0.8125	1.7139	0.0687	11.4375	275.9409	276.0095	
2 (Right)	Horizontal Leg	2.5000	22.0000	55.0000	3.3333	9.7500	237.6563	240.9896	
	Vertical Leg	2.1094	23.6875	49.9658	0.0687	11.4375	275.9409	276.0095	
3 (Left)	Plate	13.0000	0.2500	3.2500	0.2708	12.0000	1872.0000	1872.2708	
3 (Right)	Plate	13.0000	24.2500	315.2500	0.2708	12.0000	1872.0000	1872.2708	
4	Plate	7.3438	12.2500	89.9609	337.9655	0.0000	0.0000	337.9655	
5 (Left)	Perforated Plate	3.0000	3.5000	10.5000	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	21.0000	63.0000	9.0000	8.7500	229.6875	238.6875	
Total		57.78		707.82	370.12		6257.76	6627.88	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2500 in	S _{right} =	541.05 in ³	x-bar =	12.2500 in	S _{right} =	541.05 in ³
I _y =	6627.88 in ⁴	S _{left} =	541.05 in ³	I _y =	6627.88 in ⁴	S _{left} =	541.05 in ³
C _{right} =	12.2500 in	A =	57.7813 in ²	C _{right} =	12.2500 in	A =	57.7813 in ²
C _{left} =	12.2500 in	r _y =	10.7101 in	C _{left} =	12.2500 in	r _y =	10.7101 in



Made By KMW
Checked By DWC

Date 2/3/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

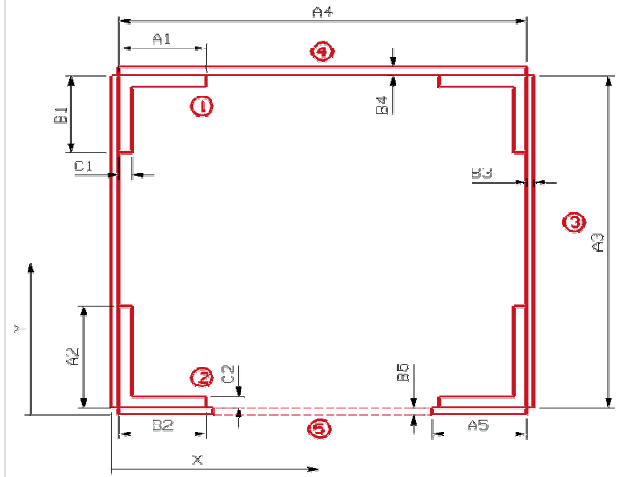
Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:
 $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:
 $A_3 = b = 30.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member U74-U75

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	30.2188	75.5469	0.0203	13.4018	449.0206	449.0409
	Vertical Leg	2.3047	28.2188	65.0354	2.6115	11.4018	299.6118	302.2233
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	16.2857	663.0601	663.0804
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	14.2857	470.3435	472.9550
3	Plate	22.5000	15.3750	345.9375	1687.5000	1.4420	46.7825	1734.2825
4	Plate	8.8125	30.5625	269.3320	0.1033	13.7455	1665.0349	1665.1382
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	16.6295	1244.4238	1244.4765
Total		45.42		763.86	1692.92		4838.28	6531.20
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.1250	2.5000	-0.3125	1.6250	-0.5078	-0.1628	15.1803	-72.0133
2	0.1250	2.5000	-0.3125	1.6250	-0.5078	-0.1628	15.1803	-72.0133
3	2.5000	0.0625	-0.1563	30.3750	-4.7461	-0.0001	13.5697	-28.7712
4	2.5000	0.0625	-0.1563	30.3750	-4.7461	-0.0001	13.5697	-28.7712
5	0.0938	2.5000	-0.2344	29.1250	-6.8262	-0.1221	12.3197	-35.5721
6	0.0938	2.5000	-0.2344	29.1250	-6.8262	-0.1221	12.3197	-35.5721
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.41	-24.16	-0.57		-272.71	-273.28



Made By KMW
Checked By DWC

Date 2/3/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.8170 in	S _{top} =	468.76 in ³	y-bar =	16.8053 in	S _{top} =	448.77 in ³
I _x =	6531.20 in ⁴	S _{bott.} =	388.37 in ³	I _x =	6257.91 in ⁴	S _{bott.} =	372.38 in ³
C _{top} =	13.9330 in	A =	45.4219 in ²	C _{top} =	13.9447 in	A =	44.0156 in ²
C _{bottom} =	16.8170 in	r _x =	11.9912 in	C _{bottom} =	16.8053 in	r _x =	11.9237 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	11.2500	0.1875	2.1094	0.1318	11.9375	1603.1689	1603.3008	
3 (Right)	Plate	11.2500	24.0625	270.7031	0.1318	11.9375	1603.1689	1603.3008	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.3750	7.5938	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.8750	46.9688	6.7500	8.7500	172.2656	179.0156	
Total		45.42		550.74	426.03		4645.75	5071.78	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	2.5000	0.1250	-0.3125	0.3750	-0.1172	-0.0004	11.7500	-43.1445	-43.1449
2	2.5000	0.1250	-0.3125	23.8750	-7.4609	-0.0004	11.7500	-43.1445	-43.1449
3	0.0625	2.5000	-0.1563	1.6250	-0.2539	-0.0814	10.5000	-17.2266	-17.3079
4	0.0625	2.5000	-0.1563	22.6250	-3.5352	-0.0814	10.5000	-17.2266	-17.3079
5	2.5000	0.0938	-0.2344	0.3750	-0.0879	-0.0002	11.7500	-32.3584	-32.3586
6	2.5000	0.0938	-0.2344	23.8750	-5.5957	-0.0002	11.7500	-32.3584	-32.3586
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.41		-17.05	-0.16		-185.46	-185.62

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	418.29 in ³	x-bar =	12.1250 in	S _{right} =	402.98 in ³
I _y =	5071.78 in ⁴	S _{left} =	418.29 in ³	I _y =	4886.15 in ⁴	S _{left} =	402.98 in ³
C _{right} =	12.1250 in	A =	45.4219 in ²	C _{right} =	12.1250 in	A =	44.0156 in ²
C _{left} =	12.1250 in	r _y =	10.5669 in	C _{left} =	12.1250 in	r _y =	10.5361 in



Made By KMW
Checked By DWC

Date 2/3/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

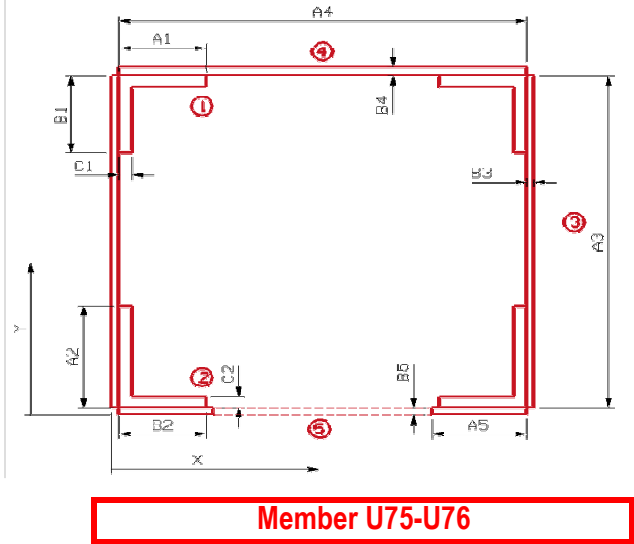
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.4375$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.4375$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:
 $A_3 = b = 30.0000$ in
 $B_3 = t = 0.5000$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member U75-U76

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	5.2500	30.2813	158.9766	0.0837	14.1636	1053.1857	1053.2694	
	Vertical Leg	6.6172	26.2813	173.9080	31.5372	10.1636	683.5436	715.0808	
2	Horizontal Leg	5.2500	0.7188	3.7734	0.0837	15.3989	1244.9165	1245.0003	
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	11.3989	859.8078	891.3450	
3	Plate	30.0000	15.5000	465.0000	2250.0000	0.6177	11.4458	2261.4458	
4	Plate	8.8125	30.6875	270.4336	0.1033	14.5698	1870.7152	1870.8184	
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	15.8677	1510.6991	1510.8241	
Total		68.55		1104.82	2313.47		7234.31	9547.78	
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	
1	2.5000	0.3750	-0.9375	30.6875	-28.7695	-0.0110	15.9394	-238.1852	-238.1961
2	21.0000	0.2500	-5.2500	30.7500	-161.4375	-0.0273	16.0019	-1344.3176	-1344.3449
3	0.1250	30.0000	-3.7500	15.5000	-58.1250	-281.2500	0.7519	-2.1200	-283.3700
4	0.1875	1.0000	-0.1875	24.0000	-4.5000	-0.0156	9.2519	-16.0495	-16.0652
5	0.0625	30.0000	-1.8750	15.5000	-29.0625	-140.6250	0.7519	-1.0600	-141.6850
6	6.0000	0.0625	-0.3750	0.0313	-0.0117	-0.0001	14.7169	-81.2197	-81.2199
7	6.0000	0.0625	-0.3750	0.0313	-0.0117	-0.0001	14.7169	-81.2197	-81.2199
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-12.75	-281.92	-421.93			-1764.17	-2186.10



Made By KMW
Checked By DWC

Date 2/3/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.1177 in	S _{top} =	646.99 in ³	y-bar =	14.7481 in	S _{top} =	456.48 in ³
I _x =	9547.78 in ⁴	S _{bott.} =	592.38 in ³	I _x =	7361.68 in ⁴	S _{bott.} =	499.16 in ³
C _{top} =	14.7573 in	A =	68.5469 in ²	C _{top} =	16.1269 in	A =	55.7969 in ²
C _{bottom} =	16.1177 in	r _x =	11.8021 in	C _{bottom} =	14.7481 in	r _x =	11.4864 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.5000	9.1875	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.7188	2.3781	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	21.0000	55.1250	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7813	78.6825	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.5000	9.1875	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.7188	2.3781	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	21.0000	55.1250	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7813	78.6825	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	15.0000	0.2500	3.7500	0.3125	12.0000	2160.0000	2160.3125	
3 (Right)	Plate	15.0000	24.2500	363.7500	0.3125	12.0000	2160.0000	2160.3125	
4	Plate	8.8125	12.2500	107.9531	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.5000	10.5000	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	21.0000	63.0000	9.0000	8.7500	229.6875	238.6875	
Total		68.55		839.70	455.89		7343.05	7798.95	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.3750	2.5000	-0.9375	1.7500	-1.6406	-0.4883	11.0077	-113.5971	-114.0854
2	0.2500	21.0000	-5.2500	13.5000	-70.8750	-192.9375	0.7423	-2.8925	-195.8300
3	30.0000	0.1250	-3.7500	0.0625	-0.2344	-0.0049	12.6952	-604.3838	-604.3887
4	1.0000	0.1875	-0.1875	0.2188	-0.0410	-0.0005	12.5390	-29.4799	-29.4805
5	30.0000	0.0625	-1.8750	24.4688	-45.8789	-0.0006	11.7110	-257.1522	-257.1528
6	0.0625	6.0000	-0.3750	3.5000	-1.3125	-1.1250	9.2577	-32.1396	-33.2646
7	0.0625	6.0000	-0.3750	21.0000	-7.8750	-1.1250	8.2423	-25.4756	-26.6006
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-12.75		-127.86	-195.68		-1065.12	-1260.80

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2500 in	S _{right} =	636.65 in ³	x-bar =	12.7577 in	S _{right} =	556.80 in ³
I _y =	7798.95 in ⁴	S _{left} =	636.65 in ³	I _y =	6538.14 in ⁴	S _{left} =	512.48 in ³
C _{right} =	12.2500 in	A =	68.5469 in ²	C _{right} =	11.7423 in	A =	55.7969 in ²
C _{left} =	12.2500 in	r _y =	10.6666 in	C _{left} =	12.7577 in	r _y =	10.8249 in



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.4375$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.4375$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 30.0000$ in
 $B_3 = t = 0.5000$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member U76-U77

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.2500	30.2813	158.9766	0.0837	14.1636	1053.1857	1053.2694
	Vertical Leg	6.6172	26.2813	173.9080	31.5372	10.1636	683.5436	715.0808
2	Horizontal Leg	5.2500	0.7188	3.7734	0.0837	15.3989	1244.9165	1245.0003
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	11.3989	859.8078	891.3450
3	Plate	30.0000	15.5000	465.0000	2250.0000	0.6177	11.4458	2261.4458
4	Plate	8.8125	30.6875	270.4336	0.1033	14.5698	1870.7152	1870.8184
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	15.8677	1510.6991	1510.8241
Total		68.55		1104.82	2313.47		7234.31	9547.78
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.1177 in	S _{top} =	646.99 in ³	y-bar =	16.1177 in	S _{top} =	646.99 in ³
I _x =	9547.78 in ⁴	S _{bott.} =	592.38 in ³	I _x =	9547.78 in ⁴	S _{bott.} =	592.38 in ³
C _{top} =	14.7573 in	A =	68.5469 in ²	C _{top} =	14.7573 in	A =	68.5469 in ²
C _{bottom} =	16.1177 in	r _x =	11.8021 in	C _{bottom} =	16.1177 in	r _x =	11.8021 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.5000	9.1875	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.7188	2.3781	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	21.0000	55.1250	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7813	78.6825	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.5000	9.1875	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.7188	2.3781	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	21.0000	55.1250	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7813	78.6825	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	15.0000	0.2500	3.7500	0.3125	12.0000	2160.0000	2160.3125	
3 (Right)	Plate	15.0000	24.2500	363.7500	0.3125	12.0000	2160.0000	2160.3125	
4	Plate	8.8125	12.2500	107.9531	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.5000	10.5000	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	21.0000	63.0000	9.0000	8.7500	229.6875	238.6875	
Total		68.55		839.70	455.89		7343.05	7798.95	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2500 in	S _{right} =	636.65 in ³	x-bar =	12.2500 in	S _{right} =	636.65 in ³
I _y =	7798.95 in ⁴	S _{left} =	636.65 in ³	I _y =	7798.95 in ⁴	S _{left} =	636.65 in ³
C _{right} =	12.2500 in	A =	68.5469 in ²	C _{right} =	12.2500 in	A =	68.5469 in ²
C _{left} =	12.2500 in	r _y =	10.6666 in	C _{left} =	12.2500 in	r _y =	10.6666 in



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.7500$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.7500$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.6250$ in

Web Plate 1:
 $A_3 = b = 30.0000$ in
 $B_3 = t = 0.6250$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.7500$ in



Member U77-U78

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	9.0000	30.3750	273.3750	0.4219	13.7678	1705.9617	1706.3836
	Vertical Leg	10.8750	26.3750	286.8281	47.6348	9.7678	1037.5750	1085.2098
2	Horizontal Leg	9.0000	1.1250	10.1250	0.4219	15.4822	2157.2969	2157.7188
	Vertical Leg	10.8750	5.1250	55.7344	47.6348	11.4822	1433.7792	1481.4139
3	Plate	37.5000	15.7500	590.6250	2812.5000	0.8572	27.5571	2840.0571
4	Plate	14.6875	31.0625	456.2305	0.4781	14.4553	3069.0212	3069.4993
5	Perforated Plate	9.0000	0.3750	3.3750	0.4219	16.2322	2371.3696	2371.7915
Total		100.94		1676.29	2909.51		11802.56	14712.07
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.6072 in	S _{top} =	996.23 in ³	y-bar =	16.6072 in	S _{top} =	996.23 in ³
I _x =	14712.07 in ⁴	S _{bott.} =	885.88 in ³	I _x =	14712.07 in ⁴	S _{bott.} =	885.88 in ³
C _{top} =	14.7678 in	A =	100.9375 in ²	C _{top} =	14.7678 in	A =	100.9375 in ²
C _{bottom} =	16.6072 in	r _x =	12.0729 in	C _{bottom} =	16.6072 in	r _x =	12.0729 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.5000	3.6250	16.3125	13.5000	8.7500	344.5313	358.0313	
	Vertical Leg	5.4375	1.0000	5.4375	0.2549	11.3750	703.5615	703.8164	
1 (Right)	Horizontal Leg	4.5000	21.1250	95.0625	13.5000	8.7500	344.5313	358.0313	
	Vertical Leg	5.4375	23.7500	129.1406	0.2549	11.3750	703.5615	703.8164	
2 (Left)	Horizontal Leg	4.5000	3.6250	16.3125	13.5000	8.7500	344.5313	358.0313	
	Vertical Leg	5.4375	1.0000	5.4375	0.2549	11.3750	703.5615	703.8164	
2 (Right)	Horizontal Leg	4.5000	21.1250	95.0625	13.5000	8.7500	344.5313	358.0313	
	Vertical Leg	5.4375	23.7500	129.1406	0.2549	11.3750	703.5615	703.8164	
3 (Left)	Plate	18.7500	0.3125	5.8594	0.6104	12.0625	2728.1982	2728.8086	
3 (Right)	Plate	18.7500	24.4375	458.2031	0.6104	12.0625	2728.1982	2728.8086	
4	Plate	14.6875	12.3750	181.7578	675.9310	0.0000	0.0000	675.9310	
5 (Left)	Perforated Plate	4.5000	3.6250	16.3125	13.5000	8.7500	344.5313	358.0313	
5 (Right)	Perforated Plate	4.5000	21.1250	95.0625	13.5000	8.7500	344.5313	358.0313	
Total		100.94		1249.10	759.17		10337.83	11097.00	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3750 in	S _{right} =	896.73 in ³	x-bar =	12.3750 in	S _{right} =	896.73 in ³
I _y =	11097.00 in ⁴	S _{left} =	896.73 in ³	I _y =	11097.00 in ⁴	S _{left} =	896.73 in ³
C _{right} =	12.3750 in	A =	100.9375 in ²	C _{right} =	12.3750 in	A =	100.9375 in ²
C _{left} =	12.3750 in	r _y =	10.4852 in	C _{left} =	12.3750 in	r _y =	10.4852 in



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_l = 0.7500$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_l = 0.7500$ in

Top Cover Plate: PL

$A_6 = b = 23.5000$ in
 $B_6 = t = 0.6250$ in

Side Plate 1: PL

$A_3 = b = 14.0000$ in
 $B_3 = t = 0.7500$ in

Web Plate 1: PL

$A_4 = b = 30.0000$ in
 $B_4 = t = 0.3125$ in

Side Plate 2: PL (No 2nd PL)

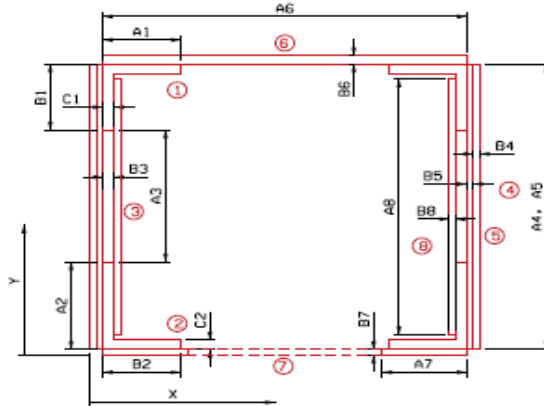
$A_8 = b = 0.0000$ in
 $B_8 = t = 0.0000$ in

Web Plate 2: PL

$A_5 = b = 30.0000$ in
 $B_5 = t = 0.6250$ in

Perforated Bottom Cover Plate: PL

$A_7 = b = 6.0000$ in
 $B_7 = t = 0.7500$ in



Member L78-L79

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg		9.0000	30.3750	273.3750	0.4219	14.0100	1766.5128	1766.9347
	Vertical Leg		10.8750	26.3750	286.8281	47.6348	10.0100	1089.6691	1137.3038
2	Horizontal Leg		9.0000	1.1250	10.1250	0.4219	15.2400	2090.3272	2090.7491
	Vertical Leg		10.8750	5.1250	55.7344	47.6348	11.2400	1373.9293	1421.5640
3	Plate		21.0000	15.7500	330.7500	343.0000	0.6150	7.9436	350.9436
4	Plate		18.7500	15.7500	295.3125	1406.2500	0.6150	7.0925	1413.3425
5	Plate		37.5000	15.7500	590.6250	2812.5000	0.6150	14.1849	2826.6849
6	Plate		14.6875	31.0625	456.2305	0.4781	14.6975	3172.7285	3173.2066
7	Perforated Plate		9.0000	0.3750	3.3750	0.4219	15.9900	2301.1302	2301.5520
8	Plate		0.0000	15.7500	0.0000	0.0000	0.6150	0.0000	0.0000
Total			140.69		2302.36	4658.76		11823.52	16482.28
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.3650 in	$S_{top} = 1098.09 \text{ in}^3$			y-bar = 16.3650 in	$S_{top} = 1098.09 \text{ in}^3$		
$I_x = 16482.28 \text{ in}^4$	$S_{bottom} = 1007.16 \text{ in}^3$			$I_x = 16482.28 \text{ in}^4$	$S_{bottom} = 1007.16 \text{ in}^3$		
$C_{top} = 15.0100 \text{ in}$	$A = 140.6875 \text{ in}^2$			$C_{top} = 15.0100 \text{ in}$	$A = 140.6875 \text{ in}^2$		
$C_{bottom} = 16.3650 \text{ in}$	$r_x = 10.8238 \text{ in}$			$C_{bottom} = 16.3650 \text{ in}$	$r_x = 10.8238 \text{ in}$		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I_o	d	Ad^2	$I_{y, gross}$	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.5000	3.9375	17.7188	13.5000	8.7500	344.5313	358.0313	
	Vertical Leg	5.4375	1.3125	7.1367	0.2549	11.3750	703.5615	703.8164	
1 (Right)	Horizontal Leg	4.5000	21.4375	96.4688	13.5000	8.7500	344.5313	358.0313	
	Vertical Leg	5.4375	24.0625	130.8398	0.2549	11.3750	703.5615	703.8164	
2 (Left)	Horizontal Leg	4.5000	3.9375	17.7188	13.5000	8.7500	344.5313	358.0313	
	Vertical Leg	5.4375	1.3125	7.1367	0.2549	11.3750	703.5615	703.8164	
2 (Right)	Horizontal Leg	4.5000	21.4375	96.4688	13.5000	8.7500	344.5313	358.0313	
	Vertical Leg	5.4375	24.0625	130.8398	0.2549	11.3750	703.5615	703.8164	
3 (Left)	Plate	10.5000	1.3125	13.7813	0.4922	11.3750	1358.6016	1359.0938	
3 (Right)	Plate	10.5000	24.0625	252.6563	0.4922	11.3750	1358.6016	1359.0938	
4 (Left)	Plate	9.3750	0.1563	1.4648	0.0763	12.5313	1472.1771	1472.2534	
4 (Right)	Plate	9.3750	25.2188	236.4258	0.0763	12.5313	1472.1771	1472.2534	
5 (Left)	Plate	18.7500	0.6250	11.7188	0.6104	12.0625	2728.1982	2728.8086	
5 (Right)	Plate	18.7500	24.7500	464.0625	0.6104	12.0625	2728.1982	2728.8086	
6	Plate	14.6875	12.6875	186.3477	675.9310	0.0000	0.0000	675.9310	
7 (Left)	Perforated Plate	4.5000	3.9375	17.7188	13.5000	8.7500	344.5313	358.0313	
7 (Right)	Perforated Plate	4.5000	21.4375	96.4688	13.5000	8.7500	344.5313	358.0313	
8 (Left)	Plate	0.0000	1.6875	0.0000	0.0000	11.0000	0.0000	0.0000	
8 (Right)	Plate	0.0000	23.6875	0.0000	0.0000	11.0000	0.0000	0.0000	
Total		140.69		1784.97	760.31		15999.39	15697.85	
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 12.6875 in	$S_{right} = 1237.27 \text{ in}^3$			x-bar = 12.6875 in	$S_{right} = 1237.27 \text{ in}^3$		
$I_y = 15697.85 \text{ in}^4$	$S_{left} = 1237.27 \text{ in}^3$			$I_y = 15697.85 \text{ in}^4$	$S_{left} = 1237.27 \text{ in}^3$		
$C_{right} = 12.6875 \text{ in}$	$A = 140.6875 \text{ in}^2$			$C_{right} = 12.6875 \text{ in}$	$A = 140.6875 \text{ in}^2$		
$C_{left} = 12.6875 \text{ in}$	$r_y = 10.5631 \text{ in}$			$C_{left} = 12.6875 \text{ in}$	$r_y = 10.5631 \text{ in}$		



Made By KMW
Checked By DWC

Date 2/3/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

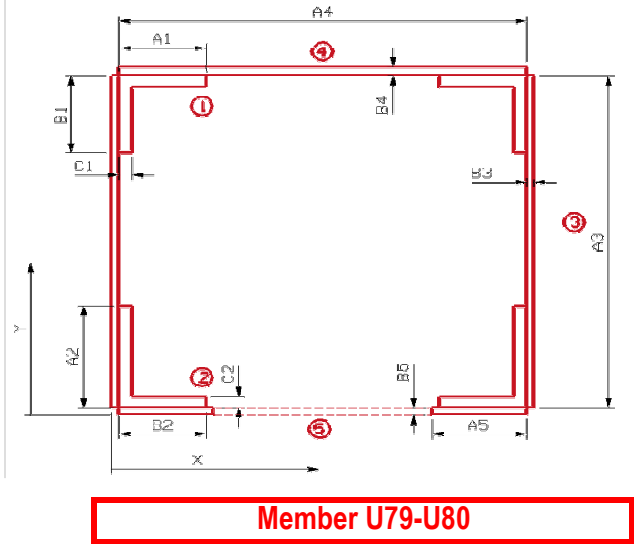
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.7500$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.7500$ in

Top Cover Plate:
 $A_4 = b = 22.0000$ in
 $B_4 = t = 0.6250$ in

Web Plate 1:
 $A_3 = b = 30.0000$ in
 $B_3 = t = 1.7500$ in

Perforated Cover Plate
 $A_5 = b = 5.2500$ in
 $B_5 = t = 0.7500$ in



X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	9.0000	30.3750	273.3750	0.4219	14.0872	1786.0546	1786.4765
	Vertical Leg	10.8750	26.3750	286.8281	47.6348	10.0872	1106.5589	1154.1936
2	Horizontal Leg	9.0000	1.1250	10.1250	0.4219	15.1628	2069.1819	2069.6037
	Vertical Leg	10.8750	5.1250	55.7344	47.6348	11.1628	1355.1019	1402.7366
3	Plate	105.0000	15.7500	1653.7500	7875.0000	0.5378	30.3638	7905.3638
4	Plate	13.7500	31.0625	427.1094	0.4476	14.7747	3001.5306	3001.9782
5	Perforated Plate	7.8750	0.3750	2.9531	0.3691	15.9128	1994.0738	1994.4430
Total		166.38		2709.88	7971.93		11342.87	19314.80
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	7.3333	0.1250	-0.9167	23.3125	-21.3698	-0.0012	7.2223	-47.8152
2	14.6667	0.2500	-3.6667	23.2500	-85.2500	-0.0191	7.1598	-187.9650
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-4.58	-106.62	-0.02		-235.78	-235.80



Made By KMW
Checked By DWC

Date 2/3/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	16.2878	in	S _{top} =	1280.21	in ³	y-bar =	16.0902	in	S _{top} =	1248.23	in ³
I _x =	19314.80	in ⁴	S _{bott.} =	1185.85	in ³	I _x =	19078.99	in ⁴	S _{bott.} =	1185.75	in ³
C _{top} =	15.0872	in	A =	166.3750	in ²	C _{top} =	15.2848	in	A =	161.7917	in ²
C _{bottom} =	16.2878	in	r _x =	10.7746	in	C _{bottom} =	16.0902	in	r _x =	10.8592	in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.5000	4.7500	21.3750	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	2.1250	11.5547	0.2549	10.6250	613.8428	614.0977	
1 (Right)	Horizontal Leg	4.5000	20.7500	93.3750	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	23.3750	127.1016	0.2549	10.6250	613.8428	614.0977	
2 (Left)	Horizontal Leg	4.5000	4.7500	21.3750	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	2.1250	11.5547	0.2549	10.6250	613.8428	614.0977	
2 (Right)	Horizontal Leg	4.5000	20.7500	93.3750	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	23.3750	127.1016	0.2549	10.6250	613.8428	614.0977	
3 (Left)	Plate	52.5000	0.8750	45.9375	13.3984	11.8750	7403.3203	7416.7188	
3 (Right)	Plate	52.5000	24.6250	1292.8125	13.3984	11.8750	7403.3203	7416.7188	
4	Plate	13.7500	12.7500	175.3125	554.5833	0.0000	0.0000	554.5833	
5 (Left)	Perforated Plate	3.9375	4.3750	17.2266	9.0439	8.3750	276.1787	285.2227	
5 (Right)	Perforated Plate	3.9375	21.1250	83.1797	9.0439	8.3750	276.1787	285.2227	
Total		166.38		2121.28	654.49		18966.37	19620.86	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1250	7.3333	-0.9167	5.4167	-4.9653	-4.1080	7.2918	-48.7393	-52.8473
2	0.2500	14.6667	-3.6667	16.4167	-60.1944	-65.7284	3.7082	-50.4198	-116.1482
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-4.58		-65.16	-69.84		-99.16	-169.00

As-Built Section Properties				As-Inspected Section Properties							
x-bar =	12.7500	in	S _{right} =	1538.89	in ³	x-bar =	12.7085	in	S _{right} =	1520.68	in ³
I _y =	19620.86	in ⁴	S _{left} =	1538.89	in ³	I _y =	19451.86	in ⁴	S _{left} =	1530.62	in ³
C _{right} =	12.7500	in	A =	166.3750	in ²	C _{right} =	12.7915	in	A =	161.7917	in ²
C _{left} =	12.7500	in	r _y =	10.8596	in	C _{left} =	12.7085	in	r _y =	10.9648	in



Made By SFH
Checked By DMP

Date 1/12/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_l = 0.7500$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_l = 0.7500$ in

Top Cover Plate: PL

$A_6 = b = 22.0000$ in
 $B_6 = t = 0.6250$ in

Side Plate 1: PL

$A_3 = b = 14.0000$ in
 $B_3 = t = 0.8125$ in

Web Plate 1: PL

$A_4 = b = 30.0000$ in
 $B_4 = t = 0.8750$ in

Side Plate 2: PL (No 2nd PL)

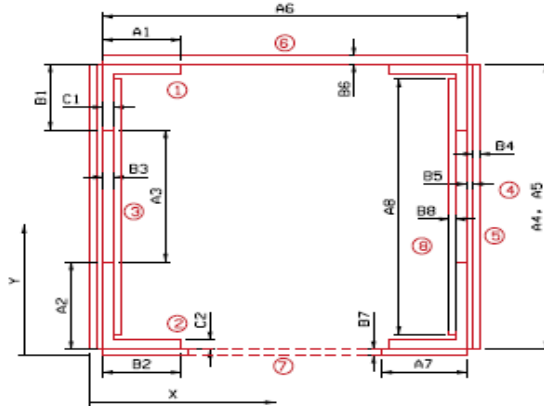
$A_8 = b = 0.0000$ in
 $B_8 = t = 0.0000$ in

Web Plate 2: PL

$A_5 = b = 30.0000$ in
 $B_5 = t = 0.8750$ in

Perforated Bottom Cover Plate: PL

$A_7 = b = 5.2500$ in
 $B_7 = t = 0.7500$ in



Member L80-L81

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	9.0000	30.3750	273.3750	0.4219	14.1519	1802.4949	1802.9168
	Vertical Leg	10.8750	26.3750	286.8281	47.6348	10.1519	1120.7965	1168.4313
2	Horizontal Leg	9.0000	1.1250	10.1250	0.4219	15.0981	2051.5646	2051.9865
	Vertical Leg	10.8750	5.1250	55.7344	47.6348	11.0981	1339.4421	1387.0768
3	Plate	22.7500	15.7500	358.3125	371.5833	0.4731	5.0913	376.6746
4	Plate	52.5000	15.7500	826.8750	3937.5000	0.4731	11.7491	3949.2491
5	Plate	52.5000	15.7500	826.8750	3937.5000	0.4731	11.7491	3949.2491
6	Plate	13.7500	31.0625	427.1094	0.4476	14.8394	3027.8707	3028.3183
7	Perforated Plate	7.8750	0.3750	2.9531	0.3691	15.8481	1977.8946	1978.2637
8	Plate	0.0000	15.7500	0.0000	0.0000	0.4731	0.0000	0.0000
Total		189.13		3068.19	8343.51		11348.65	19692.17
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/12/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.2231 in	$S_{top} = 1299.65 \text{ in}^3$			y-bar = 16.2231 in	$S_{top} = 1299.65 \text{ in}^3$		
$I_x = 19692.17 \text{ in}^4$	$S_{bottom} = 1213.84 \text{ in}^3$			$I_x = 19692.17 \text{ in}^4$	$S_{bottom} = 1213.84 \text{ in}^3$		
$C_{top} = 15.1519 \text{ in}$	$A = 189.1250 \text{ in}^2$			$C_{top} = 15.1519 \text{ in}$	$A = 189.1250 \text{ in}^2$		
$C_{bottom} = 16.2231 \text{ in}$	$r_x = 10.2040 \text{ in}$			$C_{bottom} = 16.2231 \text{ in}$	$r_x = 10.2040 \text{ in}$		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I_o	d	Ad^2	$I_{y, gross}$	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.5000	4.7500	21.3750	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	2.1250	11.5547	0.2549	10.6250	613.8428	614.0977	
1 (Right)	Horizontal Leg	4.5000	20.7500	93.3750	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	23.3750	127.1016	0.2549	10.6250	613.8428	614.0977	
2 (Left)	Horizontal Leg	4.5000	4.7500	21.3750	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	2.1250	11.5547	0.2549	10.6250	613.8428	614.0977	
2 (Right)	Horizontal Leg	4.5000	20.7500	93.3750	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	23.3750	127.1016	0.2549	10.6250	613.8428	614.0977	
3 (Left)	Plate	11.3750	2.1563	24.5273	0.6258	10.5938	1276.5883	1277.2140	
3 (Right)	Plate	11.3750	23.3438	265.5352	0.6258	10.5938	1276.5883	1277.2140	
4 (Left)	Plate	26.2500	0.4375	11.4844	1.6748	12.3125	3979.4385	3981.1133	
4 (Right)	Plate	26.2500	25.0625	657.8906	1.6748	12.3125	3979.4385	3981.1133	
5 (Left)	Plate	26.2500	1.3125	34.4531	1.6748	11.4375	3433.9307	3435.6055	
5 (Right)	Plate	26.2500	24.1875	634.9219	1.6748	11.4375	3433.9307	3435.6055	
6	Plate	13.7500	12.7500	175.3125	554.5833	0.0000	0.0000	554.5833	
7 (Left)	Perforated Plate	3.9375	4.3750	17.2266	9.0439	8.3750	276.1787	285.2227	
7 (Right)	Perforated Plate	3.9375	21.1250	83.1797	9.0439	8.3750	276.1787	285.2227	
8 (Left)	Plate	0.0000	2.5625	0.0000	0.0000	10.1875	0.0000	0.0000	
8 (Right)	Plate	0.0000	22.9375	0.0000	0.0000	10.1875	0.0000	0.0000	
Total		189.13		2411.34	635.64		21539.64	22175.28	
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 12.7500 in	$S_{right} = 1739.24 \text{ in}^3$			x-bar = 12.7500 in	$S_{right} = 1739.24 \text{ in}^3$		
$I_y = 22175.28 \text{ in}^4$	$S_{left} = 1739.24 \text{ in}^3$			$I_y = 22175.28 \text{ in}^4$	$S_{left} = 1739.24 \text{ in}^3$		
$C_{right} = 12.7500 \text{ in}$	$A = 189.1250 \text{ in}^2$			$C_{right} = 12.7500 \text{ in}$	$A = 189.1250 \text{ in}^2$		
$C_{left} = 12.7500 \text{ in}$	$r_y = 10.8283 \text{ in}$			$C_{left} = 12.7500 \text{ in}$	$r_y = 10.8283 \text{ in}$		



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_l = 0.7500$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_l = 0.7500$ in

Top Cover Plate: PL

$A_6 = b = 22.0000$ in
 $B_6 = t = 0.6250$ in

Side Plate 1: PL

$A_3 = b = 14.0000$ in
 $B_3 = t = 0.6875$ in

Web Plate 1: PL

$A_4 = b = 30.0000$ in
 $B_4 = t = 0.8125$ in

Side Plate 2: PL (No 2nd PL)

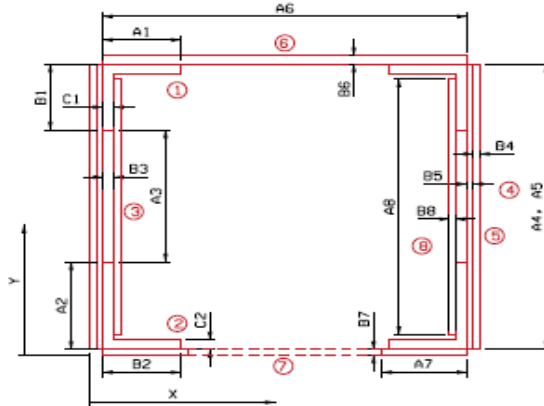
$A_8 = b = 0.0000$ in
 $B_8 = t = 0.0000$ in

Web Plate 2: PL

$A_5 = b = 30.0000$ in
 $B_5 = t = 0.8750$ in

Perforated Bottom Cover Plate: PL

$A_7 = b = 5.2500$ in
 $B_7 = t = 0.7500$ in



Member L81-L82

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	9.0000	30.3750	273.3750	0.4219	14.1331	1797.6944	1798.1163
	Vertical Leg	10.8750	26.3750	286.8281	47.6348	10.1331	1116.6365	1164.2713
2	Horizontal Leg	9.0000	1.1250	10.1250	0.4219	15.1169	2056.6926	2057.1145
	Vertical Leg	10.8750	5.1250	55.7344	47.6348	11.1169	1343.9978	1391.6326
3	Plate	19.2500	15.7500	303.1875	314.4167	0.4919	4.6583	319.0750
4	Plate	48.7500	15.7500	767.8125	3656.2500	0.4919	11.7970	3668.0470
5	Plate	52.5000	15.7500	826.8750	3937.5000	0.4919	12.7045	3950.2045
6	Plate	13.7500	31.0625	427.1094	0.4476	14.8206	3020.1801	3020.6277
7	Perforated Plate	7.8750	0.3750	2.9531	0.3691	15.8669	1982.6044	1982.9735
8	Plate	0.0000	15.7500	0.0000	0.0000	0.4919	0.0000	0.0000
Total		181.88		2954.00	8005.10		11346.97	19352.06
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.2419 in	$S_{top} = 1278.79 \text{ in}^3$			y-bar = 16.2419 in	$S_{top} = 1278.79 \text{ in}^3$		
$I_x = 19352.06 \text{ in}^4$	$S_{bottom} = 1191.49 \text{ in}^3$			$I_x = 19352.06 \text{ in}^4$	$S_{bottom} = 1191.49 \text{ in}^3$		
$C_{top} = 15.1331 \text{ in}$	$A = 181.8750 \text{ in}^2$			$C_{top} = 15.1331 \text{ in}$	$A = 181.8750 \text{ in}^2$		
$C_{bottom} = 16.2419 \text{ in}$	$r_x = 10.3152 \text{ in}$			$C_{bottom} = 16.2419 \text{ in}$	$r_x = 10.3152 \text{ in}$		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I_o	d	Ad^2	$I_{y, gross}$	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.5000	4.6875	21.0938	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	2.0625	11.2148	0.2549	10.6250	613.8428	614.0977	
1 (Right)	Horizontal Leg	4.5000	20.6875	93.0938	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	23.3125	126.7617	0.2549	10.6250	613.8428	614.0977	
2 (Left)	Horizontal Leg	4.5000	4.6875	21.0938	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	2.0625	11.2148	0.2549	10.6250	613.8428	614.0977	
2 (Right)	Horizontal Leg	4.5000	20.6875	93.0938	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	23.3125	126.7617	0.2549	10.6250	613.8428	614.0977	
3 (Left)	Plate	9.6250	2.0313	19.5508	0.3791	10.6563	1092.9733	1093.3524	
3 (Right)	Plate	9.6250	23.3438	224.6836	0.3791	10.6563	1092.9733	1093.3524	
4 (Left)	Plate	24.3750	0.4063	9.9023	1.3409	12.2813	3676.4594	3677.8003	
4 (Right)	Plate	24.3750	24.9688	608.6133	1.3409	12.2813	3676.4594	3677.8003	
5 (Left)	Plate	26.2500	1.2500	32.8125	1.6748	11.4375	3433.9307	3435.6055	
5 (Right)	Plate	26.2500	24.1250	633.2813	1.6748	11.4375	3433.9307	3435.6055	
6	Plate	13.7500	12.6875	174.4531	554.5833	0.0000	0.0000	554.5833	
7 (Left)	Perforated Plate	3.9375	4.3125	16.9805	9.0439	8.3750	276.1787	285.2227	
7 (Right)	Perforated Plate	3.9375	21.0625	82.9336	9.0439	8.3750	276.1787	285.2227	
8 (Left)	Plate	0.0000	2.3750	0.0000	0.0000	10.3125	0.0000	0.0000	
8 (Right)	Plate	0.0000	23.0000	0.0000	0.0000	10.3125	0.0000	0.0000	
Total		181.88		2307.54	634.48		20566.46	21200.94	
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 12.6875 in	$S_{right} = 1671.01 \text{ in}^3$			x-bar = 12.6875 in	$S_{right} = 1671.01 \text{ in}^3$		
$I_y = 21200.94 \text{ in}^4$	$S_{left} = 1671.01 \text{ in}^3$			$I_y = 21200.94 \text{ in}^4$	$S_{left} = 1671.01 \text{ in}^3$		
$C_{right} = 12.6875 \text{ in}$	$A = 181.8750 \text{ in}^2$			$C_{right} = 12.6875 \text{ in}$	$A = 181.8750 \text{ in}^2$		
$C_{left} = 12.6875 \text{ in}$	$r_y = 10.7967 \text{ in}$			$C_{left} = 12.6875 \text{ in}$	$r_y = 10.7967 \text{ in}$		



Made By KMW
Checked By DWC

Date 2/3/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_l = 0.7500$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_l = 0.7500$ in

Top Cover Plate: PL

$A_6 = b = 22.0000$ in
 $B_6 = t = 0.6250$ in

Side Plate 1: PL

$A_3 = b = 14.0000$ in
 $B_3 = t = 0.6875$ in

Web Plate 1: PL

$A_4 = b = 30.0000$ in
 $B_4 = t = 0.8125$ in

Side Plate 2: PL (No 2nd PL)

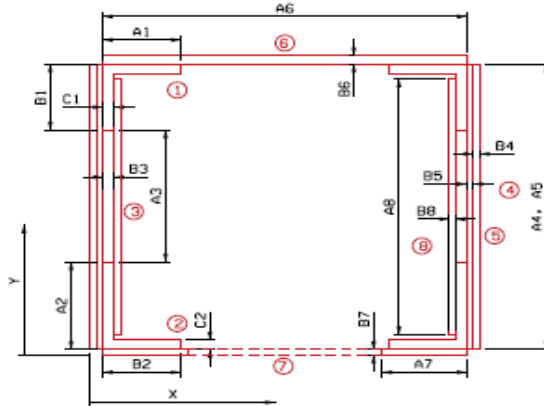
$A_8 = b = 0.0000$ in
 $B_8 = t = 0.0000$ in

Web Plate 2: PL

$A_5 = b = 30.0000$ in
 $B_5 = t = 0.8750$ in

Perforated Bottom Cover Plate: PL

$A_7 = b = 5.2500$ in
 $B_7 = t = 0.7500$ in



Member L82-L83

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg		9.0000	30.3750	273.3750	0.4219	14.1331	1797.6944	1798.1163
	Vertical Leg		10.8750	26.3750	286.8281	47.6348	10.1331	1116.6365	1164.2713
2	Horizontal Leg		9.0000	1.1250	10.1250	0.4219	15.1169	2056.6926	2057.1145
	Vertical Leg		10.8750	5.1250	55.7344	47.6348	11.1169	1343.9978	1391.6326
3	Plate		19.2500	15.7500	303.1875	314.4167	0.4919	4.6583	319.0750
4	Plate		48.7500	15.7500	767.8125	3656.2500	0.4919	11.7970	3668.0470
5	Plate		52.5000	15.7500	826.8750	3937.5000	0.4919	12.7045	3950.2045
6	Plate		13.7500	31.0625	427.1094	0.4476	14.8206	3020.1801	3020.6277
7	Perforated Plate		7.8750	0.3750	2.9531	0.3691	15.8669	1982.6044	1982.9735
8	Plate		0.0000	15.7500	0.0000	0.0000	0.4919	0.0000	0.0000
Total			181.88		2954.00	8005.10		11346.97	19352.06
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1250	8.0000	-1.0000	26.7500	-26.7500	-5.3333	10.5949	-112.2511	-117.5845
2	0.2500	8.0000	-2.0000	18.7500	-37.5000	-10.6667	2.5949	-13.4666	-24.1333
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-3.00		-64.25	-16.00		-125.72	-141.72



Made By KMW
Checked By DWC

Date 2/3/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.2419 in	$S_{top} = 1278.79 \text{ in}^3$			y-bar = 16.1551 in	$S_{top} = 1262.19 \text{ in}^3$		
$I_x = 19352.06 \text{ in}^4$	$S_{bottom} = 1191.49 \text{ in}^3$			$I_x = 19210.34 \text{ in}^4$	$S_{bottom} = 1189.12 \text{ in}^3$		
$C_{top} = 15.1331 \text{ in}$	$A = 181.8750 \text{ in}^2$			$C_{top} = 15.2199 \text{ in}$	$A = 178.8750 \text{ in}^2$		
$C_{bottom} = 16.2419 \text{ in}$	$r_x = 10.3152 \text{ in}$			$C_{bottom} = 16.1551 \text{ in}$	$r_x = 10.3632 \text{ in}$		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I_o	d	Ad^2	$I_{y, gross}$	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.5000	4.6875	21.0938	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	2.0625	11.2148	0.2549	10.6250	613.8428	614.0977	
1 (Right)	Horizontal Leg	4.5000	20.6875	93.0938	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	23.3125	126.7617	0.2549	10.6250	613.8428	614.0977	
2 (Left)	Horizontal Leg	4.5000	4.6875	21.0938	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	2.0625	11.2148	0.2549	10.6250	613.8428	614.0977	
2 (Right)	Horizontal Leg	4.5000	20.6875	93.0938	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	23.3125	126.7617	0.2549	10.6250	613.8428	614.0977	
3 (Left)	Plate	9.6250	2.0313	19.5508	0.3791	10.6563	1092.9733	1093.3524	
3 (Right)	Plate	9.6250	23.3438	224.6836	0.3791	10.6563	1092.9733	1093.3524	
4 (Left)	Plate	24.3750	0.4063	9.9023	1.3409	12.2813	3676.4594	3677.8003	
4 (Right)	Plate	24.3750	24.9688	608.6133	1.3409	12.2813	3676.4594	3677.8003	
5 (Left)	Plate	26.2500	1.2500	32.8125	1.6748	11.4375	3433.9307	3435.6055	
5 (Right)	Plate	26.2500	24.1250	633.2813	1.6748	11.4375	3433.9307	3435.6055	
6	Plate	13.7500	12.6875	174.4531	554.5833	0.0000	0.0000	554.5833	
7 (Left)	Perforated Plate	3.9375	4.3125	16.9805	9.0439	8.3750	276.1787	285.2227	
7 (Right)	Perforated Plate	3.9375	21.0625	82.9336	9.0439	8.3750	276.1787	285.2227	
8 (Left)	Plate	0.0000	2.3750	0.0000	0.0000	10.3125	0.0000	0.0000	
8 (Right)	Plate	0.0000	23.0000	0.0000	0.0000	10.3125	0.0000	0.0000	
Total		181.88		2307.54	634.48		20566.46	21200.94	
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	8.0000	0.1250	-1.0000	0.0625	-0.0625	-0.0013	12.8360	-164.7640	-164.7653
2	8.0000	0.2500	-2.0000	0.1250	-0.2500	-0.0104	12.7735	-326.3267	-326.3371
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-3.00		-0.31	-0.01		-491.09	-491.10

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 12.6875 in	$S_{right} = 1671.01 \text{ in}^3$			x-bar = 12.8985 in	$S_{right} = 1659.91 \text{ in}^3$		
$I_y = 21200.94 \text{ in}^4$	$S_{left} = 1671.01 \text{ in}^3$			$I_y = 20709.83 \text{ in}^4$	$S_{left} = 1605.59 \text{ in}^3$		
$C_{right} = 12.6875 \text{ in}$	$A = 181.8750 \text{ in}^2$			$C_{right} = 12.4765 \text{ in}$	$A = 178.8750 \text{ in}^2$		
$C_{left} = 12.6875 \text{ in}$	$r_y = 10.7967 \text{ in}$			$C_{left} = 12.8985 \text{ in}$	$r_y = 10.7600 \text{ in}$		



Made By KMW
Checked By DWC

Date 2/3/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_l = 0.6250$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_l = 0.6250$ in

Top Cover Plate: PL

$A_6 = b = 22.0000$ in
 $B_6 = t = 0.5625$ in

Side Plate 1: PL

$A_3 = b = 14.0000$ in
 $B_3 = t = 0.6250$ in

Web Plate 1: PL

$A_4 = b = 30.0000$ in
 $B_4 = t = 0.7500$ in

Side Plate 2: PL (No 2nd PL)

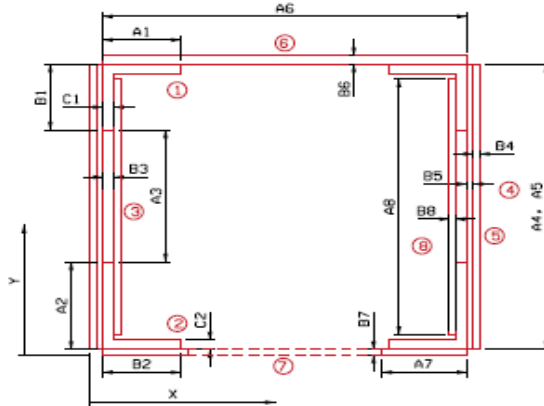
$A_8 = b = 0.0000$ in
 $B_8 = t = 0.0000$ in

Web Plate 2: PL

$A_5 = b = 30.0000$ in
 $B_5 = t = 0.8750$ in

Perforated Bottom Cover Plate: PL

$A_7 = b = 5.2500$ in
 $B_7 = t = 0.6875$ in



Member L83-L84

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	7.5000	30.3750	227.8125	0.2441	14.2213	1516.8319	1517.0761
	Vertical Leg	9.2188	26.3750	243.1445	41.7845	10.2213	963.1213	1004.9057
2	Horizontal Leg	7.5000	1.0000	7.5000	0.2441	15.1537	1722.2686	1722.5128
	Vertical Leg	9.2188	5.0000	46.0938	41.7845	11.1537	1146.8669	1188.6514
3	Plate	17.5000	15.6875	274.5313	285.8333	0.4662	3.8041	289.6375
4	Plate	45.0000	15.6875	705.9375	3375.0000	0.4662	9.7821	3384.7821
5	Plate	52.5000	15.6875	823.5938	3937.5000	0.4662	11.4124	3948.9124
6	Plate	12.3750	30.9688	383.2383	0.3263	14.8150	2716.1212	2716.4475
7	Perforated Plate	7.2188	0.3438	2.4814	0.2843	15.8100	1804.3682	1804.6525
8	Plate	0.0000	15.6875	0.0000	0.0000	0.4662	0.0000	0.0000
Total		168.03		2714.33	7683.00		9894.58	17577.58
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	5.2500	0.0625	-0.3281	0.0313	-0.0103	-0.0001	16.1611	-85.7003
2	5.2500	0.0625	-0.3281	0.0313	-0.0103	-0.0001	16.1611	-85.7003
3	0.0625	28.0000	-1.7500	14.6875	-25.7031	-114.3333	1.5049	-3.9631
4	0.2500	2.0000	-0.5000	29.6875	-14.8438	-0.1667	13.4951	-91.0592
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.91	-40.57	-114.50		-266.42	-380.92



Made By KMW
Checked By DWC

Date 2/3/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.1537 in	$S_{top} = 1164.37 \text{ in}^3$			y-bar = 16.1924 in	$S_{top} = 1142.06 \text{ in}^3$		
$I_x = 17577.58 \text{ in}^4$	$S_{bottom} = 1088.14 \text{ in}^3$			$I_x = 17196.65 \text{ in}^4$	$S_{bottom} = 1062.02 \text{ in}^3$		
$C_{top} = 15.0963 \text{ in}$	$A = 168.0313 \text{ in}^2$			$C_{top} = 15.0576 \text{ in}$	$A = 165.1250 \text{ in}^2$		
$C_{bottom} = 16.1537 \text{ in}$	$r_x = 10.2279 \text{ in}$			$C_{bottom} = 16.1924 \text{ in}$	$r_x = 10.2051 \text{ in}$		

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I_o	d	Ad^2	$I_{y, gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1 (Left)	Horizontal Leg		3.7500	4.6250	17.3438	11.2500	8.0000	240.0000	251.2500
	Vertical Leg		4.6094	1.9375	8.9307	0.1500	10.6875	526.4951	526.6451
1 (Right)	Horizontal Leg		3.7500	20.6250	77.3438	11.2500	8.0000	240.0000	251.2500
	Vertical Leg		4.6094	23.3125	107.4561	0.1500	10.6875	526.4951	526.6451
2 (Left)	Horizontal Leg		3.7500	4.6250	17.3438	11.2500	8.0000	240.0000	251.2500
	Vertical Leg		4.6094	1.9375	8.9307	0.1500	10.6875	526.4951	526.6451
2 (Right)	Horizontal Leg		3.7500	20.6250	77.3438	11.2500	8.0000	240.0000	251.2500
	Vertical Leg		4.6094	23.3125	107.4561	0.1500	10.6875	526.4951	526.6451
3 (Left)	Plate		8.7500	1.9375	16.9531	0.2848	10.6875	999.4482	999.7331
3 (Right)	Plate		8.7500	23.3125	203.9844	0.2848	10.6875	999.4482	999.7331
4 (Left)	Plate		22.5000	0.3750	8.4375	1.0547	12.2500	3376.4063	3377.4609
4 (Right)	Plate		22.5000	24.8750	559.6875	1.0547	12.2500	3376.4063	3377.4609
5 (Left)	Plate		26.2500	1.1875	31.1719	1.6748	11.4375	3433.9307	3435.6055
5 (Right)	Plate		26.2500	24.0625	631.6406	1.6748	11.4375	3433.9307	3435.6055
6	Plate		12.3750	12.6250	156.2344	499.1250	0.0000	0.0000	499.1250
7 (Left)	Perforated Plate		3.6094	4.2500	15.3398	8.2903	8.3750	253.1638	261.4541
7 (Right)	Perforated Plate		3.6094	21.0000	75.7969	8.2903	8.3750	253.1638	261.4541
8 (Left)	Plate		0.0000	2.2500	0.0000	0.0000	10.3750	0.0000	0.0000
8 (Right)	Plate		0.0000	23.0000	0.0000	0.0000	10.3750	0.0000	0.0000
Total			168.03		2121.39	567.33		19191.88	19759.21
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0625	5.2500	-0.3281	4.2500	-1.3945	-0.7537	8.2072	-22.1017	-22.8553
2	0.0625	5.2500	-0.3281	19.2500	-6.3164	-0.7537	6.7928	-15.1406	-15.8942
3	28.0000	0.0625	-1.7500	25.2188	-44.1328	-0.0006	12.7616	-285.0019	-285.0025
4	2.0000	0.2500	-0.5000	25.1250	-12.5625	-0.0026	12.6678	-80.2371	-80.2397
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.91		-64.41	-1.51		-402.48	-403.99

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 12.6250 in	$S_{right} = 1565.09 \text{ in}^3$			x-bar = 12.4572 in	$S_{right} = 1512.97 \text{ in}^3$		
$I_y = 19759.21 \text{ in}^4$	$S_{left} = 1565.09 \text{ in}^3$			$I_y = 19355.22 \text{ in}^4$	$S_{left} = 1553.74 \text{ in}^3$		
$C_{right} = 12.6250 \text{ in}$	$A = 168.0313 \text{ in}^2$			$C_{right} = 12.7928 \text{ in}$	$A = 165.1250 \text{ in}^2$		
$C_{left} = 12.6250 \text{ in}$	$r_y = 10.8440 \text{ in}$			$C_{left} = 12.4572 \text{ in}$	$r_y = 10.8266 \text{ in}$		



Made By KMW
Checked By DWC

Date 2/3/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

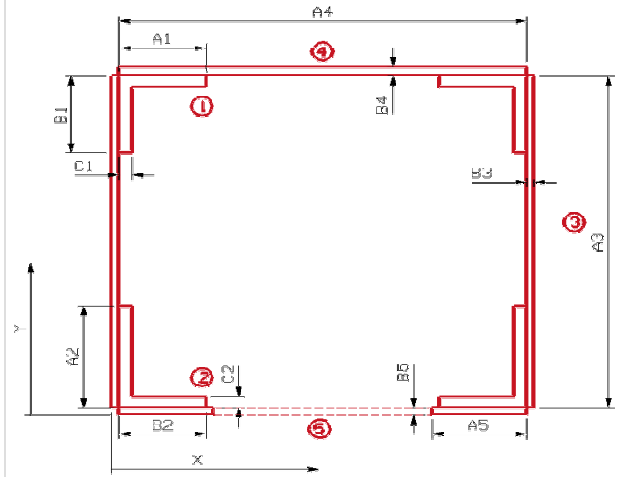
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6250$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6250$ in

Top Cover Plate:
 $A_4 = b = 22.0000$ in
 $B_4 = t = 0.5625$ in

Web Plate 1:
 $A_3 = b = 30.0000$ in
 $B_3 = t = 1.4375$ in

Perforated Cover Plate
 $A_5 = b = 5.2500$ in
 $B_5 = t = 0.6875$ in



Member U84-U85

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	7.5000	30.3750	227.8125	0.2441	14.1250	1496.3716	1496.6158
	Vertical Leg	9.2188	26.3750	243.1445	41.7845	10.1250	945.0698	986.8543
2	Horizontal Leg	7.5000	1.0000	7.5000	0.2441	15.2500	1744.2139	1744.4581
	Vertical Leg	9.2188	5.0000	46.0938	41.7845	11.2500	1166.7437	1208.5281
3	Plate	86.2500	15.6875	1353.0469	6468.7500	0.5625	27.2880	6496.0380
4	Plate	12.3750	30.9688	383.2383	0.3263	14.7188	2680.9475	2681.2738
5	Perforated Plate	7.2188	0.3438	2.4814	0.2843	15.9062	1826.4024	1826.6867
Total		139.28		2263.32	6553.42		9887.04	16440.45
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	5.2500	0.0625	-0.3281	0.0313	-0.0103	-0.0001	16.2024	-86.1386
2	5.2500	0.0625	-0.3281	0.0313	-0.0103	-0.0001	16.2024	-86.1386
3	0.1250	16.0000	-2.0000	22.6875	-45.3750	-42.6667	6.4539	-125.9711
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.66	-45.40	-42.67		-255.58	-298.25



Made By KMW
Checked By DWC

Date 2/3/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.2500 in	S _{top} =	1096.03 in ³	y-bar =	16.2336 in	S _{top} =	1074.98 in ³
I _x =	16440.45 in ⁴	S _{bott.} =	1011.72 in ³	I _x =	16142.21 in ⁴	S _{bott.} =	994.37 in ³
C _{top} =	15.0000 in	A =	139.2813 in ²	C _{top} =	15.0164 in	A =	136.6250 in ²
C _{bottom} =	16.2500 in	r _x =	10.8645 in	C _{bottom} =	16.2336 in	r _x =	10.8697 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.7500	4.4375	16.6406	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.7500	8.0664	0.1500	10.6875	526.4951	526.6451	
1 (Right)	Horizontal Leg	3.7500	20.4375	76.6406	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	23.1250	106.5918	0.1500	10.6875	526.4951	526.6451	
2 (Left)	Horizontal Leg	3.7500	4.4375	16.6406	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.7500	8.0664	0.1500	10.6875	526.4951	526.6451	
2 (Right)	Horizontal Leg	3.7500	20.4375	76.6406	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	23.1250	106.5918	0.1500	10.6875	526.4951	526.6451	
3 (Left)	Plate	43.1250	0.7188	30.9961	7.4261	11.7188	5922.3175	5929.7437	
3 (Right)	Plate	43.1250	24.1563	1041.7383	7.4261	11.7188	5922.3175	5929.7437	
4	Plate	12.3750	12.4375	153.9141	499.1250	0.0000	0.0000	499.1250	
5 (Left)	Perforated Plate	3.6094	4.0625	14.6631	8.2903	8.3750	253.1638	261.4541	
5 (Right)	Perforated Plate	3.6094	20.8125	75.1201	8.2903	8.3750	253.1638	261.4541	
Total		139.28		1732.31	576.16		15416.94	15993.10	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0625	5.2500	-0.3281	4.0625	-1.3330	-0.7537	8.1938	-22.0300	-22.7837
2	0.0625	5.2500	-0.3281	20.8125	-6.8291	-0.7537	8.5562	-24.0213	-24.7750
3	16.0000	0.1250	-2.0000	24.8125	-49.6250	-0.0026	12.5562	-315.3139	-315.3165
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.66		-57.79	-1.51		-361.37	-362.88

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.4375 in	S _{right} =	1285.88 in ³	x-bar =	12.2563 in	S _{right} =	1238.66 in ³
I _y =	15993.10 in ⁴	S _{left} =	1285.88 in ³	I _y =	15630.23 in ⁴	S _{left} =	1275.28 in ³
C _{right} =	12.4375 in	A =	139.2813 in ²	C _{right} =	12.6187 in	A =	136.6250 in ²
C _{left} =	12.4375 in	r _y =	10.7157 in	C _{left} =	12.2563 in	r _y =	10.6959 in



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6875$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6875$ in

Top Cover Plate:
 $A_4 = b = 22.0000$ in
 $B_4 = t = 0.6250$ in

Web Plate 1:
 $A_3 = b = 30.0000$ in
 $B_3 = t = 1.1875$ in

Perforated Cover Plate
 $A_5 = b = 5.2500$ in
 $B_5 = t = 0.7500$ in



Member U85-U86

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	8.2500	30.4063	250.8516	0.3250	13.9653	1608.9915	1609.3165
	Vertical Leg	10.0547	26.4063	265.5066	44.8042	9.9653	998.5005	1043.3048
2	Horizontal Leg	8.2500	1.0938	9.0234	0.3250	15.3472	1943.1795	1943.5044
	Vertical Leg	10.0547	5.0938	51.2161	44.8042	11.3472	1294.6337	1339.4379
3	Plate	71.2500	15.7500	1122.1875	5343.7500	0.6910	34.0168	5377.7668
4	Plate	13.7500	31.0625	427.1094	0.4476	14.6215	2939.6040	2940.0516
5	Perforated Plate	7.8750	0.3750	2.9531	0.3691	16.0660	2032.6566	2033.0258
Total		129.48		2128.85	5434.83		10851.58	16286.41
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.4410 in	S _{top} =	1090.56 in ³	y-bar =	16.4410 in	S _{top} =	1090.56 in ³
I _x =	16286.41 in ⁴	S _{bottom} =	990.60 in ³	I _x =	16286.41 in ⁴	S _{bottom} =	990.60 in ³
C _{top} =	14.9340 in	A =	129.4844 in ²	C _{top} =	14.9340 in	A =	129.4844 in ²
C _{bottom} =	16.4410 in	r _x =	11.2151 in	C _{bottom} =	16.4410 in	r _x =	11.2151 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	4.1875	17.2734	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.5313	7.6981	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	20.1875	83.2734	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.8438	114.8434	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	4.1875	17.2734	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.5313	7.6981	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	20.1875	83.2734	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.8438	114.8434	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	35.6250	0.5938	21.1523	4.1864	11.5938	4788.5358	4792.7222	
3 (Right)	Plate	35.6250	23.7813	847.2070	4.1864	11.5938	4788.5358	4792.7222	
4	Plate	13.7500	12.1875	167.5781	554.5833	0.0000	0.0000	554.5833	
5 (Left)	Perforated Plate	3.9375	3.8125	15.0117	9.0439	8.3750	276.1787	285.2227	
5 (Right)	Perforated Plate	3.9375	20.5625	80.9648	9.0439	8.3750	276.1787	285.2227	
Total		129.48		1578.09	631.34		13468.96	14100.30	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	1156.95 in ³	x-bar =	12.1875 in	S _{right} =	1156.95 in ³
I _y =	14100.30 in ⁴	S _{left} =	1156.95 in ³	I _y =	14100.30 in ⁴	S _{left} =	1156.95 in ³
C _{right} =	12.1875 in	A =	129.4844 in ²	C _{right} =	12.1875 in	A =	129.4844 in ²
C _{left} =	12.1875 in	r _y =	10.4353 in	C _{left} =	12.1875 in	r _y =	10.4353 in



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6875$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6875$ in

Top Cover Plate:

$A_4 = b = 22.0000$ in
 $B_4 = t = 0.6250$ in

Web Plate 1:

$A_3 = b = 30.0000$ in
 $B_3 = t = 1.1875$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.7500$ in



Member U86-U87

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	8.2500	30.4063	250.8516	0.3250	13.9653	1608.9915	1609.3165
	Vertical Leg	10.0547	26.4063	265.5066	44.8042	9.9653	998.5005	1043.3048
2	Horizontal Leg	8.2500	1.0938	9.0234	0.3250	15.3472	1943.1795	1943.5044
	Vertical Leg	10.0547	5.0938	51.2161	44.8042	11.3472	1294.6337	1339.4379
3	Plate	71.2500	15.7500	1122.1875	5343.7500	0.6910	34.0168	5377.7668
4	Plate	13.7500	31.0625	427.1094	0.4476	14.6215	2939.6040	2940.0516
5	Perforated Plate	7.8750	0.3750	2.9531	0.3691	16.0660	2032.6566	2033.0258
Total		129.48		2128.85	5434.83		10851.58	16286.41
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.4410 in	S _{top} =	1090.56 in ³	y-bar =	16.4410 in	S _{top} =	1090.56 in ³
I _x =	16286.41 in ⁴	S _{bottom} =	990.60 in ³	I _x =	16286.41 in ⁴	S _{bottom} =	990.60 in ³
C _{top} =	14.9340 in	A =	129.4844 in ²	C _{top} =	14.9340 in	A =	129.4844 in ²
C _{bottom} =	16.4410 in	r _x =	11.2151 in	C _{bottom} =	16.4410 in	r _x =	11.2151 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	4.1875	17.2734	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.5313	7.6981	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	20.1875	83.2734	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.8438	114.8434	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	4.1875	17.2734	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.5313	7.6981	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	20.1875	83.2734	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.8438	114.8434	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	35.6250	0.5938	21.1523	4.1864	11.5938	4788.5358	4792.7222	
3 (Right)	Plate	35.6250	23.7813	847.2070	4.1864	11.5938	4788.5358	4792.7222	
4	Plate	13.7500	12.1875	167.5781	554.5833	0.0000	0.0000	554.5833	
5 (Left)	Perforated Plate	3.9375	3.8125	15.0117	9.0439	8.3750	276.1787	285.2227	
5 (Right)	Perforated Plate	3.9375	20.5625	80.9648	9.0439	8.3750	276.1787	285.2227	
Total		129.48		1578.09	631.34		13468.96	14100.30	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	1156.95 in ³	x-bar =	12.1875 in	S _{right} =	1156.95 in ³
I _y =	14100.30 in ⁴	S _{left} =	1156.95 in ³	I _y =	14100.30 in ⁴	S _{left} =	1156.95 in ³
C _{right} =	12.1875 in	A =	129.4844 in ²	C _{right} =	12.1875 in	A =	129.4844 in ²
C _{left} =	12.1875 in	r _y =	10.4353 in	C _{left} =	12.1875 in	r _y =	10.4353 in



Made By KMW
Checked By DWC

Date 2/3/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

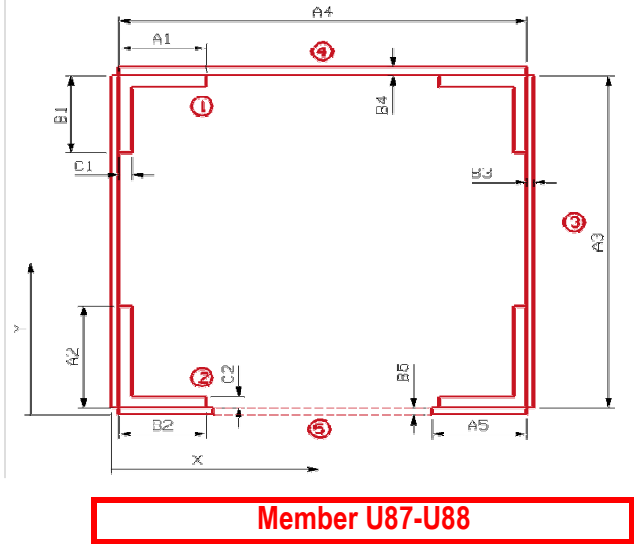
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6875$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6875$ in

Top Cover Plate:
 $A_4 = b = 22.0000$ in
 $B_4 = t = 0.6250$ in

Web Plate 1:
 $A_3 = b = 30.0000$ in
 $B_3 = t = 1.2500$ in

Perforated Cover Plate
 $A_5 = b = 5.2500$ in
 $B_5 = t = 0.7500$ in



Member U87-U88

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	8.2500	30.4063	250.8516	0.3250	13.9847	1613.4759	1613.8009
	Vertical Leg	10.0547	26.4063	265.5066	44.8042	9.9847	1002.4016	1047.2058
2	Horizontal Leg	8.2500	1.0938	9.0234	0.3250	15.3278	1938.2579	1938.5828
	Vertical Leg	10.0547	5.0938	51.2161	44.8042	11.3278	1290.1998	1335.0040
3	Plate	75.0000	15.7500	1181.2500	5625.0000	0.6715	33.8198	5658.8198
4	Plate	13.7500	31.0625	427.1094	0.4476	14.6410	2947.4290	2947.8766
5	Perforated Plate	7.8750	0.3750	2.9531	0.3691	16.0465	2027.7386	2028.1077
Total		133.23		2187.91	5716.08		10853.32	16569.40
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	19.0000	0.0625	-1.1875	31.3438	-37.2207	-0.0004	15.1206	-271.5003
2	3.0000	0.1875	-0.5625	31.2813	-17.5957	-0.0016	15.0581	-127.5444
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.75	-54.82	0.00		-399.04	-399.05



Made By KMW
Checked By DWC

Date 2/3/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.4215 in	S _{top} =	1108.06 in ³	y-bar =	16.2232 in	S _{top} =	1067.22 in ³
I _x =	16569.40 in ⁴	S _{bott.} =	1009.01 in ³	I _x =	16170.35 in ⁴	S _{bott.} =	996.74 in ³
C _{top} =	14.9535 in	A =	133.2344 in ²	C _{top} =	15.1518 in	A =	131.4844 in ²
C _{bottom} =	16.4215 in	r _x =	11.1518 in	C _{bottom} =	16.2232 in	r _x =	11.0898 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	4.2500	17.5313	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.5938	8.0123	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	20.2500	83.5313	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.9063	115.1576	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	4.2500	17.5313	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.5938	8.0123	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	20.2500	83.5313	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.9063	115.1576	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	37.5000	0.6250	23.4375	4.8828	11.6250	5067.7734	5072.6563	
3 (Right)	Plate	37.5000	23.8750	895.3125	4.8828	11.6250	5067.7734	5072.6563	
4	Plate	13.7500	12.2500	168.4375	554.5833	0.0000	0.0000	554.5833	
5 (Left)	Perforated Plate	3.9375	3.8750	15.2578	9.0439	8.3750	276.1787	285.2227	
5 (Right)	Perforated Plate	3.9375	20.6250	81.2109	9.0439	8.3750	276.1787	285.2227	
Total		133.23		1632.12	632.73		14027.44	14660.17	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0625	19.0000	-1.1875	10.7500	-12.7656	-35.7240	1.4729	-2.5762	-38.3002
2	0.1875	3.0000	-0.5625	21.7500	-12.2344	-0.4219	9.5271	-51.0556	-51.4775
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.75		-25.00	-36.15		-53.63	-89.78

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2500 in	S _{right} =	1196.75 in ³	x-bar =	12.2229 in	S _{right} =	1186.79 in ³
I _y =	14660.17 in ⁴	S _{left} =	1196.75 in ³	I _y =	14570.39 in ⁴	S _{left} =	1192.06 in ³
C _{right} =	12.2500 in	A =	133.2344 in ²	C _{right} =	12.2771 in	A =	131.4844 in ²
C _{left} =	12.2500 in	r _y =	10.4897 in	C _{left} =	12.2229 in	r _y =	10.5269 in



Made By KMW
Checked By DWC

Date 2/3/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

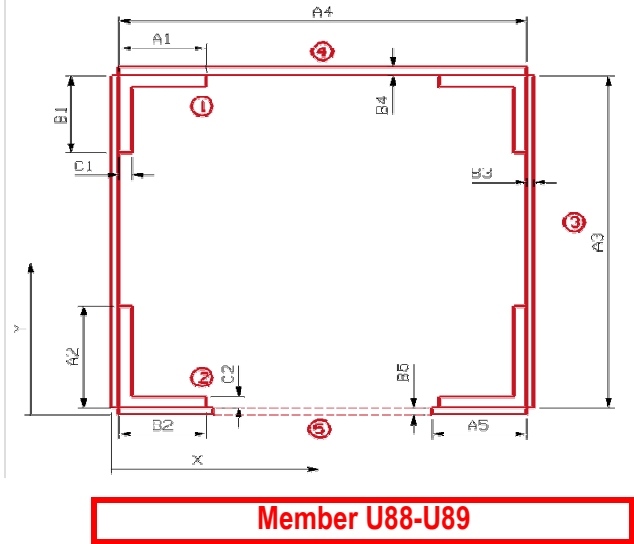
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6875$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6875$ in

Top Cover Plate:
 $A_4 = b = 22.0000$ in
 $B_4 = t = 0.6250$ in

Web Plate 1:
 $A_3 = b = 30.0000$ in
 $B_3 = t = 1.2500$ in

Perforated Cover Plate
 $A_5 = b = 5.2500$ in
 $B_5 = t = 0.7500$ in



X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	8.2500	30.4063	250.8516	0.3250	13.9847	1613.4759	1613.8009	
	Vertical Leg	10.0547	26.4063	265.5066	44.8042	9.9847	1002.4016	1047.2058	
2	Horizontal Leg	8.2500	1.0938	9.0234	0.3250	15.3278	1938.2579	1938.5828	
	Vertical Leg	10.0547	5.0938	51.2161	44.8042	11.3278	1290.1998	1335.0040	
3	Plate	75.0000	15.7500	1181.2500	5625.0000	0.6715	33.8198	5658.8198	
4	Plate	13.7500	31.0625	427.1094	0.4476	14.6410	2947.4290	2947.8766	
5	Perforated Plate	7.8750	0.3750	2.9531	0.3691	16.0465	2027.7386	2028.1077	
Total		133.23		2187.91	5716.08		10853.32	16569.40	
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	
1	0.1250	14.0000	-1.7500	15.7500	-27.5625	-28.5833	0.7811	-1.0677	-29.6511
2	0.1875	8.0000	-1.5000	4.7500	-7.1250	-8.0000	11.7811	-208.1920	-216.1920
3	22.0000	0.0625	-1.3750	31.3438	-43.0977	-0.0004	14.8126	-301.6945	-301.6949
4	2.0000	0.1875	-0.3750	31.2188	-11.7070	-0.0011	14.6876	-80.8975	-80.8986
5	2.0000	0.1875	-0.3750	31.2188	-11.7070	-0.0011	14.6876	-80.8975	-80.8986
6	5.2500	0.2500	-1.3125	0.1250	-0.1641	-0.0068	16.4061	-353.2733	-353.2801
7	5.2500	0.0625	-0.3281	0.0313	-0.0103	-0.0001	16.4999	-89.3306	-89.3307
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-7.02	-101.37	-36.59			-1115.35	-1151.95



Made By KMW
Checked By DWC

Date 2/3/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.4215 in	S _{top} =	1108.06 in ³	y-bar =	16.5311 in	S _{top} =	1038.64 in ³
I _x =	16569.40 in ⁴	S _{bott.} =	1009.01 in ³	I _x =	15417.45 in ⁴	S _{bott.} =	932.63 in ³
C _{top} =	14.9535 in	A =	133.2344 in ²	C _{top} =	14.8439 in	A =	126.2188 in ²
C _{bottom} =	16.4215 in	r _x =	11.1518 in	C _{bottom} =	16.5311 in	r _x =	11.0521 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	4.2500	17.5313	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.5938	8.0123	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	20.2500	83.5313	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.9063	115.1576	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	4.2500	17.5313	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.5938	8.0123	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	20.2500	83.5313	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.9063	115.1576	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	37.5000	0.6250	23.4375	4.8828	11.6250	5067.7734	5072.6563	
3 (Right)	Plate	37.5000	23.8750	895.3125	4.8828	11.6250	5067.7734	5072.6563	
4	Plate	13.7500	12.2500	168.4375	554.5833	0.0000	0.0000	554.5833	
5 (Left)	Perforated Plate	3.9375	3.8750	15.2578	9.0439	8.3750	276.1787	285.2227	
5 (Right)	Perforated Plate	3.9375	20.6250	81.2109	9.0439	8.3750	276.1787	285.2227	
Total		133.23		1632.12	632.73		14027.44	14660.17	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	14.0000	0.1250	-1.7500	0.0625	-0.1094	-0.0023	12.5663	-276.3441	-276.3463
2	8.0000	0.1875	-1.5000	0.0938	-0.1406	-0.0044	12.5350	-235.6897	-235.6941
3	0.0625	22.0000	-1.3750	12.2500	-16.8438	-55.4583	0.3788	-0.1973	-55.6556
4	0.1875	2.0000	-0.3750	2.2500	-0.8438	-0.1250	10.3788	-40.3945	-40.5195
5	0.1875	2.0000	-0.3750	22.2500	-8.3438	-0.1250	9.6212	-34.7131	-34.8381
6	0.2500	5.2500	-1.3125	3.8750	-5.0859	-3.0146	8.7538	-100.5747	-103.5893
7	0.0625	5.2500	-0.3281	20.6250	-6.7676	-0.7537	7.9962	-20.9803	-21.7339
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-7.02		-38.13	-59.48		-708.89	-768.38

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2500 in	S _{right} =	1196.75 in ³	x-bar =	12.6288 in	S _{right} =	1170.21 in ³
I _y =	14660.17 in ⁴	S _{left} =	1196.75 in ³	I _y =	13891.79 in ⁴	S _{left} =	1100.01 in ³
C _{right} =	12.2500 in	A =	133.2344 in ²	C _{right} =	11.8712 in	A =	126.2188 in ²
C _{left} =	12.2500 in	r _y =	10.4897 in	C _{left} =	12.6288 in	r _y =	10.4910 in



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6875$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6875$ in

Top Cover Plate:

$A_4 = b = 22.0000$ in
 $B_4 = t = 0.6250$ in

Web Plate 1:

$A_3 = b = 30.0000$ in
 $B_3 = t = 1.2500$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.7500$ in



Member U89-U90

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	8.2500	30.4063	250.8516	0.3250	13.9847	1613.4759	1613.8009
	Vertical Leg	10.0547	26.4063	265.5066	44.8042	9.9847	1002.4016	1047.2058
2	Horizontal Leg	8.2500	1.0938	9.0234	0.3250	15.3278	1938.2579	1938.5828
	Vertical Leg	10.0547	5.0938	51.2161	44.8042	11.3278	1290.1998	1335.0040
3	Plate	75.0000	15.7500	1181.2500	5625.0000	0.6715	33.8198	5658.8198
4	Plate	13.7500	31.0625	427.1094	0.4476	14.6410	2947.4290	2947.8766
5	Perforated Plate	7.8750	0.3750	2.9531	0.3691	16.0465	2027.7386	2028.1077
Total		133.23		2187.91	5716.08		10853.32	16569.40
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00	0.00	0.00	0.00



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.4215 in	S _{top} =	1108.06 in ³	y-bar =	16.4215 in	S _{top} =	1108.06 in ³
I _x =	16569.40 in ⁴	S _{bott.} =	1009.01 in ³	I _x =	16569.40 in ⁴	S _{bott.} =	1009.01 in ³
C _{top} =	14.9535 in	A =	133.2344 in ²	C _{top} =	14.9535 in	A =	133.2344 in ²
C _{bottom} =	16.4215 in	r _x =	11.1518 in	C _{bottom} =	16.4215 in	r _x =	11.1518 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	4.2500	17.5313	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.5938	8.0123	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	20.2500	83.5313	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.9063	115.1576	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	4.2500	17.5313	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.5938	8.0123	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	20.2500	83.5313	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.9063	115.1576	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	37.5000	0.6250	23.4375	4.8828	11.6250	5067.7734	5072.6563	
3 (Right)	Plate	37.5000	23.8750	895.3125	4.8828	11.6250	5067.7734	5072.6563	
4	Plate	13.7500	12.2500	168.4375	554.5833	0.0000	0.0000	554.5833	
5 (Left)	Perforated Plate	3.9375	3.8750	15.2578	9.0439	8.3750	276.1787	285.2227	
5 (Right)	Perforated Plate	3.9375	20.6250	81.2109	9.0439	8.3750	276.1787	285.2227	
Total		133.23		1632.12	632.73		14027.44	14660.17	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2500 in	S _{right} =	1196.75 in ³	x-bar =	12.2500 in	S _{right} =	1196.75 in ³
I _y =	14660.17 in ⁴	S _{left} =	1196.75 in ³	I _y =	14660.17 in ⁴	S _{left} =	1196.75 in ³
C _{right} =	12.2500 in	A =	133.2344 in ²	C _{right} =	12.2500 in	A =	133.2344 in ²
C _{left} =	12.2500 in	r _y =	10.4897 in	C _{left} =	12.2500 in	r _y =	10.4897 in



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

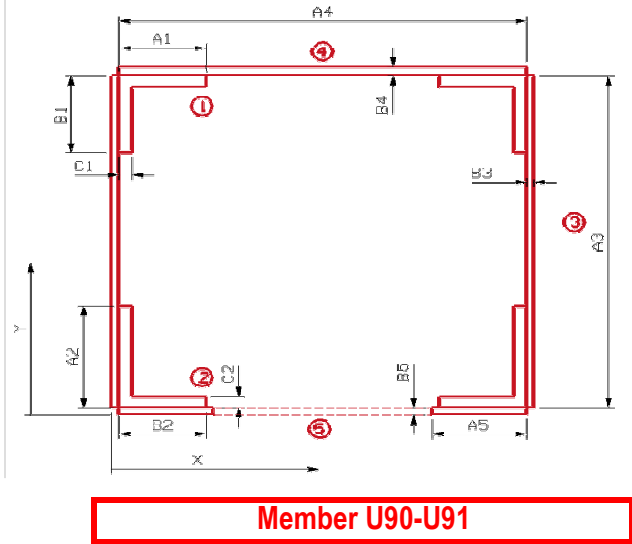
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6875$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6875$ in

Top Cover Plate:
 $A_4 = b = 22.0000$ in
 $B_4 = t = 0.6250$ in

Web Plate 1:
 $A_3 = b = 30.0000$ in
 $B_3 = t = 1.2500$ in

Perforated Cover Plate
 $A_5 = b = 5.2500$ in
 $B_5 = t = 0.7500$ in



X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	8.2500	30.4063	250.8516	0.3250	13.9847	1613.4759	1613.8009
	Vertical Leg	10.0547	26.4063	265.5066	44.8042	9.9847	1002.4016	1047.2058
2	Horizontal Leg	8.2500	1.0938	9.0234	0.3250	15.3278	1938.2579	1938.5828
	Vertical Leg	10.0547	5.0938	51.2161	44.8042	11.3278	1290.1998	1335.0040
3	Plate	75.0000	15.7500	1181.2500	5625.0000	0.6715	33.8198	5658.8198
4	Plate	13.7500	31.0625	427.1094	0.4476	14.6410	2947.4290	2947.8766
5	Perforated Plate	7.8750	0.3750	2.9531	0.3691	16.0465	2027.7386	2028.1077
Total		133.23		2187.91	5716.08		10853.32	16569.40
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.4215 in	S _{top} =	1108.06 in ³	y-bar =	16.4215 in	S _{top} =	1108.06 in ³
I _x =	16569.40 in ⁴	S _{bott.} =	1009.01 in ³	I _x =	16569.40 in ⁴	S _{bott.} =	1009.01 in ³
C _{top} =	14.9535 in	A =	133.2344 in ²	C _{top} =	14.9535 in	A =	133.2344 in ²
C _{bottom} =	16.4215 in	r _x =	11.1518 in	C _{bottom} =	16.4215 in	r _x =	11.1518 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	4.2500	17.5313	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.5938	8.0123	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	20.2500	83.5313	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.9063	115.1576	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	4.2500	17.5313	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.5938	8.0123	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	20.2500	83.5313	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.9063	115.1576	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	37.5000	0.6250	23.4375	4.8828	11.6250	5067.7734	5072.6563	
3 (Right)	Plate	37.5000	23.8750	895.3125	4.8828	11.6250	5067.7734	5072.6563	
4	Plate	13.7500	12.2500	168.4375	554.5833	0.0000	0.0000	554.5833	
5 (Left)	Perforated Plate	3.9375	3.8750	15.2578	9.0439	8.3750	276.1787	285.2227	
5 (Right)	Perforated Plate	3.9375	20.6250	81.2109	9.0439	8.3750	276.1787	285.2227	
Total		133.23		1632.12	632.73		14027.44	14660.17	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2500 in	S _{right} =	1196.75 in ³	x-bar =	12.2500 in	S _{right} =	1196.75 in ³
I _y =	14660.17 in ⁴	S _{left} =	1196.75 in ³	I _y =	14660.17 in ⁴	S _{left} =	1196.75 in ³
C _{right} =	12.2500 in	A =	133.2344 in ²	C _{right} =	12.2500 in	A =	133.2344 in ²
C _{left} =	12.2500 in	r _y =	10.4897 in	C _{left} =	12.2500 in	r _y =	10.4897 in



Made By KMW
Checked By DWC

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

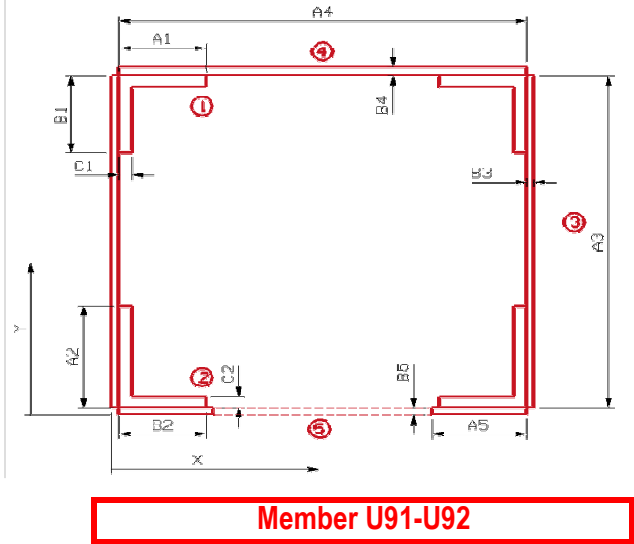
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6875$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6875$ in

Top Cover Plate:
 $A_4 = b = 22.0000$ in
 $B_4 = t = 0.6250$ in

Web Plate 1:
 $A_3 = b = 30.0000$ in
 $B_3 = t = 1.2500$ in

Perforated Cover Plate
 $A_5 = b = 5.2500$ in
 $B_5 = t = 0.7500$ in



X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	8.2500	30.4063	250.8516	0.3250	13.9847	1613.4759	1613.8009	
	Vertical Leg	10.0547	26.4063	265.5066	44.8042	9.9847	1002.4016	1047.2058	
2	Horizontal Leg	8.2500	1.0938	9.0234	0.3250	15.3278	1938.2579	1938.5828	
	Vertical Leg	10.0547	5.0938	51.2161	44.8042	11.3278	1290.1998	1335.0040	
3	Plate	75.0000	15.7500	1181.2500	5625.0000	0.6715	33.8198	5658.8198	
4	Plate	13.7500	31.0625	427.1094	0.4476	14.6410	2947.4290	2947.8766	
5	Perforated Plate	7.8750	0.3750	2.9531	0.3691	16.0465	2027.7386	2028.1077	
Total		133.23		2187.91	5716.08		10853.32	16569.40	
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	
1	0.0625	30.0000	-1.8750	15.7500	-29.5313	-140.6250	0.3869	-0.2807	-140.9057
2	0.1875	14.0000	-2.6250	23.7500	-62.3438	-42.8750	7.6131	-152.1421	-195.0171
3	0.1875	1.0000	-0.1875	8.0000	-1.5000	-0.0156	8.1369	-12.4143	-12.4299
4	22.0000	0.0625	-1.3750	31.3438	-43.0977	-0.0004	15.2068	-317.9654	-317.9658
5	0.0625	30.0000	-1.8750	15.7500	-29.5313	-140.6250	0.3869	-0.2807	-140.9057
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-7.94	-166.00	-324.14		-483.08	-807.22	



Made By KMW
Checked By DWC

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.4215 in	S _{top} =	1108.06 in ³	y-bar =	16.1369 in	S _{top} =	1034.39 in ³
I _x =	16569.40 in ⁴	S _{bot.} =	1009.01 in ³	I _x =	15762.17 in ⁴	S _{bot.} =	976.78 in ³
C _{top} =	14.9535 in	A =	133.2344 in ²	C _{top} =	15.2381 in	A =	125.2969 in ²
C _{bottom} =	16.4215 in	r _x =	11.1518 in	C _{bottom} =	16.1369 in	r _x =	11.2160 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	4.2500	17.5313	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.5938	8.0123	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	20.2500	83.5313	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.9063	115.1576	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	4.2500	17.5313	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.5938	8.0123	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	20.2500	83.5313	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.9063	115.1576	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	37.5000	0.6250	23.4375	4.8828	11.6250	5067.7734	5072.6563	
3 (Right)	Plate	37.5000	23.8750	895.3125	4.8828	11.6250	5067.7734	5072.6563	
4	Plate	13.7500	12.2500	168.4375	554.5833	0.0000	0.0000	554.5833	
5 (Left)	Perforated Plate	3.9375	3.8750	15.2578	9.0439	8.3750	276.1787	285.2227	
5 (Right)	Perforated Plate	3.9375	20.6250	81.2109	9.0439	8.3750	276.1787	285.2227	
Total		133.23		1632.12	632.73		14027.44	14660.17	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	30.0000	0.0625	-1.8750	0.0313	-0.0586	-0.0006	12.4902	-292.5102	-292.5109
2	14.0000	0.1875	-2.6250	0.1563	-0.4102	-0.0077	12.3652	-401.3586	-401.3663
3	1.0000	0.1875	-0.1875	0.1563	-0.0293	-0.0005	12.3652	-28.6685	-28.6690
4	0.0625	22.0000	-1.3750	12.2500	-16.8438	-55.4583	0.2715	-0.1013	-55.5597
5	30.0000	0.0625	-1.8750	24.4688	-45.8789	-0.0006	11.9473	-267.6331	-267.6337
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-7.94		-63.22	-55.47		-990.27	-1045.74

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2500 in	S _{right} =	1196.75 in ³	x-bar =	12.5215 in	S _{right} =	1136.57 in ³
I _y =	14660.17 in ⁴	S _{left} =	1196.75 in ³	I _y =	13614.43 in ⁴	S _{left} =	1087.29 in ³
C _{right} =	12.2500 in	A =	133.2344 in ²	C _{right} =	11.9785 in	A =	125.2969 in ²
C _{left} =	12.2500 in	r _y =	10.4897 in	C _{left} =	12.5215 in	r _y =	10.4239 in



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6875$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6875$ in

Top Cover Plate:

$A_4 = b = 22.0000$ in
 $B_4 = t = 0.6250$ in

Web Plate 1:

$A_3 = b = 30.0000$ in
 $B_3 = t = 1.0625$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.7500$ in



Member U92-U93

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	8.2500	30.4063	250.8516	0.3250	13.9228	1599.2173	1599.5422
	Vertical Leg	10.0547	26.4063	265.5066	44.8042	9.9228	990.0054	1034.8096
2	Horizontal Leg	8.2500	1.0938	9.0234	0.3250	15.3897	1953.9522	1954.2772
	Vertical Leg	10.0547	5.0938	51.2161	44.8042	11.3897	1304.3457	1349.1500
3	Plate	63.7500	15.7500	1004.0625	4781.2500	0.7334	34.2937	4815.5437
4	Plate	13.7500	31.0625	427.1094	0.4476	14.5791	2922.5469	2922.9945
5	Perforated Plate	7.8750	0.3750	2.9531	0.3691	16.1084	2043.4206	2043.7897
Total		121.98		2010.72	4872.33		10847.78	15720.11
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.4834 in	S _{top} =	1055.64 in ³	y-bar =	16.4834 in	S _{top} =	1055.64 in ³
I _x =	15720.11 in ⁴	S _{bott.} =	953.69 in ³	I _x =	15720.11 in ⁴	S _{bott.} =	953.69 in ³
C _{top} =	14.8916 in	A =	121.9844 in ²	C _{top} =	14.8916 in	A =	121.9844 in ²
C _{bottom} =	16.4834 in	r _x =	11.3521 in	C _{bottom} =	16.4834 in	r _x =	11.3521 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	4.0625	16.7578	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.4063	7.0697	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	20.0625	82.7578	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.7188	114.2150	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	4.0625	16.7578	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.4063	7.0697	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	20.0625	82.7578	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.7188	114.2150	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	31.8750	0.5313	16.9336	2.9987	11.5313	4238.4100	4241.4087	
3 (Right)	Plate	31.8750	23.5938	752.0508	2.9987	11.5313	4238.4100	4241.4087	
4	Plate	13.7500	12.0625	165.8594	554.5833	0.0000	0.0000	554.5833	
5 (Left)	Perforated Plate	3.9375	3.6875	14.5195	9.0439	8.3750	276.1787	285.2227	
5 (Right)	Perforated Plate	3.9375	20.4375	80.4727	9.0439	8.3750	276.1787	285.2227	
Total		121.98		1471.44	628.96		12368.71	12997.67	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.0625 in	S _{right} =	1077.53 in ³	x-bar =	12.0625 in	S _{right} =	1077.53 in ³
I _y =	12997.67 in ⁴	S _{left} =	1077.53 in ³	I _y =	12997.67 in ⁴	S _{left} =	1077.53 in ³
C _{right} =	12.0625 in	A =	121.9844 in ²	C _{right} =	12.0625 in	A =	121.9844 in ²
C _{left} =	12.0625 in	r _y =	10.3224 in	C _{left} =	12.0625 in	r _y =	10.3224 in



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.4375$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_f = 0.4375$ in

Top Cover Plate:

$A_4 = b = 22.0000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 30.0000$ in
 $B_3 = t = 1.0000$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.5000$ in



Member U93-U94

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg		5.2500	30.2813	158.9766	0.0837	14.3160	1075.9823	1076.0660
	Vertical Leg		6.6172	26.2813	173.9080	31.5372	10.3160	704.2056	735.7428
2	Horizontal Leg		5.2500	0.7188	3.7734	0.0837	15.2465	1220.3863	1220.4700
	Vertical Leg		6.6172	4.7188	31.2249	31.5372	11.2465	836.9608	868.4980
3	Plate		60.0000	15.5000	930.0000	4500.0000	0.4652	12.9852	4512.9852
4	Plate		8.2500	30.6875	253.1719	0.0967	14.7223	1788.1531	1788.2498
5	Perforated Plate		5.2500	0.2500	1.3125	0.1094	15.7152	1296.5810	1296.6904
Total			97.23		1552.37	4563.45		6935.25	11498.70
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	15.9652 in	S _{top} =	771.22 in ³	y-bar =	15.9652 in	S _{top} =	771.22 in ³
I _x =	11498.70 in ⁴	S _{bott.} =	720.23 in ³	I _x =	11498.70 in ⁴	S _{bott.} =	720.23 in ³
C _{top} =	14.9098 in	A =	97.2344 in ²	C _{top} =	14.9098 in	A =	97.2344 in ²
C _{bottom} =	15.9652 in	r _x =	10.8746 in	C _{bottom} =	15.9652 in	r _x =	10.8746 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	4.0000	10.5000	7.8750	8.0000	168.0000	175.8750	
	Vertical Leg	3.3086	1.2188	4.0323	0.0528	10.7813	384.5756	384.6283	
1 (Right)	Horizontal Leg	2.6250	20.0000	52.5000	7.8750	8.0000	168.0000	175.8750	
	Vertical Leg	3.3086	22.7813	75.3739	0.0528	10.7813	384.5756	384.6283	
2 (Left)	Horizontal Leg	2.6250	4.0000	10.5000	7.8750	8.0000	168.0000	175.8750	
	Vertical Leg	3.3086	1.2188	4.0323	0.0528	10.7813	384.5756	384.6283	
2 (Right)	Horizontal Leg	2.6250	20.0000	52.5000	7.8750	8.0000	168.0000	175.8750	
	Vertical Leg	3.3086	22.7813	75.3739	0.0528	10.7813	384.5756	384.6283	
3 (Left)	Plate	30.0000	0.5000	15.0000	2.5000	11.5000	3967.5000	3970.0000	
3 (Right)	Plate	30.0000	23.5000	705.0000	2.5000	11.5000	3967.5000	3970.0000	
4	Plate	8.2500	12.0000	99.0000	332.7500	0.0000	0.0000	332.7500	
5 (Left)	Perforated Plate	2.6250	3.6250	9.5156	6.0293	8.3750	184.1191	190.1484	
5 (Right)	Perforated Plate	2.6250	20.3750	53.4844	6.0293	8.3750	184.1191	190.1484	
Total		97.23		1166.81	381.52		10513.54	10895.06	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.0000 in	S _{right} =	907.92 in ³	x-bar =	12.0000 in	S _{right} =	907.92 in ³
I _y =	10895.06 in ⁴	S _{left} =	907.92 in ³	I _y =	10895.06 in ⁴	S _{left} =	907.92 in ³
C _{right} =	12.0000 in	A =	97.2344 in ²	C _{right} =	12.0000 in	A =	97.2344 in ²
C _{left} =	12.0000 in	r _y =	10.5853 in	C _{left} =	12.0000 in	r _y =	10.5853 in



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

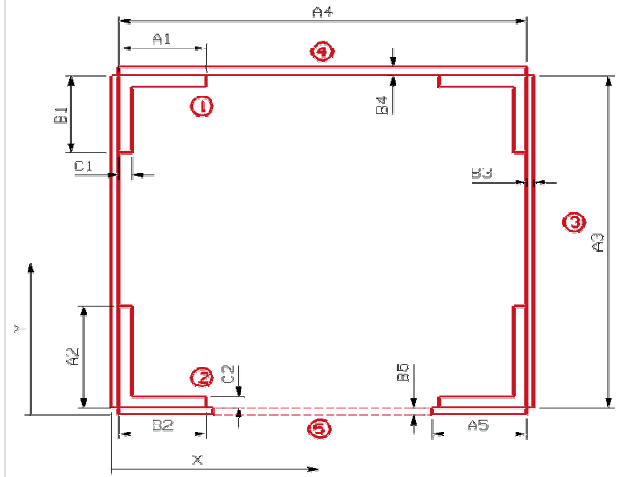
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.4375$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_f = 0.4375$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:
 $A_3 = b = 30.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member U94-U95

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.2500	30.2813	158.9766	0.0837	14.0877	1041.9304	1042.0141
	Vertical Leg	6.6172	26.2813	173.9080	31.5372	10.0877	673.3745	704.9117
2	Horizontal Leg	5.2500	0.7188	3.7734	0.0837	15.4748	1257.2166	1257.3004
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	11.4748	871.2939	902.8311
3	Plate	22.5000	15.5000	348.7500	1687.5000	0.6936	10.8232	1698.3232
4	Plate	8.8125	30.6875	270.4336	0.1033	14.4939	1851.2790	1851.3823
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	15.9436	1525.1832	1525.3082
Total		61.05		988.57	1750.97		7231.10	8982.07
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.1936 in	S _{top} =	611.80 in ³	y-bar =	16.1936 in	S _{top} =	611.80 in ³
I _x =	8982.07 in ⁴	S _{bott.} =	554.67 in ³	I _x =	8982.07 in ⁴	S _{bott.} =	554.67 in ³
C _{top} =	14.6814 in	A =	61.0469 in ²	C _{top} =	14.6814 in	A =	61.0469 in ²
C _{bottom} =	16.1936 in	r _x =	12.1299 in	C _{bottom} =	16.1936 in	r _x =	12.1299 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.3750	8.8594	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.5938	1.9645	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	20.8750	54.7969	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.6563	78.2689	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.3750	8.8594	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.5938	1.9645	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	20.8750	54.7969	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.6563	78.2689	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	11.2500	0.1875	2.1094	0.1318	11.9375	1603.1689	1603.3008	
3 (Right)	Plate	11.2500	24.0625	270.7031	0.1318	11.9375	1603.1689	1603.3008	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.3750	10.1250	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.8750	62.6250	9.0000	8.7500	229.6875	238.6875	
Total		61.05		740.19	455.53		6229.39	6684.92	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	551.33 in ³	x-bar =	12.1250 in	S _{right} =	551.33 in ³
I _y =	6684.92 in ⁴	S _{left} =	551.33 in ³	I _y =	6684.92 in ⁴	S _{left} =	551.33 in ³
C _{right} =	12.1250 in	A =	61.0469 in ²	C _{right} =	12.1250 in	A =	61.0469 in ²
C _{left} =	12.1250 in	r _y =	10.4645 in	C _{left} =	12.1250 in	r _y =	10.4645 in



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

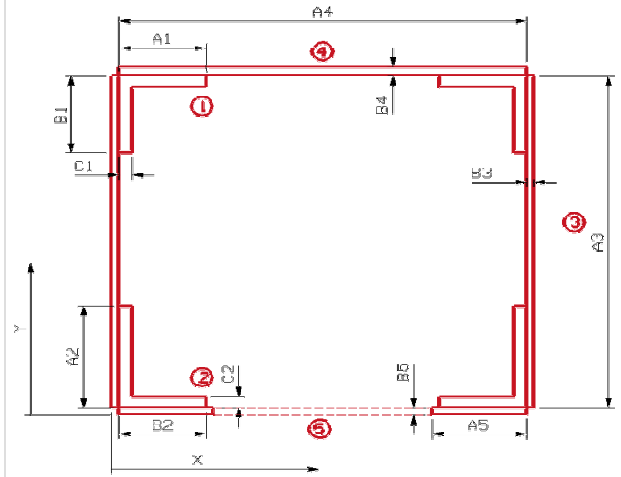
Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:
 $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:
 $A_3 = b = 30.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member U95-U96

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	30.2188	75.5469	0.0203	13.4018	449.0206	449.0409
	Vertical Leg	2.3047	28.2188	65.0354	2.6115	11.4018	299.6118	302.2233
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	16.2857	663.0601	663.0804
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	14.2857	470.3435	472.9550
3	Plate	22.5000	15.3750	345.9375	1687.5000	1.4420	46.7825	1734.2825
4	Plate	8.8125	30.5625	269.3320	0.1033	13.7455	1665.0349	1665.1382
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	16.6295	1244.4238	1244.4765
Total		45.42		763.86	1692.92		4838.28	6531.20
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.8170 in	S _{top} =	468.76 in ³	y-bar =	16.8170 in	S _{top} =	468.76 in ³
I _x =	6531.20 in ⁴	S _{bott.} =	388.37 in ³	I _x =	6531.20 in ⁴	S _{bott.} =	388.37 in ³
C _{top} =	13.9330 in	A =	45.4219 in ²	C _{top} =	13.9330 in	A =	45.4219 in ²
C _{bottom} =	16.8170 in	r _x =	11.9912 in	C _{bottom} =	16.8170 in	r _x =	11.9912 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	11.2500	0.1875	2.1094	0.1318	11.9375	1603.1689	1603.3008	
3 (Right)	Plate	11.2500	24.0625	270.7031	0.1318	11.9375	1603.1689	1603.3008	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.3750	7.5938	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.8750	46.9688	6.7500	8.7500	172.2656	179.0156	
Total		45.42		550.74	426.03		4645.75	5071.78	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	418.29 in ³	x-bar =	12.1250 in	S _{right} =	418.29 in ³
I _y =	5071.78 in ⁴	S _{left} =	418.29 in ³	I _y =	5071.78 in ⁴	S _{left} =	418.29 in ³
C _{right} =	12.1250 in	A =	45.4219 in ²	C _{right} =	12.1250 in	A =	45.4219 in ²
C _{left} =	12.1250 in	r _y =	10.5669 in	C _{left} =	12.1250 in	r _y =	10.5669 in



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.4375$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_f = 0.4375$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 30.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member U96-U97

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.2500	30.2813	158.9766	0.0837	14.0877	1041.9304	1042.0141
	Vertical Leg	6.6172	26.2813	173.9080	31.5372	10.0877	673.3745	704.9117
2	Horizontal Leg	5.2500	0.7188	3.7734	0.0837	15.4748	1257.2166	1257.3004
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	11.4748	871.2939	902.8311
3	Plate	22.5000	15.5000	348.7500	1687.5000	0.6936	10.8232	1698.3232
4	Plate	8.8125	30.6875	270.4336	0.1033	14.4939	1851.2790	1851.3823
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	15.9436	1525.1832	1525.3082
Total		61.05		988.57	1750.97		7231.10	8982.07
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00	0.00	0.00	0.00



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.1936 in	S _{top} =	611.80 in ³	y-bar =	16.1936 in	S _{top} =	611.80 in ³
I _x =	8982.07 in ⁴	S _{bott.} =	554.67 in ³	I _x =	8982.07 in ⁴	S _{bott.} =	554.67 in ³
C _{top} =	14.6814 in	A =	61.0469 in ²	C _{top} =	14.6814 in	A =	61.0469 in ²
C _{bottom} =	16.1936 in	r _x =	12.1299 in	C _{bottom} =	16.1936 in	r _x =	12.1299 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.3750	8.8594	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.5938	1.9645	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	20.8750	54.7969	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.6563	78.2689	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.3750	8.8594	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.5938	1.9645	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	20.8750	54.7969	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.6563	78.2689	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	11.2500	0.1875	2.1094	0.1318	11.9375	1603.1689	1603.3008	
3 (Right)	Plate	11.2500	24.0625	270.7031	0.1318	11.9375	1603.1689	1603.3008	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.3750	10.1250	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.8750	62.6250	9.0000	8.7500	229.6875	238.6875	
Total		61.05		740.19	455.53		6229.39	6684.92	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	551.33 in ³	x-bar =	12.1250 in	S _{right} =	551.33 in ³
I _y =	6684.92 in ⁴	S _{left} =	551.33 in ³	I _y =	6684.92 in ⁴	S _{left} =	551.33 in ³
C _{right} =	12.1250 in	A =	61.0469 in ²	C _{right} =	12.1250 in	A =	61.0469 in ²
C _{left} =	12.1250 in	r _y =	10.4645 in	C _{left} =	12.1250 in	r _y =	10.4645 in



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.5000$ in

Top Cover Plate:

$A_4 = b = 22.0000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 30.0000$ in
 $B_3 = t = 0.8750$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.5000$ in



Member U97-U98

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	6.0000	30.2500	181.5000	0.1250	14.2636	1220.7032	1220.8282
	Vertical Leg	7.5000	26.2500	196.8750	35.1563	10.2636	790.0625	825.2188
2	Horizontal Leg	6.0000	0.7500	4.5000	0.1250	15.2364	1392.8857	1393.0107
	Vertical Leg	7.5000	4.7500	35.6250	35.1563	11.2364	946.9236	982.0799
3	Plate	52.5000	15.5000	813.7500	3937.5000	0.4864	12.4203	3949.9203
4	Plate	8.2500	30.6875	253.1719	0.0967	14.7011	1783.0115	1783.1081
5	Perforated Plate	5.2500	0.2500	1.3125	0.1094	15.7364	1300.0785	1300.1879
Total		93.00		1486.73	4008.27		7446.09	11454.35
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00	0.00	0.00	0.00



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	15.9864 in	S _{top} =	769.34 in ³	y-bar =	15.9864 in	S _{top} =	769.34 in ³
I _x =	11454.35 in ⁴	S _{bott.} =	716.51 in ³	I _x =	11454.35 in ⁴	S _{bott.} =	716.51 in ³
C _{top} =	14.8886 in	A =	93.0000 in ²	C _{top} =	14.8886 in	A =	93.0000 in ²
C _{bottom} =	15.9864 in	r _x =	11.0980 in	C _{bottom} =	15.9864 in	r _x =	11.0980 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.0000	3.8750	11.6250	9.0000	8.0000	192.0000	201.0000	
	Vertical Leg	3.7500	1.1250	4.2188	0.0781	10.7500	433.3594	433.4375	
1 (Right)	Horizontal Leg	3.0000	19.8750	59.6250	9.0000	8.0000	192.0000	201.0000	
	Vertical Leg	3.7500	22.6250	84.8438	0.0781	10.7500	433.3594	433.4375	
2 (Left)	Horizontal Leg	3.0000	3.8750	11.6250	9.0000	8.0000	192.0000	201.0000	
	Vertical Leg	3.7500	1.1250	4.2188	0.0781	10.7500	433.3594	433.4375	
2 (Right)	Horizontal Leg	3.0000	19.8750	59.6250	9.0000	8.0000	192.0000	201.0000	
	Vertical Leg	3.7500	22.6250	84.8438	0.0781	10.7500	433.3594	433.4375	
3 (Left)	Plate	26.2500	0.4375	11.4844	1.6748	11.4375	3433.9307	3435.6055	
3 (Right)	Plate	26.2500	23.3125	611.9531	1.6748	11.4375	3433.9307	3435.6055	
4	Plate	8.2500	11.8750	97.9688	332.7500	0.0000	0.0000	332.7500	
5 (Left)	Perforated Plate	2.6250	3.5000	9.1875	6.0293	8.3750	184.1191	190.1484	
5 (Right)	Perforated Plate	2.6250	20.2500	53.1563	6.0293	8.3750	184.1191	190.1484	
Total		93.00		1104.38	384.47		9737.54	10122.01	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	11.8750 in	S _{right} =	852.38 in ³	x-bar =	11.8750 in	S _{right} =	852.38 in ³
I _y =	10122.01 in ⁴	S _{left} =	852.38 in ³	I _y =	10122.01 in ⁴	S _{left} =	852.38 in ³
C _{right} =	11.8750 in	A =	93.0000 in ²	C _{right} =	11.8750 in	A =	93.0000 in ²
C _{left} =	11.8750 in	r _y =	10.4326 in	C _{left} =	11.8750 in	r _y =	10.4326 in



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.5000$ in

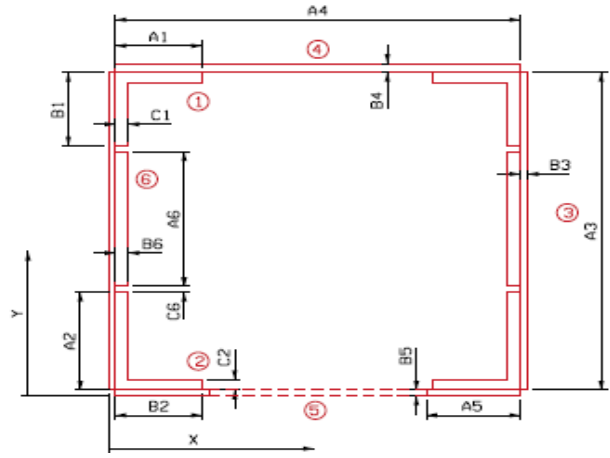
Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.5000$ in

Web Plate 1:
 $A_3 = b = 30.0000$ in
 $B_3 = t = 0.8750$ in

Top Cover Plate:
 $A_4 = b = 22.0000$ in
 $B_4 = t = 0.5000$ in

Web Plate 2:
 $A_6 = b = 14.0000$ in
 $B_6 = t = 0.5000$ in
 $C_6 = \text{gap} = 0.0000$ in

Perforated Cover Plate
 $A_5 = b = 5.2500$ in
 $B_5 = t = 0.6250$ in



Member U98-U99

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	6.0000	30.3750	182.2500	0.1250	14.1444	1200.3808	1200.5058
	Vertical Leg	7.5000	26.3750	197.8125	35.1563	10.1444	771.8133	806.9695
2	Horizontal Leg	6.0000	0.8750	5.2500	0.1250	15.3556	1414.7705	1414.8955
	Vertical Leg	7.5000	4.8750	36.5625	35.1563	11.3556	967.1259	1002.2821
3	Plate	52.5000	15.6250	820.3125	3937.5000	0.6056	19.2557	3956.7557
4	Plate	11.0000	30.8750	339.6250	0.2292	14.6444	2359.0364	2359.2656
5	Perforated Plate	6.5625	0.3125	2.0508	0.2136	15.9181	1662.8493	1663.0629
6	Side Plates	14.0000	15.6250	218.7500	228.6667	0.6056	5.1349	233.8015
Total		111.06		1802.61	4237.17		8400.37	12637.54
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.2306 in	$S_{top} = 848.48 \text{ in}^3$			y-bar = 16.2306 in	$S_{top} = 848.48 \text{ in}^3$		
$I_x = 12637.54 \text{ in}^4$	$S_{bott.} = 778.62 \text{ in}^3$			$I_x = 12637.54 \text{ in}^4$	$S_{bott.} = 778.62 \text{ in}^3$		
$C_{top} = 14.8944 \text{ in}$	$A = 111.0625 \text{ in}^2$			$C_{top} = 14.8944 \text{ in}$	$A = 111.0625 \text{ in}^2$		
$C_{bottom} = 16.2306 \text{ in}$	$r_x = 10.6671 \text{ in}$			$C_{bottom} = 16.2306 \text{ in}$	$r_x = 10.6671 \text{ in}$		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I_o	d	Ad^2	$I_{y,gross}$	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.0000	3.8750	11.6250	9.0000	8.0000	192.0000	201.0000	
	Vertical Leg	3.7500	1.1250	4.2188	0.0781	10.7500	433.3594	433.4375	
1 (Right)	Horizontal Leg	3.0000	19.8750	59.6250	9.0000	8.0000	192.0000	201.0000	
	Vertical Leg	3.7500	22.6250	84.8438	0.0781	10.7500	433.3594	433.4375	
2 (Left)	Horizontal Leg	3.0000	3.8750	11.6250	9.0000	8.0000	192.0000	201.0000	
	Vertical Leg	3.7500	1.1250	4.2188	0.0781	10.7500	433.3594	433.4375	
2 (Right)	Horizontal Leg	3.0000	19.8750	59.6250	9.0000	8.0000	192.0000	201.0000	
	Vertical Leg	3.7500	22.6250	84.8438	0.0781	10.7500	433.3594	433.4375	
3 (Left)	Plate	26.2500	0.4375	11.4844	1.6748	11.4375	3433.9307	3435.6055	
3 (Right)	Plate	26.2500	23.3125	611.9531	1.6748	11.4375	3433.9307	3435.6055	
4	Plate	11.0000	11.8750	130.6250	443.6667	0.0000	0.0000	443.6667	
5 (Left)	Perforated Plate	3.2813	3.5000	11.4844	7.5366	8.3750	230.1489	237.6855	
5 (Right)	Perforated Plate	3.2813	20.2500	66.4453	7.5366	8.3750	230.1489	237.6855	
6 (Left)	Plate	7.0000	1.1250	7.8750	0.1458	10.7500	808.9375	809.0833	
6 (Right)	Plate	7.0000	22.6250	158.3750	0.1458	10.7500	808.9375	809.0833	
Total		111.06		1318.87	498.69		11447.47	11946.17	
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 11.8750 in	$S_{right} = 1005.99 \text{ in}^3$			x-bar = 11.8750 in	$S_{right} = 1005.99 \text{ in}^3$		
$I_y = 11946.17 \text{ in}^4$	$S_{left} = 1005.99 \text{ in}^3$			$I_y = 11946.17 \text{ in}^4$	$S_{left} = 1005.99 \text{ in}^3$		
$C_{right} = 11.8750 \text{ in}$	$A = 111.0625 \text{ in}^2$			$C_{right} = 11.8750 \text{ in}$	$A = 111.0625 \text{ in}^2$		
$C_{left} = 11.8750 \text{ in}$	$r_y = 10.3712 \text{ in}$			$C_{left} = 11.8750 \text{ in}$	$r_y = 10.3712 \text{ in}$		



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.5000$ in

Web Plate 1:

$A_3 = b = 30.0000$ in
 $B_3 = t = 1.0000$ in

Top Cover Plate:

$A_4 = b = 22.0000$ in
 $B_4 = t = 0.5000$ in

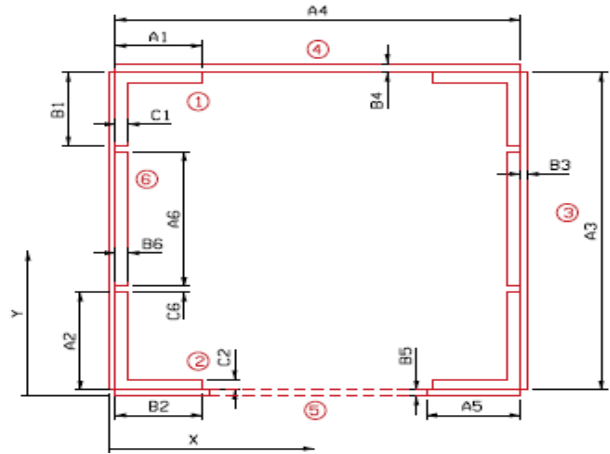
Web Plate 2:

$A_6 = b = 14.0000$ in
 $B_6 = t = 0.5000$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.6250$ in

$C_6 = \text{gap} = 0.0000$ in



Member U99-U100

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	6.0000	30.3750	182.2500	0.1250	14.1827	1206.8921	1207.0171
	Vertical Leg	7.5000	26.3750	197.8125	35.1563	10.1827	777.6538	812.8100
2	Horizontal Leg	6.0000	0.8750	5.2500	0.1250	15.3173	1407.7200	1407.8450
	Vertical Leg	7.5000	4.8750	36.5625	35.1563	11.3173	960.6113	995.7676
3	Plate	60.0000	15.6250	937.5000	4500.0000	0.5673	19.3105	4519.3105
4	Plate	11.0000	30.8750	339.6250	0.2292	14.6827	2371.3952	2371.6243
5	Perforated Plate	6.5625	0.3125	2.0508	0.2136	15.8798	1654.8549	1655.0686
6	Side Plates	14.0000	15.6250	218.7500	228.6667	0.5673	4.5058	233.1724
Total		118.56		1919.80	4799.67		8402.94	13202.62
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.1923 in	$S_{top} = 884.14 \text{ in}^3$			y-bar = 16.1923 in	$S_{top} = 884.14 \text{ in}^3$		
$I_x = 13202.62 \text{ in}^4$	$S_{bott.} = 815.36 \text{ in}^3$			$I_x = 13202.62 \text{ in}^4$	$S_{bott.} = 815.36 \text{ in}^3$		
$C_{top} = 14.9327 \text{ in}$	$A = 118.5625 \text{ in}^2$			$C_{top} = 14.9327 \text{ in}$	$A = 118.5625 \text{ in}^2$		
$C_{bottom} = 16.1923 \text{ in}$	$r_x = 10.5525 \text{ in}$			$C_{bottom} = 16.1923 \text{ in}$	$r_x = 10.5525 \text{ in}$		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I_o	d	Ad^2	$I_{y,gross}$	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.0000	4.0000	12.0000	9.0000	8.0000	192.0000	201.0000	
	Vertical Leg	3.7500	1.2500	4.6875	0.0781	10.7500	433.3594	433.4375	
1 (Right)	Horizontal Leg	3.0000	20.0000	60.0000	9.0000	8.0000	192.0000	201.0000	
	Vertical Leg	3.7500	22.7500	85.3125	0.0781	10.7500	433.3594	433.4375	
2 (Left)	Horizontal Leg	3.0000	4.0000	12.0000	9.0000	8.0000	192.0000	201.0000	
	Vertical Leg	3.7500	1.2500	4.6875	0.0781	10.7500	433.3594	433.4375	
2 (Right)	Horizontal Leg	3.0000	20.0000	60.0000	9.0000	8.0000	192.0000	201.0000	
	Vertical Leg	3.7500	22.7500	85.3125	0.0781	10.7500	433.3594	433.4375	
3 (Left)	Plate	30.0000	0.5000	15.0000	2.5000	11.5000	3967.5000	3970.0000	
3 (Right)	Plate	30.0000	23.5000	705.0000	2.5000	11.5000	3967.5000	3970.0000	
4	Plate	11.0000	12.0000	132.0000	443.6667	0.0000	0.0000	443.6667	
5 (Left)	Perforated Plate	3.2813	3.6250	11.8945	7.5366	8.3750	230.1489	237.6855	
5 (Right)	Perforated Plate	3.2813	20.3750	66.8555	7.5366	8.3750	230.1489	237.6855	
6 (Left)	Plate	7.0000	1.2500	8.7500	0.1458	10.7500	808.9375	809.0833	
6 (Right)	Plate	7.0000	22.7500	159.2500	0.1458	10.7500	808.9375	809.0833	
Total		118.56		1422.75	500.34		12514.61	13014.95	
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 12.0000 in	$S_{right} = 1084.58 \text{ in}^3$			x-bar = 12.0000 in	$S_{right} = 1084.58 \text{ in}^3$		
$I_y = 13014.95 \text{ in}^4$	$S_{left} = 1084.58 \text{ in}^3$			$I_y = 13014.95 \text{ in}^4$	$S_{left} = 1084.58 \text{ in}^3$		
$C_{right} = 12.0000 \text{ in}$	$A = 118.5625 \text{ in}^2$			$C_{right} = 12.0000 \text{ in}$	$A = 118.5625 \text{ in}^2$		
$C_{left} = 12.0000 \text{ in}$	$r_y = 10.4773 \text{ in}$			$C_{left} = 12.0000 \text{ in}$	$r_y = 10.4773 \text{ in}$		



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.5000$ in

Web Plate 1:

$A_3 = b = 30.0000$ in
 $B_3 = t = 1.0000$ in

Top Cover Plate:

$A_4 = b = 22.0000$ in
 $B_4 = t = 0.5000$ in

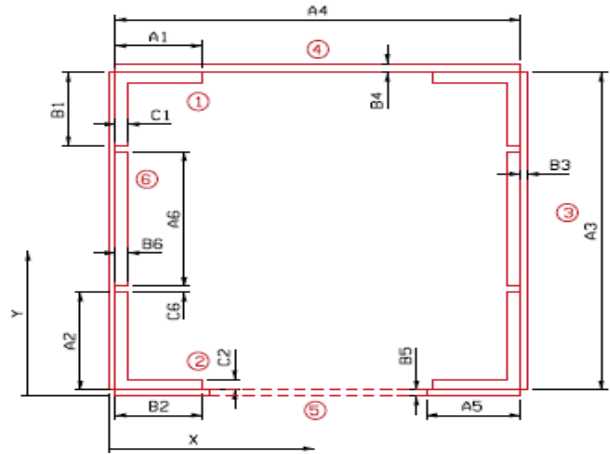
Web Plate 2:

$A_6 = b = 14.0000$ in
 $B_6 = t = 0.5000$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.6250$ in

$C_6 = \text{gap} = 0.0000$ in



Member U100-U101

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	6.0000	30.3750	182.2500	0.1250	14.1827	1206.8921	1207.0171
	Vertical Leg	7.5000	26.3750	197.8125	35.1563	10.1827	777.6538	812.8100
2	Horizontal Leg	6.0000	0.8750	5.2500	0.1250	15.3173	1407.7200	1407.8450
	Vertical Leg	7.5000	4.8750	36.5625	35.1563	11.3173	960.6113	995.7676
3	Plate	60.0000	15.6250	937.5000	4500.0000	0.5673	19.3105	4519.3105
4	Plate	11.0000	30.8750	339.6250	0.2292	14.6827	2371.3952	2371.6243
5	Perforated Plate	6.5625	0.3125	2.0508	0.2136	15.8798	1654.8549	1655.0686
6	Side Plates	14.0000	15.6250	218.7500	228.6667	0.5673	4.5058	233.1724
Total		118.56		1919.80	4799.67		8402.94	13202.62
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.1923 in	S _{top} = 884.14 in ³			y-bar = 16.1923 in	S _{top} = 884.14 in ³		
I _x = 13202.62 in ⁴	S _{bott.} = 815.36 in ³			I _x = 13202.62 in ⁴	S _{bott.} = 815.36 in ³		
C _{top} = 14.9327 in	A = 118.5625 in ²			C _{top} = 14.9327 in	A = 118.5625 in ²		
C _{bottom} = 16.1923 in	r _x = 10.5525 in			C _{bottom} = 16.1923 in	r _x = 10.5525 in		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1 (Left)	Horizontal Leg	3.0000	4.0000	12.0000	9.0000	8.0000	192.0000	201.0000
	Vertical Leg	3.7500	1.2500	4.6875	0.0781	10.7500	433.3594	433.4375
1 (Right)	Horizontal Leg	3.0000	20.0000	60.0000	9.0000	8.0000	192.0000	201.0000
	Vertical Leg	3.7500	22.7500	85.3125	0.0781	10.7500	433.3594	433.4375
2 (Left)	Horizontal Leg	3.0000	4.0000	12.0000	9.0000	8.0000	192.0000	201.0000
	Vertical Leg	3.7500	1.2500	4.6875	0.0781	10.7500	433.3594	433.4375
2 (Right)	Horizontal Leg	3.0000	20.0000	60.0000	9.0000	8.0000	192.0000	201.0000
	Vertical Leg	3.7500	22.7500	85.3125	0.0781	10.7500	433.3594	433.4375
3 (Left)	Plate	30.0000	0.5000	15.0000	2.5000	11.5000	3967.5000	3970.0000
3 (Right)	Plate	30.0000	23.5000	705.0000	2.5000	11.5000	3967.5000	3970.0000
4	Plate	11.0000	12.0000	132.0000	443.6667	0.0000	0.0000	443.6667
5 (Left)	Perforated Plate	3.2813	3.6250	11.8945	7.5366	8.3750	230.1489	237.6855
5 (Right)	Perforated Plate	3.2813	20.3750	66.8555	7.5366	8.3750	230.1489	237.6855
6 (Left)	Plate	7.0000	1.2500	8.7500	0.1458	10.7500	808.9375	809.0833
6 (Right)	Plate	7.0000	22.7500	159.2500	0.1458	10.7500	808.9375	809.0833
Total		118.56		1422.75	500.34		12514.61	13014.95
Section Losses		A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 12.0000 in	S _{right} = 1084.58 in ³			x-bar = 12.0000 in	S _{right} = 1084.58 in ³		
I _y = 13014.95 in ⁴	S _{left} = 1084.58 in ³			I _y = 13014.95 in ⁴	S _{left} = 1084.58 in ³		
C _{right} = 12.0000 in	A = 118.5625 in ²			C _{right} = 12.0000 in	A = 118.5625 in ²		
C _{left} = 12.0000 in	r _y = 10.4773 in			C _{left} = 12.0000 in	r _y = 10.4773 in		



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.5000$ in

Web Plate 1:

$A_3 = b = 30.0000$ in
 $B_3 = t = 0.8750$ in

Top Cover Plate:

$A_4 = b = 22.0000$ in
 $B_4 = t = 0.5000$ in

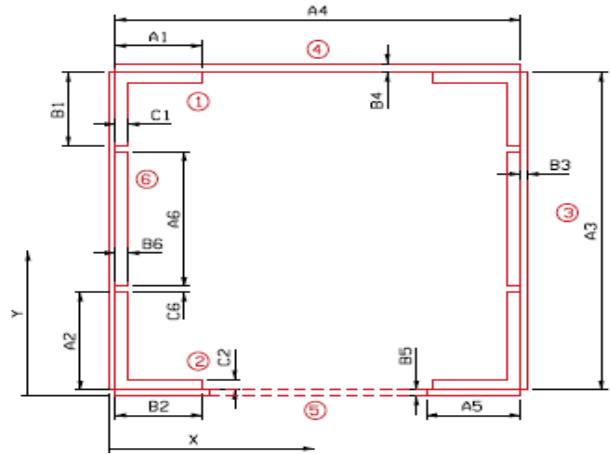
Web Plate 2:

$A_6 = b = 14.0000$ in
 $B_6 = t = 0.5000$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.6250$ in

$C_6 = \text{gap} = 0.0000$ in



Member U101-U102

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	6.0000	30.3750	182.2500	0.1250	14.1444	1200.3808	1200.5058
	Vertical Leg	7.5000	26.3750	197.8125	35.1563	10.1444	771.8133	806.9695
2	Horizontal Leg	6.0000	0.8750	5.2500	0.1250	15.3556	1414.7705	1414.8955
	Vertical Leg	7.5000	4.8750	36.5625	35.1563	11.3556	967.1259	1002.2821
3	Plate	52.5000	15.6250	820.3125	3937.5000	0.6056	19.2557	3956.7557
4	Plate	11.0000	30.8750	339.6250	0.2292	14.6444	2359.0364	2359.2656
5	Perforated Plate	6.5625	0.3125	2.0508	0.2136	15.9181	1662.8493	1663.0629
6	Side Plates	14.0000	15.6250	218.7500	228.6667	0.6056	5.1349	233.8015
Total		111.06		1802.61	4237.17		8400.37	12637.54
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.2306 in	$S_{top} = 848.48 \text{ in}^3$			y-bar = 16.2306 in	$S_{top} = 848.48 \text{ in}^3$		
$I_x = 12637.54 \text{ in}^4$	$S_{bott.} = 778.62 \text{ in}^3$			$I_x = 12637.54 \text{ in}^4$	$S_{bott.} = 778.62 \text{ in}^3$		
$C_{top} = 14.8944 \text{ in}$	$A = 111.0625 \text{ in}^2$			$C_{top} = 14.8944 \text{ in}$	$A = 111.0625 \text{ in}^2$		
$C_{bottom} = 16.2306 \text{ in}$	$r_x = 10.6671 \text{ in}$			$C_{bottom} = 16.2306 \text{ in}$	$r_x = 10.6671 \text{ in}$		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I_o	d	Ad^2	$I_{y,gross}$	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.0000	3.8750	11.6250	9.0000	8.0000	192.0000	201.0000	
	Vertical Leg	3.7500	1.1250	4.2188	0.0781	10.7500	433.3594	433.4375	
1 (Right)	Horizontal Leg	3.0000	19.8750	59.6250	9.0000	8.0000	192.0000	201.0000	
	Vertical Leg	3.7500	22.6250	84.8438	0.0781	10.7500	433.3594	433.4375	
2 (Left)	Horizontal Leg	3.0000	3.8750	11.6250	9.0000	8.0000	192.0000	201.0000	
	Vertical Leg	3.7500	1.1250	4.2188	0.0781	10.7500	433.3594	433.4375	
2 (Right)	Horizontal Leg	3.0000	19.8750	59.6250	9.0000	8.0000	192.0000	201.0000	
	Vertical Leg	3.7500	22.6250	84.8438	0.0781	10.7500	433.3594	433.4375	
3 (Left)	Plate	26.2500	0.4375	11.4844	1.6748	11.4375	3433.9307	3435.6055	
3 (Right)	Plate	26.2500	23.3125	611.9531	1.6748	11.4375	3433.9307	3435.6055	
4	Plate	11.0000	11.8750	130.6250	443.6667	0.0000	0.0000	443.6667	
5 (Left)	Perforated Plate	3.2813	3.5000	11.4844	7.5366	8.3750	230.1489	237.6855	
5 (Right)	Perforated Plate	3.2813	20.2500	66.4453	7.5366	8.3750	230.1489	237.6855	
6 (Left)	Plate	7.0000	1.1250	7.8750	0.1458	10.7500	808.9375	809.0833	
6 (Right)	Plate	7.0000	22.6250	158.3750	0.1458	10.7500	808.9375	809.0833	
Total		111.06		1318.87	498.69		11447.47	11946.17	
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 11.8750 in	$S_{right} = 1005.99 \text{ in}^3$			x-bar = 11.8750 in	$S_{right} = 1005.99 \text{ in}^3$		
$I_y = 11946.17 \text{ in}^4$	$S_{left} = 1005.99 \text{ in}^3$			$I_y = 11946.17 \text{ in}^4$	$S_{left} = 1005.99 \text{ in}^3$		
$C_{right} = 11.8750 \text{ in}$	$A = 111.0625 \text{ in}^2$			$C_{right} = 11.8750 \text{ in}$	$A = 111.0625 \text{ in}^2$		
$C_{left} = 11.8750 \text{ in}$	$r_y = 10.3712 \text{ in}$			$C_{left} = 11.8750 \text{ in}$	$r_y = 10.3712 \text{ in}$		



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_f = 0.5000$ in

Top Cover Plate:

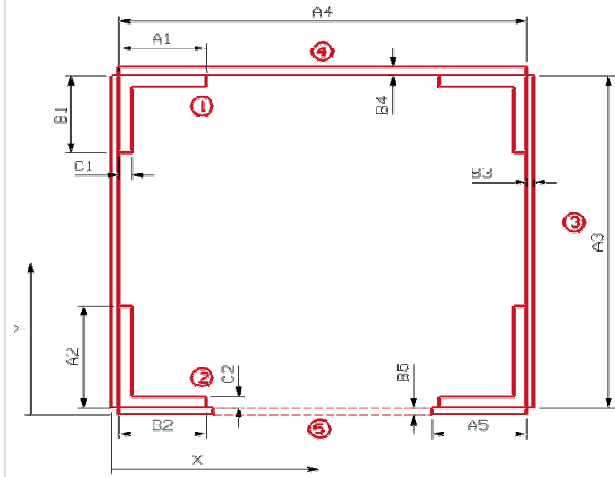
$A_4 = b = 22.0000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 30.0000$ in
 $B_3 = t = 0.8750$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.5000$ in



Member U102-U103

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	6.0000	30.2500	181.5000	0.1250	14.2636	1220.7032	1220.8282
	Vertical Leg	7.5000	26.2500	196.8750	35.1563	10.2636	790.0625	825.2188
2	Horizontal Leg	6.0000	0.7500	4.5000	0.1250	15.2364	1392.8857	1393.0107
	Vertical Leg	7.5000	4.7500	35.6250	35.1563	11.2364	946.9236	982.0799
3	Plate	52.5000	15.5000	813.7500	3937.5000	0.4864	12.4203	3949.9203
4	Plate	8.2500	30.6875	253.1719	0.0967	14.7011	1783.0115	1783.1081
5	Perforated Plate	5.2500	0.2500	1.3125	0.1094	15.7364	1300.0785	1300.1879
Total		93.00		1486.73	4008.27		7446.09	11454.35
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	15.9864 in	S _{top} =	769.34 in ³	y-bar =	15.9864 in	S _{top} =	769.34 in ³
I _x =	11454.35 in ⁴	S _{bott.} =	716.51 in ³	I _x =	11454.35 in ⁴	S _{bott.} =	716.51 in ³
C _{top} =	14.8886 in	A =	93.0000 in ²	C _{top} =	14.8886 in	A =	93.0000 in ²
C _{bottom} =	15.9864 in	r _x =	11.0980 in	C _{bottom} =	15.9864 in	r _x =	11.0980 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.0000	3.8750	11.6250	9.0000	8.0000	192.0000	201.0000	
	Vertical Leg	3.7500	1.1250	4.2188	0.0781	10.7500	433.3594	433.4375	
1 (Right)	Horizontal Leg	3.0000	19.8750	59.6250	9.0000	8.0000	192.0000	201.0000	
	Vertical Leg	3.7500	22.6250	84.8438	0.0781	10.7500	433.3594	433.4375	
2 (Left)	Horizontal Leg	3.0000	3.8750	11.6250	9.0000	8.0000	192.0000	201.0000	
	Vertical Leg	3.7500	1.1250	4.2188	0.0781	10.7500	433.3594	433.4375	
2 (Right)	Horizontal Leg	3.0000	19.8750	59.6250	9.0000	8.0000	192.0000	201.0000	
	Vertical Leg	3.7500	22.6250	84.8438	0.0781	10.7500	433.3594	433.4375	
3 (Left)	Plate	26.2500	0.4375	11.4844	1.6748	11.4375	3433.9307	3435.6055	
3 (Right)	Plate	26.2500	23.3125	611.9531	1.6748	11.4375	3433.9307	3435.6055	
4	Plate	8.2500	11.8750	97.9688	332.7500	0.0000	0.0000	332.7500	
5 (Left)	Perforated Plate	2.6250	3.5000	9.1875	6.0293	8.3750	184.1191	190.1484	
5 (Right)	Perforated Plate	2.6250	20.2500	53.1563	6.0293	8.3750	184.1191	190.1484	
Total		93.00		1104.38	384.47		9737.54	10122.01	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	11.8750 in	S _{right} =	852.38 in ³	x-bar =	11.8750 in	S _{right} =	852.38 in ³
I _y =	10122.01 in ⁴	S _{left} =	852.38 in ³	I _y =	10122.01 in ⁴	S _{left} =	852.38 in ³
C _{right} =	11.8750 in	A =	93.0000 in ²	C _{right} =	11.8750 in	A =	93.0000 in ²
C _{left} =	11.8750 in	r _y =	10.4326 in	C _{left} =	11.8750 in	r _y =	10.4326 in



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.4375$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_f = 0.4375$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 30.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member U103-U104

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.2500	30.2813	158.9766	0.0837	14.0877	1041.9304	1042.0141
	Vertical Leg	6.6172	26.2813	173.9080	31.5372	10.0877	673.3745	704.9117
2	Horizontal Leg	5.2500	0.7188	3.7734	0.0837	15.4748	1257.2166	1257.3004
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	11.4748	871.2939	902.8311
3	Plate	22.5000	15.5000	348.7500	1687.5000	0.6936	10.8232	1698.3232
4	Plate	8.8125	30.6875	270.4336	0.1033	14.4939	1851.2790	1851.3823
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	15.9436	1525.1832	1525.3082
Total		61.05		988.57	1750.97		7231.10	8982.07
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.1936 in	S _{top} =	611.80 in ³	y-bar =	16.1936 in	S _{top} =	611.80 in ³
I _x =	8982.07 in ⁴	S _{bott.} =	554.67 in ³	I _x =	8982.07 in ⁴	S _{bott.} =	554.67 in ³
C _{top} =	14.6814 in	A =	61.0469 in ²	C _{top} =	14.6814 in	A =	61.0469 in ²
C _{bottom} =	16.1936 in	r _x =	12.1299 in	C _{bottom} =	16.1936 in	r _x =	12.1299 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.3750	8.8594	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.5938	1.9645	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	20.8750	54.7969	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.6563	78.2689	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.3750	8.8594	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.5938	1.9645	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	20.8750	54.7969	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.6563	78.2689	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	11.2500	0.1875	2.1094	0.1318	11.9375	1603.1689	1603.3008	
3 (Right)	Plate	11.2500	24.0625	270.7031	0.1318	11.9375	1603.1689	1603.3008	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.3750	10.1250	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.8750	62.6250	9.0000	8.7500	229.6875	238.6875	
Total		61.05		740.19	455.53		6229.39	6684.92	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	551.33 in ³	x-bar =	12.1250 in	S _{right} =	551.33 in ³
I _y =	6684.92 in ⁴	S _{left} =	551.33 in ³	I _y =	6684.92 in ⁴	S _{left} =	551.33 in ³
C _{right} =	12.1250 in	A =	61.0469 in ²	C _{right} =	12.1250 in	A =	61.0469 in ²
C _{left} =	12.1250 in	r _y =	10.4645 in	C _{left} =	12.1250 in	r _y =	10.4645 in



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

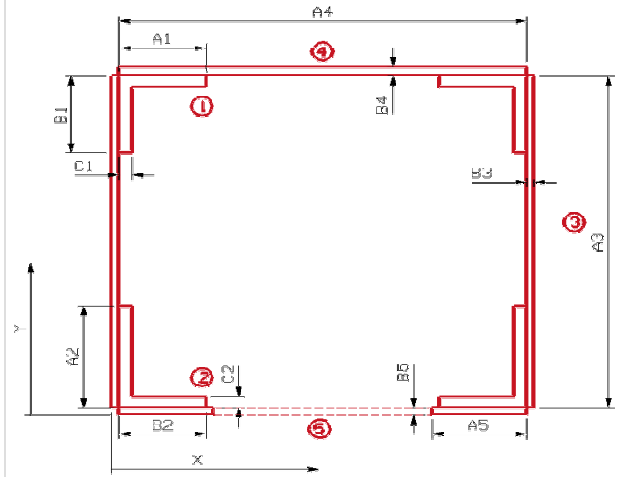
Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:
 $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:
 $A_3 = b = 30.0000$ in
 $B_3 = t = 0.6250$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member U104-U105

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	30.2188	75.5469	0.0203	13.7598	473.3282	473.3485
	Vertical Leg	2.3047	28.2188	65.0354	2.6115	11.7598	318.7203	321.3318
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	15.9277	634.2314	634.2518
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	13.9277	447.0671	449.6786
3	Plate	37.5000	15.3750	576.5625	2812.5000	1.0840	44.0630	2856.5630
4	Plate	8.8125	30.5625	269.3320	0.1033	14.1035	1752.8880	1752.9913
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	16.2715	1191.4248	1191.4775
Total		60.42		994.48	2817.92		4861.72	7679.64
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.4590 in	S _{top} =	537.38 in ³	y-bar =	16.4590 in	S _{top} =	537.38 in ³
I _x =	7679.64 in ⁴	S _{bott.} =	466.59 in ³	I _x =	7679.64 in ⁴	S _{bott.} =	466.59 in ³
C _{top} =	14.2910 in	A =	60.4219 in ²	C _{top} =	14.2910 in	A =	60.4219 in ²
C _{bottom} =	16.4590 in	r _x =	11.2739 in	C _{bottom} =	16.4590 in	r _x =	11.2739 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.6250	3.2813	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.7813	0.9003	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	22.1250	27.6563	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.9688	27.6202	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.6250	3.2813	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.7813	0.9003	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	22.1250	27.6563	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.9688	27.6202	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	18.7500	0.3125	5.8594	0.6104	12.0625	2728.1982	2728.8086	
3 (Right)	Plate	18.7500	24.4375	458.2031	0.6104	12.0625	2728.1982	2728.8086	
4	Plate	8.8125	12.3750	109.0547	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.6250	8.1563	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	21.1250	47.5313	6.7500	8.7500	172.2656	179.0156	
Total		60.42		747.72	426.98		6895.81	7322.79	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3750 in	S _{right} =	591.74 in ³	x-bar =	12.3750 in	S _{right} =	591.74 in ³
I _y =	7322.79 in ⁴	S _{left} =	591.74 in ³	I _y =	7322.79 in ⁴	S _{left} =	591.74 in ³
C _{right} =	12.3750 in	A =	60.4219 in ²	C _{right} =	12.3750 in	A =	60.4219 in ²
C _{left} =	12.3750 in	r _y =	11.0088 in	C _{left} =	12.3750 in	r _y =	11.0088 in



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.4375$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_f = 0.4375$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:
 $A_3 = b = 30.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member U105-U106

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.2500	30.2813	158.9766	0.0837	14.0877	1041.9304	1042.0141
	Vertical Leg	6.6172	26.2813	173.9080	31.5372	10.0877	673.3745	704.9117
2	Horizontal Leg	5.2500	0.7188	3.7734	0.0837	15.4748	1257.2166	1257.3004
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	11.4748	871.2939	902.8311
3	Plate	22.5000	15.5000	348.7500	1687.5000	0.6936	10.8232	1698.3232
4	Plate	8.8125	30.6875	270.4336	0.1033	14.4939	1851.2790	1851.3823
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	15.9436	1525.1832	1525.3082
Total		61.05		988.57	1750.97		7231.10	8982.07
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.1936 in	S _{top} =	611.80 in ³	y-bar =	16.1936 in	S _{top} =	611.80 in ³
I _x =	8982.07 in ⁴	S _{bott.} =	554.67 in ³	I _x =	8982.07 in ⁴	S _{bott.} =	554.67 in ³
C _{top} =	14.6814 in	A =	61.0469 in ²	C _{top} =	14.6814 in	A =	61.0469 in ²
C _{bottom} =	16.1936 in	r _x =	12.1299 in	C _{bottom} =	16.1936 in	r _x =	12.1299 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.3750	8.8594	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.5938	1.9645	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	20.8750	54.7969	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.6563	78.2689	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.3750	8.8594	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.5938	1.9645	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	20.8750	54.7969	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.6563	78.2689	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	11.2500	0.1875	2.1094	0.1318	11.9375	1603.1689	1603.3008	
3 (Right)	Plate	11.2500	24.0625	270.7031	0.1318	11.9375	1603.1689	1603.3008	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.3750	10.1250	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.8750	62.6250	9.0000	8.7500	229.6875	238.6875	
Total		61.05		740.19	455.53		6229.39	6684.92	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	551.33 in ³	x-bar =	12.1250 in	S _{right} =	551.33 in ³
I _y =	6684.92 in ⁴	S _{left} =	551.33 in ³	I _y =	6684.92 in ⁴	S _{left} =	551.33 in ³
C _{right} =	12.1250 in	A =	61.0469 in ²	C _{right} =	12.1250 in	A =	61.0469 in ²
C _{left} =	12.1250 in	r _y =	10.4645 in	C _{left} =	12.1250 in	r _y =	10.4645 in



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

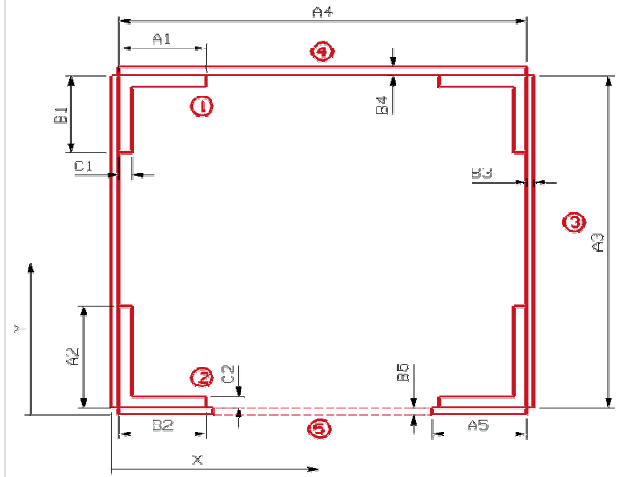
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6875$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6875$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.6250$ in

Web Plate 1:
 $A_3 = b = 30.0000$ in
 $B_3 = t = 0.7500$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.7500$ in



Member U106-U107

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	8.2500	30.4063	250.8516	0.3250	13.8345	1578.9963	1579.3212
	Vertical Leg	10.0547	26.4063	265.5066	44.8042	9.8345	972.4638	1017.2681
2	Horizontal Leg	8.2500	1.0938	9.0234	0.3250	15.4780	1976.4391	1976.7641
	Vertical Leg	10.0547	5.0938	51.2161	44.8042	11.4780	1324.6488	1369.4531
3	Plate	45.0000	15.7500	708.7500	3375.0000	0.8217	30.3870	3405.3870
4	Plate	14.6875	31.0625	456.2305	0.4781	14.4908	3084.1097	3084.5878
5	Perforated Plate	9.0000	0.3750	3.3750	0.4219	16.1967	2361.0114	2361.4333
Total		105.30		1744.95	3466.16		11328.06	14794.21
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00	0.00	0.00	0.00



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.5717 in	$S_{top} = 999.39 \text{ in}^3$			y-bar = 16.5717 in	$S_{top} = 999.39 \text{ in}^3$		
$I_x = 14794.21 \text{ in}^4$	$S_{bott.} = 892.74 \text{ in}^3$			$I_x = 14794.21 \text{ in}^4$	$S_{bott.} = 892.74 \text{ in}^3$		
$C_{top} = 14.8033 \text{ in}$	$A = 105.2969 \text{ in}^2$			$C_{top} = 14.8033 \text{ in}$	$A = 105.2969 \text{ in}^2$		
$C_{bottom} = 16.5717 \text{ in}$	$r_x = 11.8533 \text{ in}$			$C_{bottom} = 16.5717 \text{ in}$	$r_x = 11.8533 \text{ in}$		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I_o	d	Ad^2	$I_{y,gross}$	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	3.7500	15.4688	12.3750	8.7500	315.8203	328.1953	
	Vertical Leg	5.0273	1.0938	5.4987	0.1980	11.4063	654.0702	654.2682	
1 (Right)	Horizontal Leg	4.1250	21.2500	87.6563	12.3750	8.7500	315.8203	328.1953	
	Vertical Leg	5.0273	23.9063	120.1849	0.1980	11.4063	654.0702	654.2682	
2 (Left)	Horizontal Leg	4.1250	3.7500	15.4688	12.3750	8.7500	315.8203	328.1953	
	Vertical Leg	5.0273	1.0938	5.4987	0.1980	11.4063	654.0702	654.2682	
2 (Right)	Horizontal Leg	4.1250	21.2500	87.6563	12.3750	8.7500	315.8203	328.1953	
	Vertical Leg	5.0273	23.9063	120.1849	0.1980	11.4063	654.0702	654.2682	
3 (Left)	Plate	22.5000	0.3750	8.4375	1.0547	12.1250	3307.8516	3308.9063	
3 (Right)	Plate	22.5000	24.6250	554.0625	1.0547	12.1250	3307.8516	3308.9063	
4	Plate	14.6875	12.5000	183.5938	675.9310	0.0000	0.0000	675.9310	
5 (Left)	Perforated Plate	4.5000	3.7500	16.8750	13.5000	8.7500	344.5313	358.0313	
5 (Right)	Perforated Plate	4.5000	21.2500	95.6250	13.5000	8.7500	344.5313	358.0313	
Total		105.30		1316.21	755.33		11184.33	11939.66	
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 12.5000 in	$S_{right} = 955.17 \text{ in}^3$			x-bar = 12.5000 in	$S_{right} = 955.17 \text{ in}^3$		
$I_y = 11939.66 \text{ in}^4$	$S_{left} = 955.17 \text{ in}^3$			$I_y = 11939.66 \text{ in}^4$	$S_{left} = 955.17 \text{ in}^3$		
$C_{right} = 12.5000 \text{ in}$	$A = 105.2969 \text{ in}^2$			$C_{right} = 12.5000 \text{ in}$	$A = 105.2969 \text{ in}^2$		
$C_{left} = 12.5000 \text{ in}$	$r_y = 10.6485 \text{ in}$			$C_{left} = 12.5000 \text{ in}$	$r_y = 10.6485 \text{ in}$		



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6875$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6875$ in

Top Cover Plate:

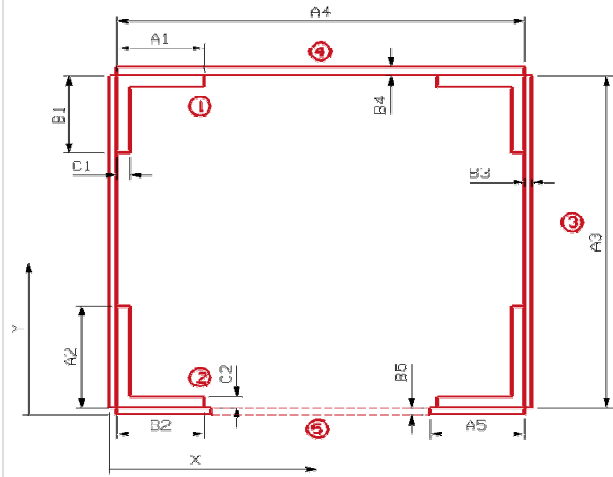
$A_4 = b = 22.0000$ in
 $B_4 = t = 0.6250$ in

Web Plate 1:

$A_3 = b = 30.0000$ in
 $B_3 = t = 1.2500$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.7500$ in



Member U107-U108

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg		8.2500	30.4063	250.8516	0.3250	13.9847	1613.4759	1613.8009
	Vertical Leg		10.0547	26.4063	265.5066	44.8042	9.9847	1002.4016	1047.2058
2	Horizontal Leg		8.2500	1.0938	9.0234	0.3250	15.3278	1938.2579	1938.5828
	Vertical Leg		10.0547	5.0938	51.2161	44.8042	11.3278	1290.1998	1335.0040
3	Plate		75.0000	15.7500	1181.2500	5625.0000	0.6715	33.8198	5658.8198
4	Plate		13.7500	31.0625	427.1094	0.4476	14.6410	2947.4290	2947.8766
5	Perforated Plate		7.8750	0.3750	2.9531	0.3691	16.0465	2027.7386	2028.1077
Total			133.23		2187.91	5716.08		10853.32	16569.40
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.4215 in	S _{top} =	1108.06 in ³	y-bar =	16.4215 in	S _{top} =	1108.06 in ³
I _x =	16569.40 in ⁴	S _{bott.} =	1009.01 in ³	I _x =	16569.40 in ⁴	S _{bott.} =	1009.01 in ³
C _{top} =	14.9535 in	A =	133.2344 in ²	C _{top} =	14.9535 in	A =	133.2344 in ²
C _{bottom} =	16.4215 in	r _x =	11.1518 in	C _{bottom} =	16.4215 in	r _x =	11.1518 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	4.2500	17.5313	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.5938	8.0123	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	20.2500	83.5313	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.9063	115.1576	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	4.2500	17.5313	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.5938	8.0123	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	20.2500	83.5313	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.9063	115.1576	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	37.5000	0.6250	23.4375	4.8828	11.6250	5067.7734	5072.6563	
3 (Right)	Plate	37.5000	23.8750	895.3125	4.8828	11.6250	5067.7734	5072.6563	
4	Plate	13.7500	12.2500	168.4375	554.5833	0.0000	0.0000	554.5833	
5 (Left)	Perforated Plate	3.9375	3.8750	15.2578	9.0439	8.3750	276.1787	285.2227	
5 (Right)	Perforated Plate	3.9375	20.6250	81.2109	9.0439	8.3750	276.1787	285.2227	
Total		133.23		1632.12	632.73		14027.44	14660.17	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2500 in	S _{right} =	1196.75 in ³	x-bar =	12.2500 in	S _{right} =	1196.75 in ³
I _y =	14660.17 in ⁴	S _{left} =	1196.75 in ³	I _y =	14660.17 in ⁴	S _{left} =	1196.75 in ³
C _{right} =	12.2500 in	A =	133.2344 in ²	C _{right} =	12.2500 in	A =	133.2344 in ²
C _{left} =	12.2500 in	r _y =	10.4897 in	C _{left} =	12.2500 in	r _y =	10.4897 in



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6875$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6875$ in

Top Cover Plate:

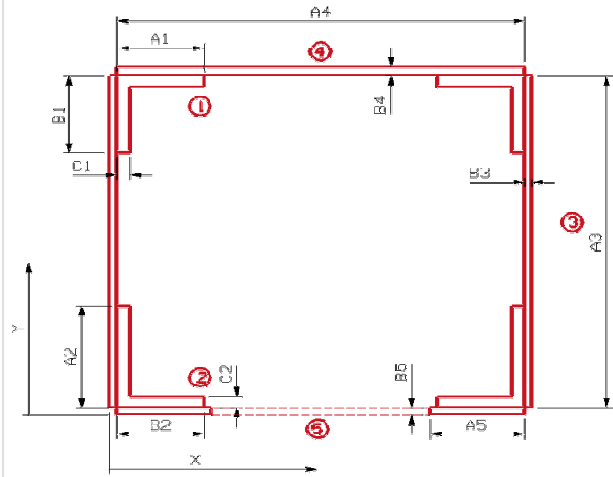
$A_4 = b = 22.0000$ in
 $B_4 = t = 0.6250$ in

Web Plate 1:

$A_3 = b = 30.0000$ in
 $B_3 = t = 1.4375$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.7500$ in



Member U108-U109

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	8.2500	30.4063	250.8516	0.3250	14.0370	1625.5634	1625.8884
	Vertical Leg	10.0547	26.4063	265.5066	44.8042	10.0370	1012.9275	1057.7317
2	Horizontal Leg	8.2500	1.0938	9.0234	0.3250	15.2755	1925.0568	1925.3818
	Vertical Leg	10.0547	5.0938	51.2161	44.8042	11.2755	1278.3168	1323.1210
3	Plate	86.2500	15.7500	1358.4375	6468.7500	0.6192	33.0720	6501.8220
4	Plate	13.7500	31.0625	427.1094	0.4476	14.6933	2968.5184	2968.9660
5	Perforated Plate	7.8750	0.3750	2.9531	0.3691	15.9942	2014.5457	2014.9148
Total		144.48		2365.10	6559.83		10858.00	17417.83
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.3692 in	$S_{top} = 1160.74 \text{ in}^3$			y-bar = 16.3692 in	$S_{top} = 1160.74 \text{ in}^3$		
$I_x = 17417.83 \text{ in}^4$	$S_{bott.} = 1064.06 \text{ in}^3$			$I_x = 17417.83 \text{ in}^4$	$S_{bott.} = 1064.06 \text{ in}^3$		
$C_{top} = 15.0058 \text{ in}$	$A = 144.4844 \text{ in}^2$			$C_{top} = 15.0058 \text{ in}$	$A = 144.4844 \text{ in}^2$		
$C_{bottom} = 16.3692 \text{ in}$	$r_x = 10.9796 \text{ in}$			$C_{bottom} = 16.3692 \text{ in}$	$r_x = 10.9796 \text{ in}$		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I_o	d	Ad^2	$I_{y,gross}$	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	4.4375	18.3047	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.7813	8.9550	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	20.4375	84.3047	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	23.0938	116.1002	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	4.4375	18.3047	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.7813	8.9550	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	20.4375	84.3047	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	23.0938	116.1002	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	43.1250	0.7188	30.9961	7.4261	11.7188	5922.3175	5929.7437	
3 (Right)	Plate	43.1250	24.1563	1041.7383	7.4261	11.7188	5922.3175	5929.7437	
4	Plate	13.7500	12.4375	171.0156	554.5833	0.0000	0.0000	554.5833	
5 (Left)	Perforated Plate	3.9375	4.0625	15.9961	9.0439	8.3750	276.1787	285.2227	
5 (Right)	Perforated Plate	3.9375	20.8125	81.9492	9.0439	8.3750	276.1787	285.2227	
Total		144.48		1797.02	637.82		15736.53	16374.34	
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 12.4375 in	$S_{right} = 1316.53 \text{ in}^3$			x-bar = 12.4375 in	$S_{right} = 1316.53 \text{ in}^3$		
$I_y = 16374.34 \text{ in}^4$	$S_{left} = 1316.53 \text{ in}^3$			$I_y = 16374.34 \text{ in}^4$	$S_{left} = 1316.53 \text{ in}^3$		
$C_{right} = 12.4375 \text{ in}$	$A = 144.4844 \text{ in}^2$			$C_{right} = 12.4375 \text{ in}$	$A = 144.4844 \text{ in}^2$		
$C_{left} = 12.4375 \text{ in}$	$r_y = 10.6456 \text{ in}$			$C_{left} = 12.4375 \text{ in}$	$r_y = 10.6456 \text{ in}$		



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6875$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6875$ in

Top Cover Plate:

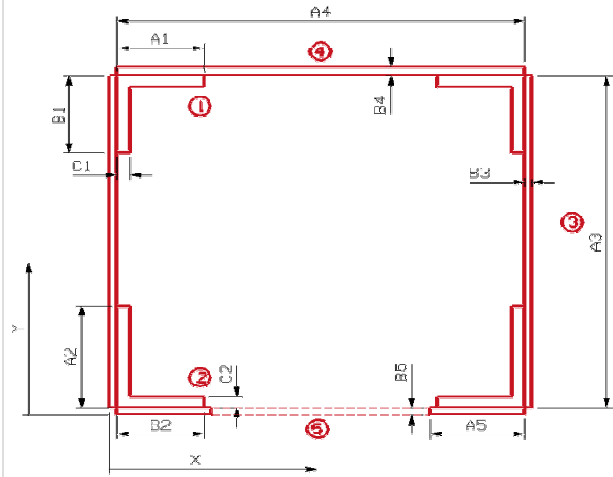
$A_4 = b = 22.0000$ in
 $B_4 = t = 0.6250$ in

Web Plate 1:

$A_3 = b = 30.0000$ in
 $B_3 = t = 1.3750$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.7500$ in



Member U109-U110

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	8.2500	30.4063	250.8516	0.3250	14.0205	1621.7441	1622.0691
	Vertical Leg	10.0547	26.4063	265.5066	44.8042	10.0205	1009.5999	1054.4041
2	Horizontal Leg	8.2500	1.0938	9.0234	0.3250	15.2920	1929.2178	1929.5428
	Vertical Leg	10.0547	5.0938	51.2161	44.8042	11.2920	1282.0608	1326.8650
3	Plate	82.5000	15.7500	1299.3750	6187.5000	0.6357	33.3424	6220.8424
4	Plate	13.7500	31.0625	427.1094	0.4476	14.6768	2961.8551	2962.3027
5	Perforated Plate	7.8750	0.3750	2.9531	0.3691	16.0107	2018.7043	2019.0734
Total		140.73		2306.04	6278.58		10856.52	17135.10
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.3857 in	$S_{top} = 1143.16 \text{ in}^3$			y-bar = 16.3857 in	$S_{top} = 1143.16 \text{ in}^3$		
$I_x = 17135.10 \text{ in}^4$	$S_{bott.} = 1045.73 \text{ in}^3$			$I_x = 17135.10 \text{ in}^4$	$S_{bott.} = 1045.73 \text{ in}^3$		
$C_{top} = 14.9893 \text{ in}$	$A = 140.7344 \text{ in}^2$			$C_{top} = 14.9893 \text{ in}$	$A = 140.7344 \text{ in}^2$		
$C_{bottom} = 16.3857 \text{ in}$	$r_x = 11.0343 \text{ in}$			$C_{bottom} = 16.3857 \text{ in}$	$r_x = 11.0343 \text{ in}$		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I_o	d	Ad^2	$I_{y,gross}$	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	4.3750	18.0469	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.7188	8.6407	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	20.3750	84.0469	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	23.0313	115.7860	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	4.3750	18.0469	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.7188	8.6407	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	20.3750	84.0469	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	23.0313	115.7860	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	41.2500	0.6875	28.3594	6.4990	11.6875	5634.6533	5641.1523	
3 (Right)	Plate	41.2500	24.0625	992.5781	6.4990	11.6875	5634.6533	5641.1523	
4	Plate	13.7500	12.3750	170.1563	554.5833	0.0000	0.0000	554.5833	
5 (Left)	Perforated Plate	3.9375	4.0000	15.7500	9.0439	8.3750	276.1787	285.2227	
5 (Right)	Perforated Plate	3.9375	20.7500	81.7031	9.0439	8.3750	276.1787	285.2227	
Total		140.73		1741.59	635.96		15161.20	15797.16	
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 12.3750 in	$S_{right} = 1276.54 \text{ in}^3$			x-bar = 12.3750 in	$S_{right} = 1276.54 \text{ in}^3$		
$I_y = 15797.16 \text{ in}^4$	$S_{left} = 1276.54 \text{ in}^3$			$I_y = 15797.16 \text{ in}^4$	$S_{left} = 1276.54 \text{ in}^3$		
$C_{right} = 12.3750 \text{ in}$	$A = 140.7344 \text{ in}^2$			$C_{right} = 12.3750 \text{ in}$	$A = 140.7344 \text{ in}^2$		
$C_{left} = 12.3750 \text{ in}$	$r_y = 10.5947 \text{ in}$			$C_{left} = 12.3750 \text{ in}$	$r_y = 10.5947 \text{ in}$		



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6875$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6875$ in

Top Cover Plate:

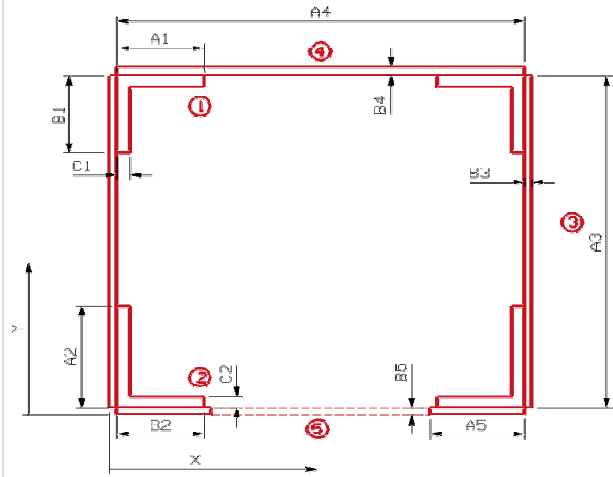
$A_4 = b = 22.0000$ in
 $B_4 = t = 0.6250$ in

Web Plate 1:

$A_3 = b = 30.0000$ in
 $B_3 = t = 1.3750$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.7500$ in



Member U110-U111

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	8.2500	30.4063	250.8516	0.3250	14.0205	1621.7441	1622.0691
	Vertical Leg	10.0547	26.4063	265.5066	44.8042	10.0205	1009.5999	1054.4041
2	Horizontal Leg	8.2500	1.0938	9.0234	0.3250	15.2920	1929.2178	1929.5428
	Vertical Leg	10.0547	5.0938	51.2161	44.8042	11.2920	1282.0608	1326.8650
3	Plate	82.5000	15.7500	1299.3750	6187.5000	0.6357	33.3424	6220.8424
4	Plate	13.7500	31.0625	427.1094	0.4476	14.6768	2961.8551	2962.3027
5	Perforated Plate	7.8750	0.3750	2.9531	0.3691	16.0107	2018.7043	2019.0734
Total		140.73		2306.04	6278.58		10856.52	17135.10
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00	0.00	0.00	0.00



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.3857 in	$S_{top} = 1143.16 \text{ in}^3$			y-bar = 16.3857 in	$S_{top} = 1143.16 \text{ in}^3$		
$I_x = 17135.10 \text{ in}^4$	$S_{bott.} = 1045.73 \text{ in}^3$			$I_x = 17135.10 \text{ in}^4$	$S_{bott.} = 1045.73 \text{ in}^3$		
$C_{top} = 14.9893 \text{ in}$	$A = 140.7344 \text{ in}^2$			$C_{top} = 14.9893 \text{ in}$	$A = 140.7344 \text{ in}^2$		
$C_{bottom} = 16.3857 \text{ in}$	$r_x = 11.0343 \text{ in}$			$C_{bottom} = 16.3857 \text{ in}$	$r_x = 11.0343 \text{ in}$		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I_o	d	Ad^2	$I_{y,gross}$	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	4.3750	18.0469	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.7188	8.6407	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	20.3750	84.0469	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	23.0313	115.7860	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	4.3750	18.0469	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.7188	8.6407	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	20.3750	84.0469	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	23.0313	115.7860	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	41.2500	0.6875	28.3594	6.4990	11.6875	5634.6533	5641.1523	
3 (Right)	Plate	41.2500	24.0625	992.5781	6.4990	11.6875	5634.6533	5641.1523	
4	Plate	13.7500	12.3750	170.1563	554.5833	0.0000	0.0000	554.5833	
5 (Left)	Perforated Plate	3.9375	4.0000	15.7500	9.0439	8.3750	276.1787	285.2227	
5 (Right)	Perforated Plate	3.9375	20.7500	81.7031	9.0439	8.3750	276.1787	285.2227	
Total		140.73		1741.59	635.96		15161.20	15797.16	
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 12.3750 in	$S_{right} = 1276.54 \text{ in}^3$			x-bar = 12.3750 in	$S_{right} = 1276.54 \text{ in}^3$		
$I_y = 15797.16 \text{ in}^4$	$S_{left} = 1276.54 \text{ in}^3$			$I_y = 15797.16 \text{ in}^4$	$S_{left} = 1276.54 \text{ in}^3$		
$C_{right} = 12.3750 \text{ in}$	$A = 140.7344 \text{ in}^2$			$C_{right} = 12.3750 \text{ in}$	$A = 140.7344 \text{ in}^2$		
$C_{left} = 12.3750 \text{ in}$	$r_y = 10.5947 \text{ in}$			$C_{left} = 12.3750 \text{ in}$	$r_y = 10.5947 \text{ in}$		



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

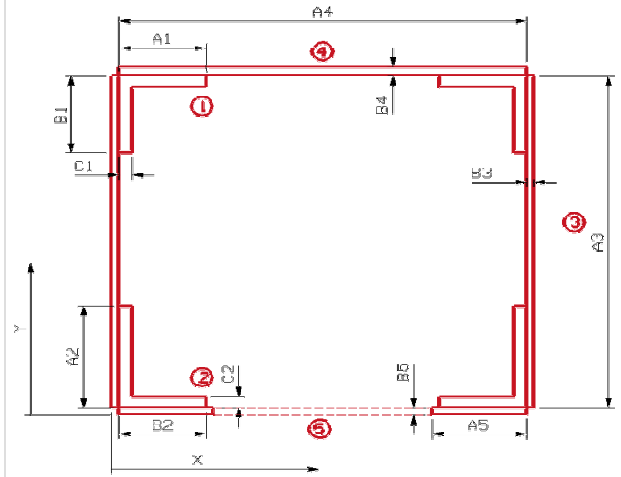
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6875$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6875$ in

Top Cover Plate:
 $A_4 = b = 22.0000$ in
 $B_4 = t = 0.6250$ in

Web Plate 1:
 $A_3 = b = 30.0000$ in
 $B_3 = t = 1.3750$ in

Perforated Cover Plate
 $A_5 = b = 5.2500$ in
 $B_5 = t = 0.7500$ in



Member U111-U112

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	8.2500	30.4063	250.8516	0.3250	14.0205	1621.7441	1622.0691
	Vertical Leg	10.0547	26.4063	265.5066	44.8042	10.0205	1009.5999	1054.4041
2	Horizontal Leg	8.2500	1.0938	9.0234	0.3250	15.2920	1929.2178	1929.5428
	Vertical Leg	10.0547	5.0938	51.2161	44.8042	11.2920	1282.0608	1326.8650
3	Plate	82.5000	15.7500	1299.3750	6187.5000	0.6357	33.3424	6220.8424
4	Plate	13.7500	31.0625	427.1094	0.4476	14.6768	2961.8551	2962.3027
5	Perforated Plate	7.8750	0.3750	2.9531	0.3691	16.0107	2018.7043	2019.0734
Total		140.73		2306.04	6278.58		10856.52	17135.10
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00	0.00	0.00	0.00



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.3857 in	$S_{top} = 1143.16 \text{ in}^3$			y-bar = 16.3857 in	$S_{top} = 1143.16 \text{ in}^3$		
$I_x = 17135.10 \text{ in}^4$	$S_{bott.} = 1045.73 \text{ in}^3$			$I_x = 17135.10 \text{ in}^4$	$S_{bott.} = 1045.73 \text{ in}^3$		
$C_{top} = 14.9893 \text{ in}$	$A = 140.7344 \text{ in}^2$			$C_{top} = 14.9893 \text{ in}$	$A = 140.7344 \text{ in}^2$		
$C_{bottom} = 16.3857 \text{ in}$	$r_x = 11.0343 \text{ in}$			$C_{bottom} = 16.3857 \text{ in}$	$r_x = 11.0343 \text{ in}$		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I_o	d	Ad^2	$I_{y,gross}$	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	4.3750	18.0469	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.7188	8.6407	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	20.3750	84.0469	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	23.0313	115.7860	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	4.3750	18.0469	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.7188	8.6407	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	20.3750	84.0469	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	23.0313	115.7860	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	41.2500	0.6875	28.3594	6.4990	11.6875	5634.6533	5641.1523	
3 (Right)	Plate	41.2500	24.0625	992.5781	6.4990	11.6875	5634.6533	5641.1523	
4	Plate	13.7500	12.3750	170.1563	554.5833	0.0000	0.0000	554.5833	
5 (Left)	Perforated Plate	3.9375	4.0000	15.7500	9.0439	8.3750	276.1787	285.2227	
5 (Right)	Perforated Plate	3.9375	20.7500	81.7031	9.0439	8.3750	276.1787	285.2227	
Total		140.73		1741.59	635.96		15161.20	15797.16	
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 12.3750 in	$S_{right} = 1276.54 \text{ in}^3$			x-bar = 12.3750 in	$S_{right} = 1276.54 \text{ in}^3$		
$I_y = 15797.16 \text{ in}^4$	$S_{left} = 1276.54 \text{ in}^3$			$I_y = 15797.16 \text{ in}^4$	$S_{left} = 1276.54 \text{ in}^3$		
$C_{right} = 12.3750 \text{ in}$	$A = 140.7344 \text{ in}^2$			$C_{right} = 12.3750 \text{ in}$	$A = 140.7344 \text{ in}^2$		
$C_{left} = 12.3750 \text{ in}$	$r_y = 10.5947 \text{ in}$			$C_{left} = 12.3750 \text{ in}$	$r_y = 10.5947 \text{ in}$		



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6875$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6875$ in

Top Cover Plate:

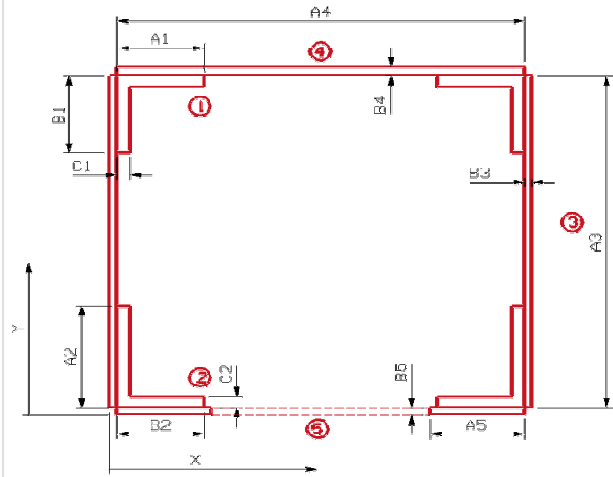
$A_4 = b = 22.0000$ in
 $B_4 = t = 0.6250$ in

Web Plate 1:

$A_3 = b = 30.0000$ in
 $B_3 = t = 1.3750$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.7500$ in



Member U112-U113

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	8.2500	30.4063	250.8516	0.3250	14.0205	1621.7441	1622.0691
	Vertical Leg	10.0547	26.4063	265.5066	44.8042	10.0205	1009.5999	1054.4041
2	Horizontal Leg	8.2500	1.0938	9.0234	0.3250	15.2920	1929.2178	1929.5428
	Vertical Leg	10.0547	5.0938	51.2161	44.8042	11.2920	1282.0608	1326.8650
3	Plate	82.5000	15.7500	1299.3750	6187.5000	0.6357	33.3424	6220.8424
4	Plate	13.7500	31.0625	427.1094	0.4476	14.6768	2961.8551	2962.3027
5	Perforated Plate	7.8750	0.3750	2.9531	0.3691	16.0107	2018.7043	2019.0734
Total		140.73		2306.04	6278.58		10856.52	17135.10
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00	0.00	0.00	0.00



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.3857 in	$S_{top} = 1143.16 \text{ in}^3$			y-bar = 16.3857 in	$S_{top} = 1143.16 \text{ in}^3$		
$I_x = 17135.10 \text{ in}^4$	$S_{bott.} = 1045.73 \text{ in}^3$			$I_x = 17135.10 \text{ in}^4$	$S_{bott.} = 1045.73 \text{ in}^3$		
$C_{top} = 14.9893 \text{ in}$	$A = 140.7344 \text{ in}^2$			$C_{top} = 14.9893 \text{ in}$	$A = 140.7344 \text{ in}^2$		
$C_{bottom} = 16.3857 \text{ in}$	$r_x = 11.0343 \text{ in}$			$C_{bottom} = 16.3857 \text{ in}$	$r_x = 11.0343 \text{ in}$		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I_o	d	Ad^2	$I_{y,gross}$	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	4.3750	18.0469	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.7188	8.6407	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	20.3750	84.0469	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	23.0313	115.7860	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	4.3750	18.0469	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.7188	8.6407	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	20.3750	84.0469	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	23.0313	115.7860	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	41.2500	0.6875	28.3594	6.4990	11.6875	5634.6533	5641.1523	
3 (Right)	Plate	41.2500	24.0625	992.5781	6.4990	11.6875	5634.6533	5641.1523	
4	Plate	13.7500	12.3750	170.1563	554.5833	0.0000	0.0000	554.5833	
5 (Left)	Perforated Plate	3.9375	4.0000	15.7500	9.0439	8.3750	276.1787	285.2227	
5 (Right)	Perforated Plate	3.9375	20.7500	81.7031	9.0439	8.3750	276.1787	285.2227	
Total		140.73		1741.59	635.96		15161.20	15797.16	
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 12.3750 in	$S_{right} = 1276.54 \text{ in}^3$			x-bar = 12.3750 in	$S_{right} = 1276.54 \text{ in}^3$		
$I_y = 15797.16 \text{ in}^4$	$S_{left} = 1276.54 \text{ in}^3$			$I_y = 15797.16 \text{ in}^4$	$S_{left} = 1276.54 \text{ in}^3$		
$C_{right} = 12.3750 \text{ in}$	$A = 140.7344 \text{ in}^2$			$C_{right} = 12.3750 \text{ in}$	$A = 140.7344 \text{ in}^2$		
$C_{left} = 12.3750 \text{ in}$	$r_y = 10.5947 \text{ in}$			$C_{left} = 12.3750 \text{ in}$	$r_y = 10.5947 \text{ in}$		



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.7500$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.7500$ in

Web Plate 1:

$A_3 = b = 30.0000$ in
 $B_3 = t = 0.7500$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.6250$ in

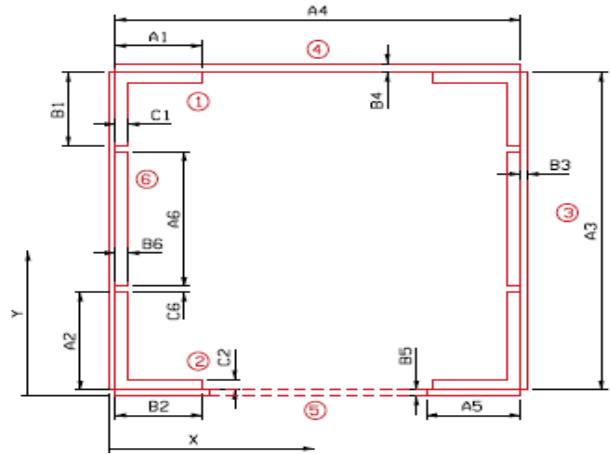
Web Plate 2:

$A_6 = b = 14.0000$ in
 $B_6 = t = 0.5000$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.7500$ in

$C_6 = \text{gap} = 0.0000$ in



Member U113-U114

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	9.0000	30.3750	273.3750	0.4219	13.9183	1743.4701	1743.8920
	Vertical Leg	10.8750	26.3750	286.8281	47.6348	9.9183	1069.8015	1117.4363
2	Horizontal Leg	9.0000	1.1250	10.1250	0.4219	15.3317	2115.5509	2115.9728
	Vertical Leg	10.8750	5.1250	55.7344	47.6348	11.3317	1396.4323	1444.0670
3	Plate	45.0000	15.7500	708.7500	3375.0000	0.7067	22.4745	3397.4745
4	Plate	14.6875	31.0625	456.2305	0.4781	14.6058	3133.2728	3133.7509
5	Perforated Plate	9.0000	0.3750	3.3750	0.4219	16.0817	2327.5915	2328.0134
6	Side Plates	14.0000	15.7500	220.5000	228.6667	0.7067	6.9921	235.6587
Total		122.44		2014.92	3700.68		11815.59	15516.27
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.4567 in	$S_{top} = 1040.08 \text{ in}^3$			y-bar = 16.4567 in	$S_{top} = 1040.08 \text{ in}^3$		
$I_x = 15516.27 \text{ in}^4$	$S_{bott.} = 942.85 \text{ in}^3$			$I_x = 15516.27 \text{ in}^4$	$S_{bott.} = 942.85 \text{ in}^3$		
$C_{top} = 14.9183 \text{ in}$	$A = 122.4375 \text{ in}^2$			$C_{top} = 14.9183 \text{ in}$	$A = 122.4375 \text{ in}^2$		
$C_{bottom} = 16.4567 \text{ in}$	$r_x = 11.2574 \text{ in}$			$C_{bottom} = 16.4567 \text{ in}$	$r_x = 11.2574 \text{ in}$		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I_o	d	Ad^2	$I_{y,gross}$	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.5000	3.7500	16.8750	13.5000	8.7500	344.5313	358.0313	
	Vertical Leg	5.4375	1.1250	6.1172	0.2549	11.3750	703.5615	703.8164	
1 (Right)	Horizontal Leg	4.5000	21.2500	95.6250	13.5000	8.7500	344.5313	358.0313	
	Vertical Leg	5.4375	23.8750	129.8203	0.2549	11.3750	703.5615	703.8164	
2 (Left)	Horizontal Leg	4.5000	3.7500	16.8750	13.5000	8.7500	344.5313	358.0313	
	Vertical Leg	5.4375	1.1250	6.1172	0.2549	11.3750	703.5615	703.8164	
2 (Right)	Horizontal Leg	4.5000	21.2500	95.6250	13.5000	8.7500	344.5313	358.0313	
	Vertical Leg	5.4375	23.8750	129.8203	0.2549	11.3750	703.5615	703.8164	
3 (Left)	Plate	22.5000	0.3750	8.4375	1.0547	12.1250	3307.8516	3308.9063	
3 (Right)	Plate	22.5000	24.6250	554.0625	1.0547	12.1250	3307.8516	3308.9063	
4	Plate	14.6875	12.5000	183.5938	675.9310	0.0000	0.0000	675.9310	
5 (Left)	Perforated Plate	4.5000	3.7500	16.8750	13.5000	8.7500	344.5313	358.0313	
5 (Right)	Perforated Plate	4.5000	21.2500	95.6250	13.5000	8.7500	344.5313	358.0313	
6 (Left)	Plate	7.0000	1.0000	7.0000	0.1458	11.5000	925.7500	925.8958	
6 (Right)	Plate	7.0000	24.0000	168.0000	0.1458	11.5000	925.7500	925.8958	
Total		122.44		1530.47	760.35		13348.64	14108.99	
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 12.5000 in	$S_{right} = 1128.72 \text{ in}^3$			x-bar = 12.5000 in	$S_{right} = 1128.72 \text{ in}^3$		
$I_y = 14108.99 \text{ in}^4$	$S_{left} = 1128.72 \text{ in}^3$			$I_y = 14108.99 \text{ in}^4$	$S_{left} = 1128.72 \text{ in}^3$		
$C_{right} = 12.5000 \text{ in}$	$A = 122.4375 \text{ in}^2$			$C_{right} = 12.5000 \text{ in}$	$A = 122.4375 \text{ in}^2$		
$C_{left} = 12.5000 \text{ in}$	$r_y = 10.7347 \text{ in}$			$C_{left} = 12.5000 \text{ in}$	$r_y = 10.7347 \text{ in}$		



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.7500$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.7500$ in

Top Cover Plate:

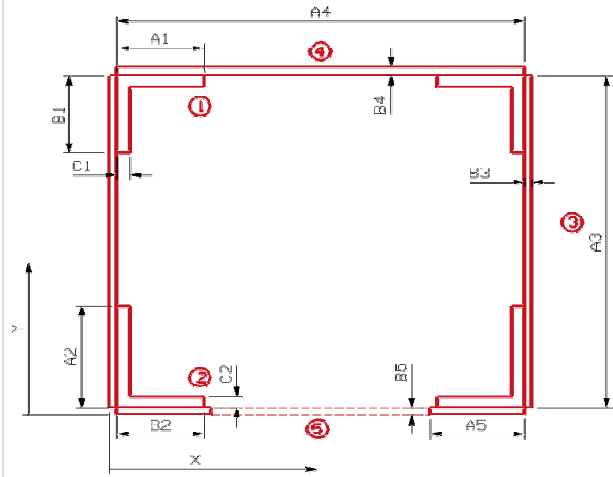
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.6250$ in

Web Plate 1:

$A_3 = b = 30.0000$ in
 $B_3 = t = 0.7500$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.7500$ in



Member U114-U115

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	9.0000	30.3750	273.3750	0.4219	13.8271	1720.6866	1721.1085
	Vertical Leg	10.8750	26.3750	286.8281	47.6348	9.8271	1050.2094	1097.8441
2	Horizontal Leg	9.0000	1.1250	10.1250	0.4219	15.4229	2140.8056	2141.2274
	Vertical Leg	10.8750	5.1250	55.7344	47.6348	11.4229	1419.0104	1466.6451
3	Plate	45.0000	15.7500	708.7500	3375.0000	0.7979	28.6524	3403.6524
4	Plate	14.6875	31.0625	456.2305	0.4781	14.5146	3094.2488	3094.7269
5	Perforated Plate	9.0000	0.3750	3.3750	0.4219	16.1729	2354.0778	2354.4997
Total		108.44		1794.42	3472.01		11807.69	15279.70
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.5479 in	S _{top} =	1030.53 in ³	y-bar =	16.5479 in	S _{top} =	1030.53 in ³
I _x =	15279.70 in ⁴	S _{bott.} =	923.36 in ³	I _x =	15279.70 in ⁴	S _{bott.} =	923.36 in ³
C _{top} =	14.8271 in	A =	108.4375 in ²	C _{top} =	14.8271 in	A =	108.4375 in ²
C _{bottom} =	16.5479 in	r _x =	11.8705 in	C _{bottom} =	16.5479 in	r _x =	11.8705 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.5000	3.7500	16.8750	13.5000	8.7500	344.5313	358.0313	
	Vertical Leg	5.4375	1.1250	6.1172	0.2549	11.3750	703.5615	703.8164	
1 (Right)	Horizontal Leg	4.5000	21.2500	95.6250	13.5000	8.7500	344.5313	358.0313	
	Vertical Leg	5.4375	23.8750	129.8203	0.2549	11.3750	703.5615	703.8164	
2 (Left)	Horizontal Leg	4.5000	3.7500	16.8750	13.5000	8.7500	344.5313	358.0313	
	Vertical Leg	5.4375	1.1250	6.1172	0.2549	11.3750	703.5615	703.8164	
2 (Right)	Horizontal Leg	4.5000	21.2500	95.6250	13.5000	8.7500	344.5313	358.0313	
	Vertical Leg	5.4375	23.8750	129.8203	0.2549	11.3750	703.5615	703.8164	
3 (Left)	Plate	22.5000	0.3750	8.4375	1.0547	12.1250	3307.8516	3308.9063	
3 (Right)	Plate	22.5000	24.6250	554.0625	1.0547	12.1250	3307.8516	3308.9063	
4	Plate	14.6875	12.5000	183.5938	675.9310	0.0000	0.0000	675.9310	
5 (Left)	Perforated Plate	4.5000	3.7500	16.8750	13.5000	8.7500	344.5313	358.0313	
5 (Right)	Perforated Plate	4.5000	21.2500	95.6250	13.5000	8.7500	344.5313	358.0313	
Total		108.44		1355.47	760.06		11497.14	12257.20	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.5000 in	S _{right} =	980.58 in ³	x-bar =	12.5000 in	S _{right} =	980.58 in ³
I _y =	12257.20 in ⁴	S _{left} =	980.58 in ³	I _y =	12257.20 in ⁴	S _{left} =	980.58 in ³
C _{right} =	12.5000 in	A =	108.4375 in ²	C _{right} =	12.5000 in	A =	108.4375 in ²
C _{left} =	12.5000 in	r _y =	10.6318 in	C _{left} =	12.5000 in	r _y =	10.6318 in



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6875$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6875$ in

Web Plate 1:

$A_3 = b = 30.0000$ in
 $B_3 = t = 0.6875$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.5625$ in

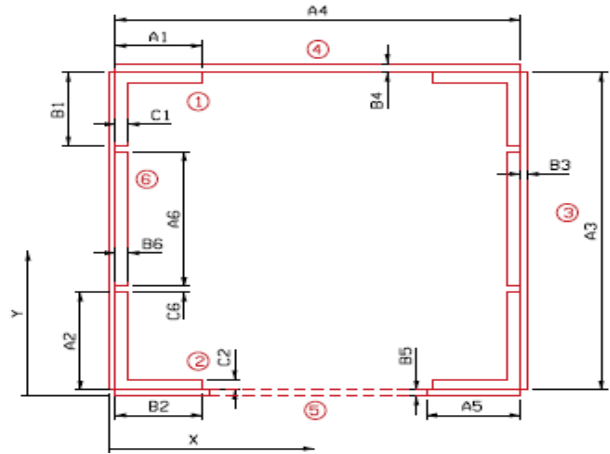
Web Plate 2:

$A_6 = b = 14.0000$ in
 $B_6 = t = 0.6875$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.6875$ in

$C_6 = \text{gap} = 0.0000$ in



Member U115-U116

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	8.2500	30.3438	250.3359	0.3250	14.0203	1621.6862	1622.0112
	Vertical Leg	10.0547	26.3438	264.8782	44.8042	10.0203	1009.5494	1054.3537
2	Horizontal Leg	8.2500	1.0313	8.5078	0.3250	15.2922	1929.2810	1929.6059
	Vertical Leg	10.0547	5.0313	50.5876	44.8042	11.2922	1282.1176	1326.9218
3	Plate	41.2500	15.6875	647.1094	3093.7500	0.6360	16.6843	3110.4343
4	Plate	13.2188	30.9688	409.3682	0.3485	14.6453	2835.2102	2835.5588
5	Perforated Plate	8.2500	0.3438	2.8359	0.3250	15.9797	2106.6516	2106.9765
6	Side Plates	19.2500	15.6875	301.9844	314.4167	0.6360	7.7860	322.2027
Total		118.58		1935.61	3499.10		10808.97	14308.06
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.3235 in	S _{top} =	958.57 in ³	y-bar =	16.3235 in	S _{top} =	958.57 in ³
I _x =	14308.06 in ⁴	S _{bott.} =	876.53 in ³	I _x =	14308.06 in ⁴	S _{bott.} =	876.53 in ³
C _{top} =	14.9265 in	A =	118.5781 in ²	C _{top} =	14.9265 in	A =	118.5781 in ²
C _{bottom} =	16.3235 in	r _x =	10.9847 in	C _{bottom} =	16.3235 in	r _x =	10.9847 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	3.6875	15.2109	12.3750	8.7500	315.8203	328.1953	
	Vertical Leg	5.0273	1.0313	5.1844	0.1980	11.4063	654.0702	654.2682	
1 (Right)	Horizontal Leg	4.1250	21.1875	87.3984	12.3750	8.7500	315.8203	328.1953	
	Vertical Leg	5.0273	23.8438	119.8707	0.1980	11.4063	654.0702	654.2682	
2 (Left)	Horizontal Leg	4.1250	3.6875	15.2109	12.3750	8.7500	315.8203	328.1953	
	Vertical Leg	5.0273	1.0313	5.1844	0.1980	11.4063	654.0702	654.2682	
2 (Right)	Horizontal Leg	4.1250	21.1875	87.3984	12.3750	8.7500	315.8203	328.1953	
	Vertical Leg	5.0273	23.8438	119.8707	0.1980	11.4063	654.0702	654.2682	
3 (Left)	Plate	20.6250	0.3438	7.0898	0.8124	12.0938	3016.5875	3017.3999	
3 (Right)	Plate	20.6250	24.5313	505.9570	0.8124	12.0938	3016.5875	3017.3999	
4	Plate	13.2188	12.4375	164.4082	608.3379	0.0000	0.0000	608.3379	
5 (Left)	Perforated Plate	4.1250	3.6875	15.2109	12.3750	8.7500	315.8203	328.1953	
5 (Right)	Perforated Plate	4.1250	21.1875	87.3984	12.3750	8.7500	315.8203	328.1953	
6 (Left)	Plate	9.6250	1.0313	9.9258	0.3791	11.4063	1252.2369	1252.6160	
6 (Right)	Plate	9.6250	23.8438	229.4961	0.3791	11.4063	1252.2369	1252.6160	
Total		118.58		1474.82	685.76		13048.85	13734.61	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.4375 in	S _{right} =	1104.29 in ³	x-bar =	12.4375 in	S _{right} =	1104.29 in ³
I _y =	13734.61 in ⁴	S _{left} =	1104.29 in ³	I _y =	13734.61 in ⁴	S _{left} =	1104.29 in ³
C _{right} =	12.4375 in	A =	118.5781 in ²	C _{right} =	12.4375 in	A =	118.5781 in ²
C _{left} =	12.4375 in	r _y =	10.7623 in	C _{left} =	12.4375 in	r _y =	10.7623 in



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_l = 0.6875$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_l = 0.6875$ in

Top Cover Plate: PL

$A_6 = b = 23.5000$ in
 $B_6 = t = 0.5625$ in

Side Plate 1: PL

$A_3 = b = 14.0000$ in
 $B_3 = t = 0.6875$ in

Web Plate 1: PL

$A_4 = b = 30.0000$ in
 $B_4 = t = 0.6875$ in

Side Plate 2: PL

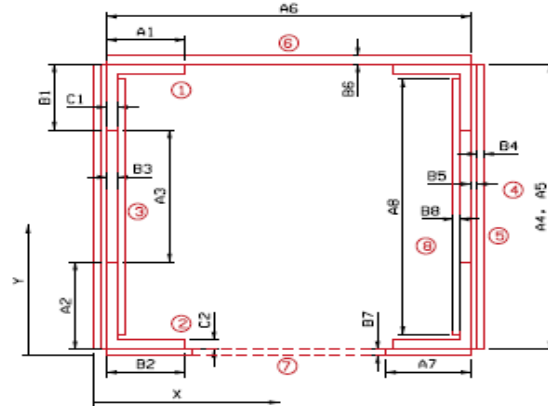
$A_8 = b = 27.5000$ in
 $B_8 = t = 0.3750$ in

Web Plate 2: PL

$A_5 = b = 0.0000$ in
 $B_5 = t = 0.0000$ in

Perforated Bottom Cover Plate: PL

$A_7 = b = 6.0000$ in
 $B_7 = t = 0.6875$ in



Member U116-U117

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	8.2500	30.3438	250.3359	0.3250	14.1145	1643.5580	1643.8830
	Vertical Leg	10.0547	26.3438	264.8782	44.8042	10.1145	1028.6261	1073.4303
2	Horizontal Leg	8.2500	1.0313	8.5078	0.3250	15.1980	1905.5781	1905.9030
	Vertical Leg	10.0547	5.0313	50.5876	44.8042	11.1980	1260.8093	1305.6135
3	Plate	19.2500	15.6875	301.9844	314.4167	0.5417	5.6497	320.0664
4	Plate	41.2500	15.6875	647.1094	3093.7500	0.5417	12.1065	3105.8565
5	Plate	0.0000	0.6875	0.0000	0.0000	15.5417	0.0000	0.0000
6	Plate	13.2188	30.9688	409.3682	0.3485	14.7395	2871.8118	2872.1604
7	Perforated Plate	8.2500	0.3438	2.8359	0.3250	15.8855	2081.8798	2082.2047
8	Plate	20.6250	15.6875	323.5547	1299.8047	0.5417	6.0533	1305.8579
Total		139.20		2259.16	4798.90		10816.07	15614.98
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.2292 in	$S_{top} = 1039.56 \text{ in}^3$			y-bar = 16.2292 in	$S_{top} = 1039.56 \text{ in}^3$		
$I_x = 15614.98 \text{ in}^4$	$S_{bott.} = 962.15 \text{ in}^3$			$I_x = 15614.98 \text{ in}^4$	$S_{bott.} = 962.15 \text{ in}^3$		
$C_{top} = 15.0208 \text{ in}$	$A = 139.2031 \text{ in}^2$			$C_{top} = 15.0208 \text{ in}$	$A = 139.2031 \text{ in}^2$		
$C_{bottom} = 16.2292 \text{ in}$	$r_x = 10.5912 \text{ in}$			$C_{bottom} = 16.2292 \text{ in}$	$r_x = 10.5912 \text{ in}$		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I_o	d	Ad^2	$I_{y,gross}$	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	3.6875	15.2109	12.3750	8.7500	315.8203	328.1953	
	Vertical Leg	5.0273	1.0313	5.1844	0.1980	11.4063	654.0702	654.2682	
1 (Right)	Horizontal Leg	4.1250	21.1875	87.3984	12.3750	8.7500	315.8203	328.1953	
	Vertical Leg	5.0273	23.8438	119.8707	0.1980	11.4063	654.0702	654.2682	
2 (Left)	Horizontal Leg	4.1250	3.6875	15.2109	12.3750	8.7500	315.8203	328.1953	
	Vertical Leg	5.0273	1.0313	5.1844	0.1980	11.4063	654.0702	654.2682	
2 (Right)	Horizontal Leg	4.1250	21.1875	87.3984	12.3750	8.7500	315.8203	328.1953	
	Vertical Leg	5.0273	23.8438	119.8707	0.1980	11.4063	654.0702	654.2682	
3 (Left)	Plate	9.6250	1.0313	9.9258	0.3791	11.4063	1252.2369	1252.6160	
3 (Right)	Plate	9.6250	23.8438	229.4961	0.3791	11.4063	1252.2369	1252.6160	
4 (Left)	Plate	20.6250	0.3438	7.0898	0.8124	12.0938	3016.5875	3017.3999	
4 (Right)	Plate	20.6250	24.5313	505.9570	0.8124	12.0938	3016.5875	3017.3999	
5 (Left)	Plate	0.0000	0.6875	0.0000	0.0000	11.7500	0.0000	0.0000	
5 (Right)	Plate	0.0000	24.1875	0.0000	0.0000	11.7500	0.0000	0.0000	
6	Plate	13.2188	12.4375	164.4082	608.3379	0.0000	0.0000	608.3379	
7 (Left)	Perforated Plate	4.1250	3.6875	15.2109	12.3750	8.7500	315.8203	328.1953	
7 (Right)	Perforated Plate	4.1250	21.1875	87.3984	12.3750	8.7500	315.8203	328.1953	
8 (Left)	Plate	10.3125	1.5625	16.1133	0.1208	10.8750	1219.6143	1219.7351	
8 (Right)	Plate	10.3125	23.3125	240.4102	0.1208	10.8750	1219.6143	1219.7351	
Total		139.20		1731.34	673.43		15488.08	16174.08	
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 12.4375 in	$S_{right} = 1300.43 \text{ in}^3$			x-bar = 12.4375 in	$S_{right} = 1300.43 \text{ in}^3$		
$I_y = 16174.08 \text{ in}^4$	$S_{left} = 1300.43 \text{ in}^3$			$I_y = 16174.08 \text{ in}^4$	$S_{left} = 1300.43 \text{ in}^3$		
$C_{right} = 12.4375 \text{ in}$	$A = 139.2031 \text{ in}^2$			$C_{right} = 12.4375 \text{ in}$	$A = 139.2031 \text{ in}^2$		
$C_{left} = 12.4375 \text{ in}$	$r_y = 10.7792 \text{ in}$			$C_{left} = 12.4375 \text{ in}$	$r_y = 10.7792 \text{ in}$		



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_l = 0.6875$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_l = 0.6875$ in

Top Cover Plate: PL

$A_6 = b = 22.0000$ in
 $B_6 = t = 0.6250$ in

Side Plate 1: PL

$A_3 = b = 14.0000$ in
 $B_3 = t = 0.3750$ in

Web Plate 1: PL

$A_4 = b = 30.0000$ in
 $B_4 = t = 0.6875$ in

Side Plate 2: PL (No 2nd PL)

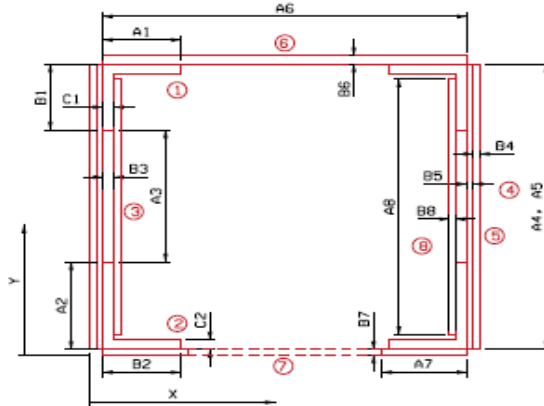
$A_8 = b = 0.0000$ in
 $B_8 = t = 0.0000$ in

Web Plate 2: PL

$A_5 = b = 30.0000$ in
 $B_5 = t = 0.6875$ in

Perforated Bottom Cover Plate: PL

$A_7 = b = 5.2500$ in
 $B_7 = t = 0.7500$ in



Member U117-U118

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	8.2500	30.4063	250.8516	0.3250	14.0647	1631.9709	1632.2959
	Vertical Leg	10.0547	26.4063	265.5066	44.8042	10.0647	1018.5135	1063.3177
2	Horizontal Leg	8.2500	1.0938	9.0234	0.3250	15.2478	1918.0972	1918.4221
	Vertical Leg	10.0547	5.0938	51.2161	44.8042	11.2478	1272.0578	1316.8620
3	Plate	10.5000	15.7500	165.3750	171.5000	0.5916	3.6748	175.1748
4	Plate	41.2500	15.7500	649.6875	3093.7500	0.5916	14.4366	3108.1866
5	Plate	41.2500	15.7500	649.6875	3093.7500	0.5916	14.4366	3108.1866
6	Plate	13.7500	31.0625	427.1094	0.4476	14.7209	2979.6964	2980.1440
7	Perforated Plate	7.8750	0.3750	2.9531	0.3691	15.9666	2007.5895	2007.9586
8	Plate	0.0000	15.7500	0.0000	0.0000	0.5916	0.0000	0.0000
Total		151.23		2471.41	6450.08		10860.47	17310.55
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.3416 in	$S_{top} = 1151.47 \text{ in}^3$			y-bar = 16.3416 in	$S_{top} = 1151.47 \text{ in}^3$		
$I_x = 17310.55 \text{ in}^4$	$S_{bottom} = 1059.29 \text{ in}^3$			$I_x = 17310.55 \text{ in}^4$	$S_{bottom} = 1059.29 \text{ in}^3$		
$C_{top} = 15.0334 \text{ in}$	$A = 151.2344 \text{ in}^2$			$C_{top} = 15.0334 \text{ in}$	$A = 151.2344 \text{ in}^2$		
$C_{bottom} = 16.3416 \text{ in}$	$r_x = 10.6987 \text{ in}$			$C_{bottom} = 16.3416 \text{ in}$	$r_x = 10.6987 \text{ in}$		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I_o	d	Ad^2	$I_{y, gross}$	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	4.3750	18.0469	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.7188	8.6407	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	20.3750	84.0469	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	23.0313	115.7860	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	4.3750	18.0469	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.7188	8.6407	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	20.3750	84.0469	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	23.0313	115.7860	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	5.2500	1.5625	8.2031	0.0615	10.8125	613.7783	613.8398	
3 (Right)	Plate	5.2500	23.1875	121.7344	0.0615	10.8125	613.7783	613.8398	
4 (Left)	Plate	20.6250	0.3438	7.0898	0.8124	12.0313	2985.4889	2986.3013	
4 (Right)	Plate	20.6250	24.4063	503.3789	0.8124	12.0313	2985.4889	2986.3013	
5 (Left)	Plate	20.6250	1.0313	21.2695	0.8124	11.3438	2654.0387	2654.8511	
5 (Right)	Plate	20.6250	23.7188	489.1992	0.8124	11.3438	2654.0387	2654.8511	
6	Plate	13.7500	12.3750	170.1563	554.5833	0.0000	0.0000	554.5833	
7 (Left)	Perforated Plate	3.9375	4.0000	15.7500	9.0439	8.3750	276.1787	285.2227	
7 (Right)	Perforated Plate	3.9375	20.7500	81.7031	9.0439	8.3750	276.1787	285.2227	
8 (Left)	Plate	0.0000	1.7500	0.0000	0.0000	10.6250	0.0000	0.0000	
8 (Right)	Plate	0.0000	23.0000	0.0000	0.0000	10.6250	0.0000	0.0000	
Total		151.23		1871.53	613.76		16398.50	17024.84	
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 12.3750 in	$S_{right} = 1375.74 \text{ in}^3$			x-bar = 12.3750 in	$S_{right} = 1375.74 \text{ in}^3$		
$I_y = 17024.84 \text{ in}^4$	$S_{left} = 1375.74 \text{ in}^3$			$I_y = 17024.84 \text{ in}^4$	$S_{left} = 1375.74 \text{ in}^3$		
$C_{right} = 12.3750 \text{ in}$	$A = 151.2344 \text{ in}^2$			$C_{right} = 12.3750 \text{ in}$	$A = 151.2344 \text{ in}^2$		
$C_{left} = 12.3750 \text{ in}$	$r_y = 10.6100 \text{ in}$			$C_{left} = 12.3750 \text{ in}$	$r_y = 10.6100 \text{ in}$		



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_l = 0.6875$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_l = 0.6875$ in

Top Cover Plate: PL

$A_6 = b = 22.0000$ in
 $B_6 = t = 0.6250$ in

Side Plate 1: PL

$A_3 = b = 14.0000$ in
 $B_3 = t = 0.3750$ in

Web Plate 1: PL

$A_4 = b = 30.0000$ in
 $B_4 = t = 0.6875$ in

Side Plate 2: PL (No 2nd PL)

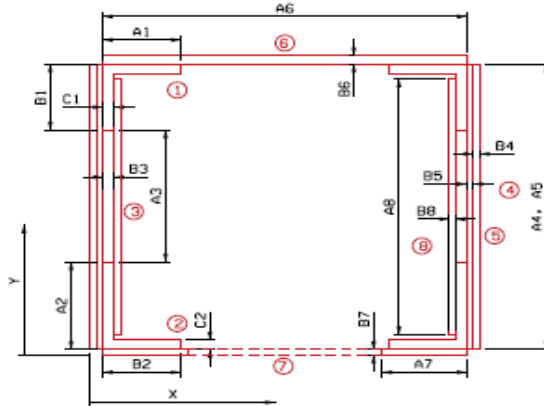
$A_8 = b = 0.0000$ in
 $B_8 = t = 0.0000$ in

Web Plate 2: PL

$A_5 = b = 30.0000$ in
 $B_5 = t = 0.6875$ in

Perforated Bottom Cover Plate: PL

$A_7 = b = 5.2500$ in
 $B_7 = t = 0.7500$ in



Member L118-L119

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	8.2500	30.4063	250.8516	0.3250	14.0647	1631.9709	1632.2959
	Vertical Leg	10.0547	26.4063	265.5066	44.8042	10.0647	1018.5135	1063.3177
2	Horizontal Leg	8.2500	1.0938	9.0234	0.3250	15.2478	1918.0972	1918.4221
	Vertical Leg	10.0547	5.0938	51.2161	44.8042	11.2478	1272.0578	1316.8620
3	Plate	10.5000	15.7500	165.3750	171.5000	0.5916	3.6748	175.1748
4	Plate	41.2500	15.7500	649.6875	3093.7500	0.5916	14.4366	3108.1866
5	Plate	41.2500	15.7500	649.6875	3093.7500	0.5916	14.4366	3108.1866
6	Plate	13.7500	31.0625	427.1094	0.4476	14.7209	2979.6964	2980.1440
7	Perforated Plate	7.8750	0.3750	2.9531	0.3691	15.9666	2007.5895	2007.9586
8	Plate	0.0000	15.7500	0.0000	0.0000	0.5916	0.0000	0.0000
Total		151.23		2471.41	6450.08		10860.47	17310.55
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.3416 in	$S_{top} = 1151.47 \text{ in}^3$			y-bar = 16.3416 in	$S_{top} = 1151.47 \text{ in}^3$		
$I_x = 17310.55 \text{ in}^4$	$S_{bottom} = 1059.29 \text{ in}^3$			$I_x = 17310.55 \text{ in}^4$	$S_{bottom} = 1059.29 \text{ in}^3$		
$C_{top} = 15.0334 \text{ in}$	$A = 151.2344 \text{ in}^2$			$C_{top} = 15.0334 \text{ in}$	$A = 151.2344 \text{ in}^2$		
$C_{bottom} = 16.3416 \text{ in}$	$r_x = 10.6987 \text{ in}$			$C_{bottom} = 16.3416 \text{ in}$	$r_x = 10.6987 \text{ in}$		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I_o	d	Ad^2	$I_{y, gross}$	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	4.3750	18.0469	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.7188	8.6407	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	20.3750	84.0469	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	23.0313	115.7860	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	4.3750	18.0469	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.7188	8.6407	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	20.3750	84.0469	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	23.0313	115.7860	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	5.2500	1.5625	8.2031	0.0615	10.8125	613.7783	613.8398	
3 (Right)	Plate	5.2500	23.1875	121.7344	0.0615	10.8125	613.7783	613.8398	
4 (Left)	Plate	20.6250	0.3438	7.0898	0.8124	12.0313	2985.4889	2986.3013	
4 (Right)	Plate	20.6250	24.4063	503.3789	0.8124	12.0313	2985.4889	2986.3013	
5 (Left)	Plate	20.6250	1.0313	21.2695	0.8124	11.3438	2654.0387	2654.8511	
5 (Right)	Plate	20.6250	23.7188	489.1992	0.8124	11.3438	2654.0387	2654.8511	
6	Plate	13.7500	12.3750	170.1563	554.5833	0.0000	0.0000	554.5833	
7 (Left)	Perforated Plate	3.9375	4.0000	15.7500	9.0439	8.3750	276.1787	285.2227	
7 (Right)	Perforated Plate	3.9375	20.7500	81.7031	9.0439	8.3750	276.1787	285.2227	
8 (Left)	Plate	0.0000	1.7500	0.0000	0.0000	10.6250	0.0000	0.0000	
8 (Right)	Plate	0.0000	23.0000	0.0000	0.0000	10.6250	0.0000	0.0000	
Total		151.23		1871.53	613.76		16398.50	17024.84	
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 12.3750 in	$S_{right} = 1375.74 \text{ in}^3$			x-bar = 12.3750 in	$S_{right} = 1375.74 \text{ in}^3$		
$I_y = 17024.84 \text{ in}^4$	$S_{left} = 1375.74 \text{ in}^3$			$I_y = 17024.84 \text{ in}^4$	$S_{left} = 1375.74 \text{ in}^3$		
$C_{right} = 12.3750 \text{ in}$	$A = 151.2344 \text{ in}^2$			$C_{right} = 12.3750 \text{ in}$	$A = 151.2344 \text{ in}^2$		
$C_{left} = 12.3750 \text{ in}$	$r_y = 10.6100 \text{ in}$			$C_{left} = 12.3750 \text{ in}$	$r_y = 10.6100 \text{ in}$		



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6875$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6875$ in

Web Plate 1:

$A_3 = b = 30.0000$ in
 $B_3 = t = 1.3750$ in

Top Cover Plate:

$A_4 = b = 22.0000$ in
 $B_4 = t = 0.6250$ in

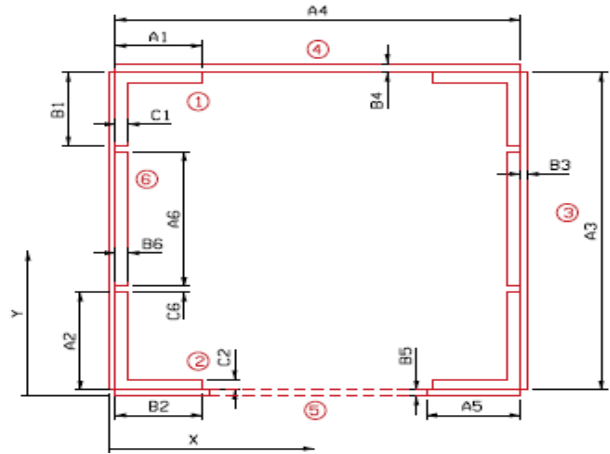
Web Plate 2:

$A_6 = b = 14.0000$ in
 $B_6 = t = 0.6875$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.7500$ in

$C_6 = \text{gap} = 0.0000$ in



Member U119-U120

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	8.2500	30.4063	250.8516	0.3250	14.0970	1639.4883	1639.8132
	Vertical Leg	10.0547	26.4063	265.5066	44.8042	10.0970	1025.0726	1069.8769
2	Horizontal Leg	8.2500	1.0938	9.0234	0.3250	15.2155	1909.9654	1910.2904
	Vertical Leg	10.0547	5.0938	51.2161	44.8042	11.2155	1264.7499	1309.5541
3	Plate	82.5000	15.7500	1299.3750	6187.5000	0.5592	25.8013	6213.3013
4	Plate	13.7500	31.0625	427.1094	0.4476	14.7533	2992.8092	2993.2568
5	Perforated Plate	7.8750	0.3750	2.9531	0.3691	15.9342	1999.4611	1999.8302
6	Side Plates	19.2500	15.7500	303.1875	314.4167	0.5592	6.0203	320.4370
Total		159.98		2609.22	6592.99		10863.37	17456.36
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.3092 in	S _{top} =	1158.68 in ³	y-bar =	16.3092 in	S _{top} =	1158.68 in ³
I _x =	17456.36 in ⁴	S _{bott.} =	1070.34 in ³	I _x =	17456.36 in ⁴	S _{bott.} =	1070.34 in ³
C _{top} =	15.0658 in	A =	159.9844 in ²	C _{top} =	15.0658 in	A =	159.9844 in ²
C _{bottom} =	16.3092 in	r _x =	10.4457 in	C _{bottom} =	16.3092 in	r _x =	10.4457 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	4.3750	18.0469	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.7188	8.6407	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	20.3750	84.0469	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	23.0313	115.7860	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	4.3750	18.0469	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.7188	8.6407	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	20.3750	84.0469	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	23.0313	115.7860	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	41.2500	0.6875	28.3594	6.4990	11.6875	5634.6533	5641.1523	
3 (Right)	Plate	41.2500	24.0625	992.5781	6.4990	11.6875	5634.6533	5641.1523	
4	Plate	13.7500	12.3750	170.1563	554.5833	0.0000	0.0000	554.5833	
5 (Left)	Perforated Plate	3.9375	4.0000	15.7500	9.0439	8.3750	276.1787	285.2227	
5 (Right)	Perforated Plate	3.9375	20.7500	81.7031	9.0439	8.3750	276.1787	285.2227	
6 (Left)	Plate	9.6250	1.7188	16.5430	0.3791	10.6563	1092.9733	1093.3524	
6 (Right)	Plate	9.6250	23.0313	221.6758	0.3791	10.6563	1092.9733	1093.3524	
Total		159.98		1979.81	636.72		17347.14	17983.86	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3750 in	S _{right} =	1453.24 in ³	x-bar =	12.3750 in	S _{right} =	1453.24 in ³
I _y =	17983.86 in ⁴	S _{left} =	1453.24 in ³	I _y =	17983.86 in ⁴	S _{left} =	1453.24 in ³
C _{right} =	12.3750 in	A =	159.9844 in ²	C _{right} =	12.3750 in	A =	159.9844 in ²
C _{left} =	12.3750 in	r _y =	10.6024 in	C _{left} =	12.3750 in	r _y =	10.6024 in



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6875$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6875$ in

Web Plate 1:

$A_3 = b = 30.0000$ in
 $B_3 = t = 1.3750$ in

Top Cover Plate:

$A_4 = b = 22.0000$ in
 $B_4 = t = 0.6250$ in

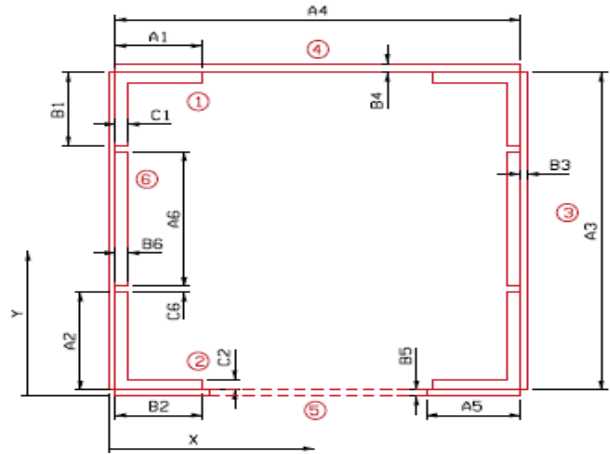
Web Plate 2:

$A_6 = b = 14.0000$ in
 $B_6 = t = 0.6875$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.7500$ in

$C_6 = \text{gap} = 0.0000$ in



Member U120-U121

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	8.2500	30.4063	250.8516	0.3250	14.0970	1639.4883	1639.8132
	Vertical Leg	10.0547	26.4063	265.5066	44.8042	10.0970	1025.0726	1069.8769
2	Horizontal Leg	8.2500	1.0938	9.0234	0.3250	15.2155	1909.9654	1910.2904
	Vertical Leg	10.0547	5.0938	51.2161	44.8042	11.2155	1264.7499	1309.5541
3	Plate	82.5000	15.7500	1299.3750	6187.5000	0.5592	25.8013	6213.3013
4	Plate	13.7500	31.0625	427.1094	0.4476	14.7533	2992.8092	2993.2568
5	Perforated Plate	7.8750	0.3750	2.9531	0.3691	15.9342	1999.4611	1999.8302
6	Side Plates	19.2500	15.7500	303.1875	314.4167	0.5592	6.0203	320.4370
Total		159.98		2609.22	6592.99		10863.37	17456.36
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.3092 in	$S_{top} = 1158.68 \text{ in}^3$			y-bar = 16.3092 in	$S_{top} = 1158.68 \text{ in}^3$		
$I_x = 17456.36 \text{ in}^4$	$S_{bott.} = 1070.34 \text{ in}^3$			$I_x = 17456.36 \text{ in}^4$	$S_{bott.} = 1070.34 \text{ in}^3$		
$C_{top} = 15.0658 \text{ in}$	$A = 159.9844 \text{ in}^2$			$C_{top} = 15.0658 \text{ in}$	$A = 159.9844 \text{ in}^2$		
$C_{bottom} = 16.3092 \text{ in}$	$r_x = 10.4457 \text{ in}$			$C_{bottom} = 16.3092 \text{ in}$	$r_x = 10.4457 \text{ in}$		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I_o	d	Ad^2	$I_{y,gross}$	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	4.3750	18.0469	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.7188	8.6407	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	20.3750	84.0469	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	23.0313	115.7860	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	4.3750	18.0469	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.7188	8.6407	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	20.3750	84.0469	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	23.0313	115.7860	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	41.2500	0.6875	28.3594	6.4990	11.6875	5634.6533	5641.1523	
3 (Right)	Plate	41.2500	24.0625	992.5781	6.4990	11.6875	5634.6533	5641.1523	
4	Plate	13.7500	12.3750	170.1563	554.5833	0.0000	0.0000	554.5833	
5 (Left)	Perforated Plate	3.9375	4.0000	15.7500	9.0439	8.3750	276.1787	285.2227	
5 (Right)	Perforated Plate	3.9375	20.7500	81.7031	9.0439	8.3750	276.1787	285.2227	
6 (Left)	Plate	9.6250	1.7188	16.5430	0.3791	10.6563	1092.9733	1093.3524	
6 (Right)	Plate	9.6250	23.0313	221.6758	0.3791	10.6563	1092.9733	1093.3524	
Total		159.98		1979.81	636.72		17347.14	17983.86	
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 12.3750 in	$S_{right} = 1453.24 \text{ in}^3$			x-bar = 12.3750 in	$S_{right} = 1453.24 \text{ in}^3$		
$I_y = 17983.86 \text{ in}^4$	$S_{left} = 1453.24 \text{ in}^3$			$I_y = 17983.86 \text{ in}^4$	$S_{left} = 1453.24 \text{ in}^3$		
$C_{right} = 12.3750 \text{ in}$	$A = 159.9844 \text{ in}^2$			$C_{right} = 12.3750 \text{ in}$	$A = 159.9844 \text{ in}^2$		
$C_{left} = 12.3750 \text{ in}$	$r_y = 10.6024 \text{ in}$			$C_{left} = 12.3750 \text{ in}$	$r_y = 10.6024 \text{ in}$		



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6875$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6875$ in

Web Plate 1:

$A_3 = b = 30.0000$ in
 $B_3 = t = 1.3125$ in

Top Cover Plate:

$A_4 = b = 22.0000$ in
 $B_4 = t = 0.6250$ in

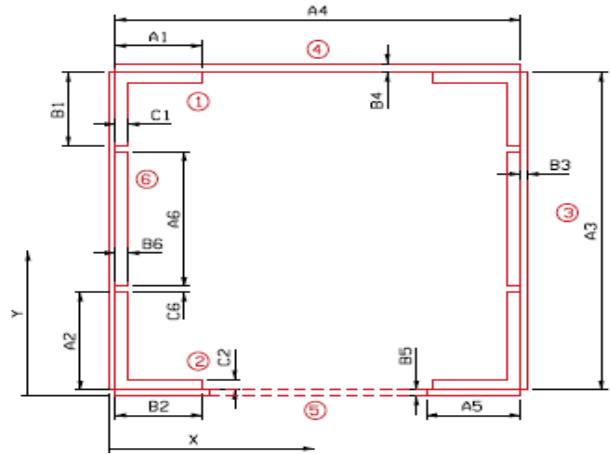
Web Plate 2:

$A_6 = b = 14.0000$ in
 $B_6 = t = 0.3750$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.7500$ in

$C_6 = \text{gap} = 0.0000$ in



Member U121-U122

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	8.2500	30.4063	250.8516	0.3250	14.0496	1628.4821	1628.8070
	Vertical Leg	10.0547	26.4063	265.5066	44.8042	10.0496	1015.4714	1060.2756
2	Horizontal Leg	8.2500	1.0938	9.0234	0.3250	15.2629	1921.8834	1922.2084
	Vertical Leg	10.0547	5.0938	51.2161	44.8042	11.2629	1275.4624	1320.2666
3	Plate	78.7500	15.7500	1240.3125	5906.2500	0.6066	28.9802	5935.2302
4	Plate	13.7500	31.0625	427.1094	0.4476	14.7059	2973.6101	2974.0577
5	Perforated Plate	7.8750	0.3750	2.9531	0.3691	15.9816	2011.3739	2011.7431
6	Side Plates	10.5000	15.7500	165.3750	171.5000	0.6066	3.8640	175.3640
Total		147.48		2412.35	6168.83		10859.13	17027.95
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.3566 in	$S_{top} = 1133.81 \text{ in}^3$			y-bar = 16.3566 in	$S_{top} = 1133.81 \text{ in}^3$		
$I_x = 17027.95 \text{ in}^4$	$S_{bott.} = 1041.04 \text{ in}^3$			$I_x = 17027.95 \text{ in}^4$	$S_{bott.} = 1041.04 \text{ in}^3$		
$C_{top} = 15.0184 \text{ in}$	$A = 147.4844 \text{ in}^2$			$C_{top} = 15.0184 \text{ in}$	$A = 147.4844 \text{ in}^2$		
$C_{bottom} = 16.3566 \text{ in}$	$r_x = 10.7450 \text{ in}$			$C_{bottom} = 16.3566 \text{ in}$	$r_x = 10.7450 \text{ in}$		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I_o	d	Ad^2	$I_{y,gross}$	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	4.3125	17.7891	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.6563	8.3265	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	20.3125	83.7891	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.9688	115.4718	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	4.3125	17.7891	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.6563	8.3265	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	20.3125	83.7891	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.9688	115.4718	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	39.3750	0.6563	25.8398	5.6525	11.6563	5349.8090	5355.4614	
3 (Right)	Plate	39.3750	23.9688	943.7695	5.6525	11.6563	5349.8090	5355.4614	
4	Plate	13.7500	12.3125	169.2969	554.5833	0.0000	0.0000	554.5833	
5 (Left)	Perforated Plate	3.9375	3.9375	15.5039	9.0439	8.3750	276.1787	285.2227	
5 (Right)	Perforated Plate	3.9375	20.6875	81.4570	9.0439	8.3750	276.1787	285.2227	
6 (Left)	Plate	5.2500	1.5000	7.8750	0.0615	10.8125	613.7783	613.8398	
6 (Right)	Plate	5.2500	23.1250	121.4063	0.0615	10.8125	613.7783	613.8398	
Total		147.48		1815.90	634.39		15819.07	16453.46	
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 12.3125 in	$S_{right} = 1336.32 \text{ in}^3$			x-bar = 12.3125 in	$S_{right} = 1336.32 \text{ in}^3$		
$I_y = 16453.46 \text{ in}^4$	$S_{left} = 1336.32 \text{ in}^3$			$I_y = 16453.46 \text{ in}^4$	$S_{left} = 1336.32 \text{ in}^3$		
$C_{right} = 12.3125 \text{ in}$	$A = 147.4844 \text{ in}^2$			$C_{right} = 12.3125 \text{ in}$	$A = 147.4844 \text{ in}^2$		
$C_{left} = 12.3125 \text{ in}$	$r_y = 10.5622 \text{ in}$			$C_{left} = 12.3125 \text{ in}$	$r_y = 10.5622 \text{ in}$		



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6875$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6875$ in

Top Cover Plate:

$A_4 = b = 22.0000$ in
 $B_4 = t = 0.6250$ in

Web Plate 1:

$A_3 = b = 30.0000$ in
 $B_3 = t = 1.0000$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.7500$ in



Member U122-U123

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	8.2500	30.4063	250.8516	0.3250	13.8995	1593.8777	1594.2027
	Vertical Leg	10.0547	26.4063	265.5066	44.8042	9.8995	985.3690	1030.1732
2	Horizontal Leg	8.2500	1.0938	9.0234	0.3250	15.4130	1959.8637	1960.1886
	Vertical Leg	10.0547	5.0938	51.2161	44.8042	11.4130	1309.6792	1354.4834
3	Plate	60.0000	15.7500	945.0000	4500.0000	0.7567	34.3563	4534.3563
4	Plate	13.7500	31.0625	427.1094	0.4476	14.5558	2913.2279	2913.6755
5	Perforated Plate	7.8750	0.3750	2.9531	0.3691	16.1317	2049.3267	2049.6958
Total		118.23		1951.66	4591.08		10845.70	15436.78
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.5067 in	S _{top} =	1038.23 in ³	y-bar =	16.5067 in	S _{top} =	1038.23 in ³
I _x =	15436.78 in ⁴	S _{bott.} =	935.18 in ³	I _x =	15436.78 in ⁴	S _{bott.} =	935.18 in ³
C _{top} =	14.8683 in	A =	118.2344 in ²	C _{top} =	14.8683 in	A =	118.2344 in ²
C _{bottom} =	16.5067 in	r _x =	11.4263 in	C _{bottom} =	16.5067 in	r _x =	11.4263 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	4.0000	16.5000	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.3438	6.7555	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	20.0000	82.5000	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.6563	113.9008	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	4.0000	16.5000	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.3438	6.7555	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	20.0000	82.5000	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.6563	113.9008	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	30.0000	0.5000	15.0000	2.5000	11.5000	3967.5000	3970.0000	
3 (Right)	Plate	30.0000	23.5000	705.0000	2.5000	11.5000	3967.5000	3970.0000	
4	Plate	13.7500	12.0000	165.0000	554.5833	0.0000	0.0000	554.5833	
5 (Left)	Perforated Plate	3.9375	3.6250	14.2734	9.0439	8.3750	276.1787	285.2227	
5 (Right)	Perforated Plate	3.9375	20.3750	80.2266	9.0439	8.3750	276.1787	285.2227	
Total		118.23		1418.81	627.96		11826.89	12454.85	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.0000 in	S _{right} =	1037.90 in ³	x-bar =	12.0000 in	S _{right} =	1037.90 in ³
I _y =	12454.85 in ⁴	S _{left} =	1037.90 in ³	I _y =	12454.85 in ⁴	S _{left} =	1037.90 in ³
C _{right} =	12.0000 in	A =	118.2344 in ²	C _{right} =	12.0000 in	A =	118.2344 in ²
C _{left} =	12.0000 in	r _y =	10.2635 in	C _{left} =	12.0000 in	r _y =	10.2635 in



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

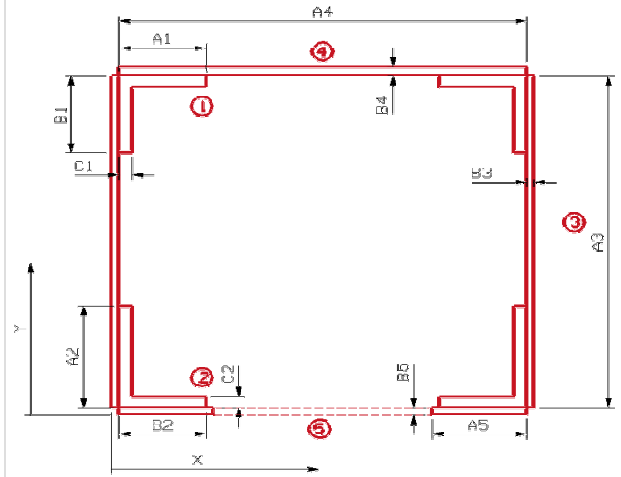
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.4375$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_f = 0.4375$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:
 $A_3 = b = 30.0000$ in
 $B_3 = t = 0.8125$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member U123-U124

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.2500	30.2813	158.9766	0.0837	14.2962	1073.0080	1073.0918
	Vertical Leg	6.6172	26.2813	173.9080	31.5372	10.2962	701.5050	733.0422
2	Horizontal Leg	5.2500	0.7188	3.7734	0.0837	15.2663	1223.5581	1223.6419
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	11.2663	839.9104	871.4476
3	Plate	48.7500	15.5000	755.6250	3656.2500	0.4850	11.4677	3667.7177
4	Plate	8.8125	30.6875	270.4336	0.1033	14.7025	1904.9383	1905.0416
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	15.7350	1485.5432	1485.6682
Total		87.30		1395.44	3719.72		7239.93	10959.65
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	15.9850 in	S _{top} =	736.04 in ³	y-bar =	15.9850 in	S _{top} =	736.04 in ³
I _x =	10959.65 in ⁴	S _{bott.} =	685.62 in ³	I _x =	10959.65 in ⁴	S _{bott.} =	685.62 in ³
C _{top} =	14.8900 in	A =	87.2969 in ²	C _{top} =	14.8900 in	A =	87.2969 in ²
C _{bottom} =	15.9850 in	r _x =	11.2047 in	C _{bottom} =	15.9850 in	r _x =	11.2047 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.8125	10.0078	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	1.0313	3.4120	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	21.3125	55.9453	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	24.0938	79.7164	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.8125	10.0078	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	1.0313	3.4120	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	21.3125	55.9453	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	24.0938	79.7164	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	24.3750	0.4063	9.9023	1.3409	12.1563	3602.0013	3603.3423	
3 (Right)	Plate	24.3750	24.7188	602.5195	1.3409	12.1563	3602.0013	3603.3423	
4	Plate	8.8125	12.5625	110.7070	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.8125	11.4375	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	21.3125	63.9375	9.0000	8.7500	229.6875	238.6875	
Total		87.30		1096.67	457.95		10227.06	10685.01	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.5625 in	S _{right} =	850.55 in ³	x-bar =	12.5625 in	S _{right} =	850.55 in ³
I _y =	10685.01 in ⁴	S _{left} =	850.55 in ³	I _y =	10685.01 in ⁴	S _{left} =	850.55 in ³
C _{right} =	12.5625 in	A =	87.2969 in ²	C _{right} =	12.5625 in	A =	87.2969 in ²
C _{left} =	12.5625 in	r _y =	11.0634 in	C _{left} =	12.5625 in	r _y =	11.0634 in



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.4375$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_f = 0.4375$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 30.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member U124-U125

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.2500	30.2813	158.9766	0.0837	14.0877	1041.9304	1042.0141
	Vertical Leg	6.6172	26.2813	173.9080	31.5372	10.0877	673.3745	704.9117
2	Horizontal Leg	5.2500	0.7188	3.7734	0.0837	15.4748	1257.2166	1257.3004
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	11.4748	871.2939	902.8311
3	Plate	22.5000	15.5000	348.7500	1687.5000	0.6936	10.8232	1698.3232
4	Plate	8.8125	30.6875	270.4336	0.1033	14.4939	1851.2790	1851.3823
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	15.9436	1525.1832	1525.3082
Total		61.05		988.57	1750.97		7231.10	8982.07
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.1936 in	S _{top} =	611.80 in ³	y-bar =	16.1936 in	S _{top} =	611.80 in ³
I _x =	8982.07 in ⁴	S _{bott.} =	554.67 in ³	I _x =	8982.07 in ⁴	S _{bott.} =	554.67 in ³
C _{top} =	14.6814 in	A =	61.0469 in ²	C _{top} =	14.6814 in	A =	61.0469 in ²
C _{bottom} =	16.1936 in	r _x =	12.1299 in	C _{bottom} =	16.1936 in	r _x =	12.1299 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.3750	8.8594	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.5938	1.9645	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	20.8750	54.7969	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.6563	78.2689	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.3750	8.8594	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.5938	1.9645	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	20.8750	54.7969	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.6563	78.2689	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	11.2500	0.1875	2.1094	0.1318	11.9375	1603.1689	1603.3008	
3 (Right)	Plate	11.2500	24.0625	270.7031	0.1318	11.9375	1603.1689	1603.3008	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.3750	10.1250	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.8750	62.6250	9.0000	8.7500	229.6875	238.6875	
Total		61.05		740.19	455.53		6229.39	6684.92	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	551.33 in ³	x-bar =	12.1250 in	S _{right} =	551.33 in ³
I _y =	6684.92 in ⁴	S _{left} =	551.33 in ³	I _y =	6684.92 in ⁴	S _{left} =	551.33 in ³
C _{right} =	12.1250 in	A =	61.0469 in ²	C _{right} =	12.1250 in	A =	61.0469 in ²
C _{left} =	12.1250 in	r _y =	10.4645 in	C _{left} =	12.1250 in	r _y =	10.4645 in



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

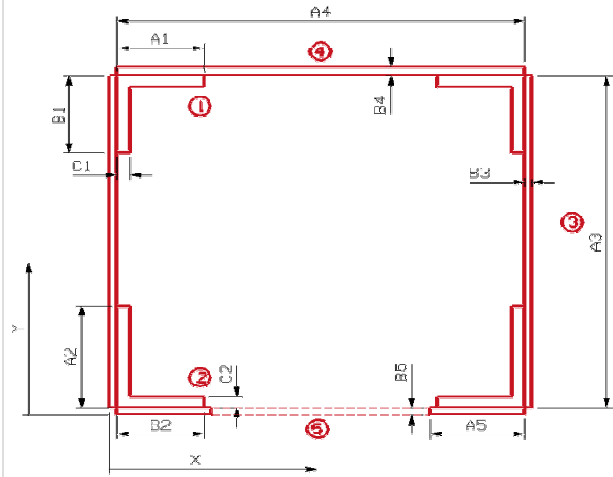
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 30.0000$ in
 $B_3 = t = 0.5000$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member U125-U126

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	30.2188	75.5469	0.0203	13.6062	462.8183	462.8387
	Vertical Leg	2.3047	28.2188	65.0354	2.6115	11.6062	310.4477	313.0592
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	16.0813	646.5245	646.5449
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	14.0813	456.9836	459.5951
3	Plate	30.0000	15.3750	461.2500	2250.0000	1.2376	45.9496	2295.9496
4	Plate	8.8125	30.5625	269.3320	0.1033	13.9499	1714.9100	1715.0133
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	16.4251	1214.0275	1214.0803
Total		52.92		879.17	2255.42		4851.66	7107.08
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00	0.00	0.00	0.00



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.6126 in	S _{top} =	502.71 in ³	y-bar =	16.6126 in	S _{top} =	502.71 in ³
I _x =	7107.08 in ⁴	S _{bott.} =	427.81 in ³	I _x =	7107.08 in ⁴	S _{bott.} =	427.81 in ³
C _{top} =	14.1374 in	A =	52.9219 in ²	C _{top} =	14.1374 in	A =	52.9219 in ²
C _{bottom} =	16.6126 in	r _x =	11.5885 in	C _{bottom} =	16.6126 in	r _x =	11.5885 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.5000	3.1250	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.6563	0.7562	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	22.0000	27.5000	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.8438	27.4762	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.5000	3.1250	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.6563	0.7562	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	22.0000	27.5000	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.8438	27.4762	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	15.0000	0.2500	3.7500	0.3125	12.0000	2160.0000	2160.3125	
3 (Right)	Plate	15.0000	24.2500	363.7500	0.3125	12.0000	2160.0000	2160.3125	
4	Plate	8.8125	12.2500	107.9531	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.5000	7.8750	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	21.0000	47.2500	6.7500	8.7500	172.2656	179.0156	
Total		52.92		648.29	426.39		5759.41	6185.80	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2500 in	S _{right} =	504.96 in ³	x-bar =	12.2500 in	S _{right} =	504.96 in ³
I _y =	6185.80 in ⁴	S _{left} =	504.96 in ³	I _y =	6185.80 in ⁴	S _{left} =	504.96 in ³
C _{right} =	12.2500 in	A =	52.9219 in ²	C _{right} =	12.2500 in	A =	52.9219 in ²
C _{left} =	12.2500 in	r _y =	10.8114 in	C _{left} =	12.2500 in	r _y =	10.8114 in



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/25/2012

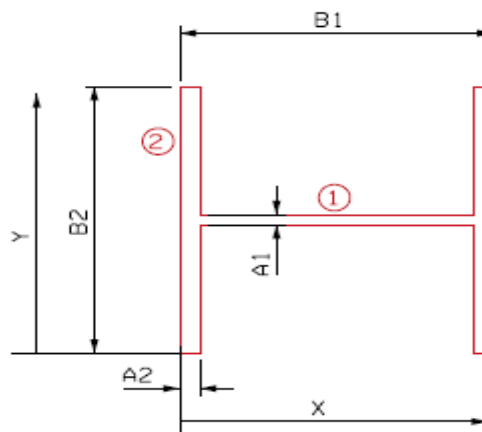
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam WF14x 176

- $A_1 = t_w = 0.8200$ in
- $A_2 = t_f = 1.3130$ in
- $B_1 = d = 15.2500$ in
- $B_2 = b_f = 15.6400$ in



Member U127-L128

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		10.3517	7.8200	80.9501	0.5800	0.0000	0.0000	0.5800
2	Flange Plates		41.0706	7.8200	321.1724	837.1894	0.0000	0.0000	837.1894
Total			51.42		402.12	837.77		0.00	837.77
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	7.8200	in	$S_{top} = 107.13$	in ³	y-bar =	7.8200	in	$S_{top} = 107.13$	in ³		
$I_x =$	837.77	in ⁴	$S_{bott.} = 107.13$	in ³	$I_x =$	837.77	in ⁴	$S_{bott.} = 107.13$	in ³		
$c_{top} =$	7.8200	in	A =	51.4223	in ²	$c_{top} =$	7.8200	in	A =	51.4223	in ²
$c_{bottom} =$	7.8200	in	$r_x =$	4.0363	in	$c_{bottom} =$	7.8200	in	$r_x =$	4.0363	in



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.3517	7.6250	78.9316	137.4749	0.0000	0.0000	137.4749
2	Left Flange		20.5353	0.6565	13.4814	2.9502	6.9685	997.1950	1000.1452
	Right Flange		20.5353	14.5935	299.6822	2.9502	6.9685	997.1950	1000.1452
Total			51.42		392.10	143.38		1994.39	2137.77
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	7.6250	in	S _{right} =	280.36	in ³	x-bar =	7.6250	in	S _{right} =	280.36	in ³
I _y =	2137.77	in ⁴	S _{left} =	280.36	in ³	I _y =	2137.77	in ⁴	S _{left} =	280.36	in ³
C _{right} =	7.6250	in	A =	51.4223	in ²	C _{right} =	7.6250	in	A =	51.4223	in ²
C _{left} =	7.6250	in	r _y =	6.4477	in	C _{left} =	7.6250	in	r _y =	6.4477	in



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/25/2012

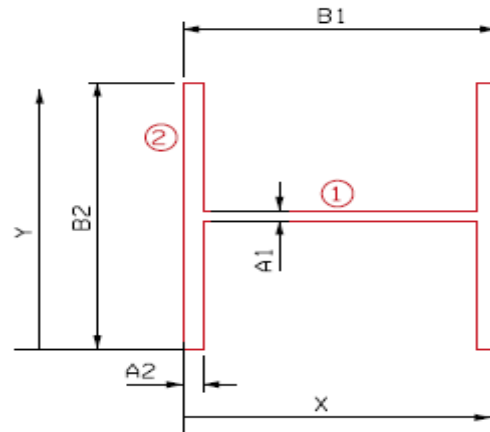
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam WF14x 176

- $A_1 = t_w = 0.8200$ in
- $A_2 = t_f = 1.3130$ in
- $B_1 = d = 15.2500$ in
- $B_2 = b_f = 15.6400$ in



Member U128-L129

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		10.3517	7.8200	80.9501	0.5800	0.0000	0.0000	0.5800
2	Flange Plates		41.0706	7.8200	321.1724	837.1894	0.0000	0.0000	837.1894
Total			51.42		402.12	837.77		0.00	837.77
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	7.8200	in	$S_{top} = 107.13$	in ³	y-bar =	7.8200	in	$S_{top} = 107.13$	in ³		
$I_x =$	837.77	in ⁴	$S_{bott.} = 107.13$	in ³	$I_x =$	837.77	in ⁴	$S_{bott.} = 107.13$	in ³		
$c_{top} =$	7.8200	in	A =	51.4223	in ²	$c_{top} =$	7.8200	in	A =	51.4223	in ²
$c_{bottom} =$	7.8200	in	$r_x =$	4.0363	in	$c_{bottom} =$	7.8200	in	$r_x =$	4.0363	in



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.3517	7.6250	78.9316	137.4749	0.0000	0.0000	137.4749
2	Left Flange		20.5353	0.6565	13.4814	2.9502	6.9685	997.1950	1000.1452
	Right Flange		20.5353	14.5935	299.6822	2.9502	6.9685	997.1950	1000.1452
Total			51.42		392.10	143.38		1994.39	2137.77
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	7.6250	in	S _{right} =	280.36	in ³	x-bar =	7.6250	in	S _{right} =	280.36	in ³
I _y =	2137.77	in ⁴	S _{left} =	280.36	in ³	I _y =	2137.77	in ⁴	S _{left} =	280.36	in ³
C _{right} =	7.6250	in	A =	51.4223	in ²	C _{right} =	7.6250	in	A =	51.4223	in ²
C _{left} =	7.6250	in	r _y =	6.4477	in	C _{left} =	7.6250	in	r _y =	6.4477	in



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam WF14x 237

- $A_1 = t_w = 1.0900$ in
- $A_2 = t_f = 1.7480$ in
- $B_1 = d = 16.1200$ in
- $B_2 = b_f = 15.9100$ in



Member U129-L130

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		13.7602	7.9550	109.4621	1.3624	0.0000	0.0000	1.3624
2	Flange Plates		55.6214	7.9550	442.4679	1173.2774	0.0000	0.0000	1173.2774
Total			69.38		551.93	1174.64		0.00	1174.64
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	7.9550	in	$S_{top} = 147.66$ in ³	y-bar =	7.9550	in	$S_{top} = 147.66$ in ³
$I_x =$	1174.64	in ⁴	$S_{bott.} = 147.66$ in ³	$I_x =$	1174.64	in ⁴	$S_{bott.} = 147.66$ in ³
$c_{top} =$	7.9550	in	$A = 69.3815$ in ²	$c_{top} =$	7.9550	in	$A = 69.3815$ in ²
$c_{bottom} =$	7.9550	in	$r_x = 4.1146$ in	$c_{bottom} =$	7.9550	in	$r_x = 4.1146$ in



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		13.7602	8.0600	110.9069	182.7411	0.0000	0.0000	182.7411
2	Left Flange		27.8107	0.8740	24.3065	7.0813	7.1860	1436.1045	1443.1858
	Right Flange		27.8107	15.2460	424.0016	7.0813	7.1860	1436.1045	1443.1858
Total			69.38		559.22	196.90		2872.21	3069.11
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	8.0600	in	S _{right} =	380.78	in ³	x-bar =	8.0600	in	S _{right} =	380.78	in ³
I _y =	3069.11	in ⁴	S _{left} =	380.78	in ³	I _y =	3069.11	in ⁴	S _{left} =	380.78	in ³
C _{right} =	8.0600	in	A =	69.3815	in ²	C _{right} =	8.0600	in	A =	69.3815	in ²
C _{left} =	8.0600	in	r _y =	6.6510	in	C _{left} =	8.0600	in	r _y =	6.6510	in



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/25/2012

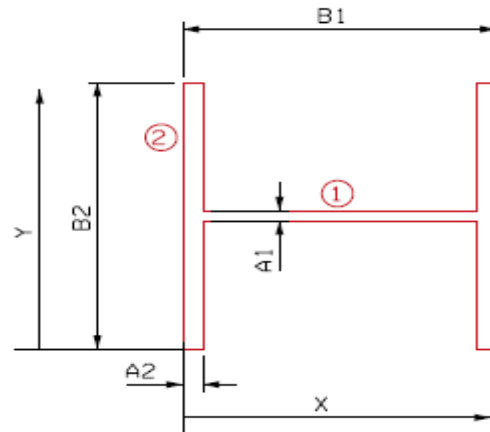
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam WF14x 237

- $A_1 = t_w = 1.0900$ in
- $A_2 = t_f = 1.7480$ in
- $B_1 = d = 16.1200$ in
- $B_2 = b_f = 15.9100$ in



Member U130-L131

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		13.7602	7.9550	109.4621	1.3624	0.0000	0.0000	1.3624
2	Flange Plates		55.6214	7.9550	442.4679	1173.2774	0.0000	0.0000	1173.2774
Total			69.38		551.93	1174.64		0.00	1174.64
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	7.9550	in	$S_{top} = 147.66$ in ³	y-bar =	7.9550	in	$S_{top} = 147.66$ in ³
$I_x =$	1174.64	in ⁴	$S_{bott.} = 147.66$ in ³	$I_x =$	1174.64	in ⁴	$S_{bott.} = 147.66$ in ³
$c_{top} =$	7.9550	in	$A = 69.3815$ in ²	$c_{top} =$	7.9550	in	$A = 69.3815$ in ²
$c_{bottom} =$	7.9550	in	$r_x = 4.1146$ in	$c_{bottom} =$	7.9550	in	$r_x = 4.1146$ in



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		13.7602	8.0600	110.9069	182.7411	0.0000	0.0000	182.7411
2	Left Flange		27.8107	0.8740	24.3065	7.0813	7.1860	1436.1045	1443.1858
	Right Flange		27.8107	15.2460	424.0016	7.0813	7.1860	1436.1045	1443.1858
Total			69.38		559.22	196.90		2872.21	3069.11
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	8.0600	in	S _{right} =	380.78	in ³	x-bar =	8.0600	in	S _{right} =	380.78	in ³
I _y =	3069.11	in ⁴	S _{left} =	380.78	in ³	I _y =	3069.11	in ⁴	S _{left} =	380.78	in ³
C _{right} =	8.0600	in	A =	69.3815	in ²	C _{right} =	8.0600	in	A =	69.3815	in ²
C _{left} =	8.0600	in	r _y =	6.6510	in	C _{left} =	8.0600	in	r _y =	6.6510	in



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam WF14x 237

- $A_1 = t_w = 1.0900$ in
- $A_2 = t_f = 1.7480$ in
- $B_1 = d = 16.1200$ in
- $B_2 = b_f = 15.9100$ in



Member U131-L132

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		13.7602	7.9550	109.4621	1.3624	0.0000	0.0000	1.3624
2	Flange Plates		55.6214	7.9550	442.4679	1173.2774	0.0000	0.0000	1173.2774
Total			69.38		551.93	1174.64		0.00	1174.64
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	7.9550	in	$S_{top} = 147.66$	in ³	y-bar =	7.9550	in	$S_{top} = 147.66$	in ³		
$I_x =$	1174.64	in ⁴	$S_{bott.} = 147.66$	in ³	$I_x =$	1174.64	in ⁴	$S_{bott.} = 147.66$	in ³		
$c_{top} =$	7.9550	in	A =	69.3815	in ²	$c_{top} =$	7.9550	in	A =	69.3815	in ²
$c_{bottom} =$	7.9550	in	$r_x =$	4.1146	in	$c_{bottom} =$	7.9550	in	$r_x =$	4.1146	in



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		13.7602	8.0600	110.9069	182.7411	0.0000	0.0000	182.7411
2	Left Flange		27.8107	0.8740	24.3065	7.0813	7.1860	1436.1045	1443.1858
	Right Flange		27.8107	15.2460	424.0016	7.0813	7.1860	1436.1045	1443.1858
Total			69.38		559.22	196.90		2872.21	3069.11
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties				
x-bar =	8.0600	in	S _{right} =	380.78 in ³	x-bar =	8.0600	in	S _{right} =	380.78 in ³
I _y =	3069.11	in ⁴	S _{left} =	380.78 in ³	I _y =	3069.11	in ⁴	S _{left} =	380.78 in ³
C _{right} =	8.0600	in	A =	69.3815 in ²	C _{right} =	8.0600	in	A =	69.3815 in ²
C _{left} =	8.0600	in	r _y =	6.6510 in	C _{left} =	8.0600	in	r _y =	6.6510 in



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam WF14x 237

- $A_1 = t_w = 1.0900$ in
- $A_2 = t_f = 1.7480$ in
- $B_1 = d = 16.1200$ in
- $B_2 = b_f = 15.9100$ in



Member U132-L133

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		13.7602	7.9550	109.4621	1.3624	0.0000	0.0000	1.3624
2	Flange Plates		55.6214	7.9550	442.4679	1173.2774	0.0000	0.0000	1173.2774
Total			69.38		551.93	1174.64		0.00	1174.64
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	7.9550	in	$S_{top} = 147.66$	in ³	y-bar =	7.9550	in	$S_{top} = 147.66$	in ³		
$I_x =$	1174.64	in ⁴	$S_{bott.} = 147.66$	in ³	$I_x =$	1174.64	in ⁴	$S_{bott.} = 147.66$	in ³		
$c_{top} =$	7.9550	in	A =	69.3815	in ²	$c_{top} =$	7.9550	in	A =	69.3815	in ²
$c_{bottom} =$	7.9550	in	$r_x =$	4.1146	in	$c_{bottom} =$	7.9550	in	$r_x =$	4.1146	in



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		13.7602	8.0600	110.9069	182.7411	0.0000	0.0000	182.7411
2	Left Flange		27.8107	0.8740	24.3065	7.0813	7.1860	1436.1045	1443.1858
	Right Flange		27.8107	15.2460	424.0016	7.0813	7.1860	1436.1045	1443.1858
Total			69.38		559.22	196.90		2872.21	3069.11
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	8.0600	in	S _{right} =	380.78	in ³	x-bar =	8.0600	in	S _{right} =	380.78	in ³
I _y =	3069.11	in ⁴	S _{left} =	380.78	in ³	I _y =	3069.11	in ⁴	S _{left} =	380.78	in ³
C _{right} =	8.0600	in	A =	69.3815	in ²	C _{right} =	8.0600	in	A =	69.3815	in ²
C _{left} =	8.0600	in	r _y =	6.6510	in	C _{left} =	8.0600	in	r _y =	6.6510	in



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/25/2012

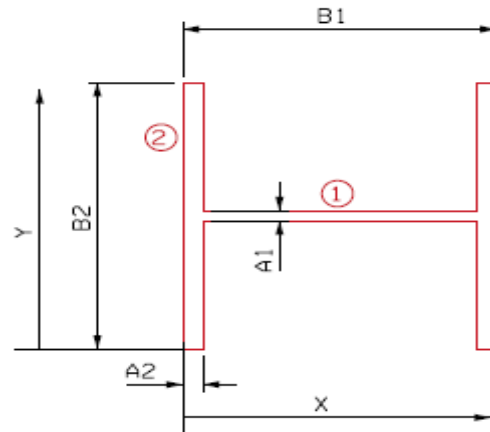
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam WF14x 193

- $A_1 = t_w = 0.8900$ in
- $A_2 = t_f = 1.4380$ in
- $B_1 = d = 15.5000$ in
- $B_2 = b_f = 15.7100$ in



Member U133-L134

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		11.2354	7.8550	88.2538	0.7416	0.0000	0.0000	0.7416
2	Flange Plates		45.1820	7.8550	354.9043	929.2577	0.0000	0.0000	929.2577
Total			56.42		443.16	930.00		0.00	930.00
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	7.8550	in	$S_{top} = 118.40$	in^3	y-bar =	7.8550	in	$S_{top} = 118.40$	in^3		
$I_x =$	930.00	in^4	$S_{bott.} = 118.40$	in^3	$I_x =$	930.00	in^4	$S_{bott.} = 118.40$	in^3		
$c_{top} =$	7.8550	in	A =	56.4173	in^2	$c_{top} =$	7.8550	in	A =	56.4173	in^2
$c_{bottom} =$	7.8550	in	$r_x =$	4.0601	in	$c_{bottom} =$	7.8550	in	$r_x =$	4.0601	in



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		11.2354	7.7500	87.0740	149.2106	0.0000	0.0000	149.2106
2	Left Flange		22.5910	0.7190	16.2429	3.8929	7.0310	1116.7842	1120.6771
	Right Flange		22.5910	14.7810	333.9173	3.8929	7.0310	1116.7842	1120.6771
Total			56.42		437.23	157.00		2233.57	2390.56
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	7.7500	in	S _{right} =	308.46	in ³	x-bar =	7.7500	in	S _{right} =	308.46	in ³
I _y =	2390.56	in ⁴	S _{left} =	308.46	in ³	I _y =	2390.56	in ⁴	S _{left} =	308.46	in ³
C _{right} =	7.7500	in	A =	56.4173	in ²	C _{right} =	7.7500	in	A =	56.4173	in ²
C _{left} =	7.7500	in	r _y =	6.5094	in	C _{left} =	7.7500	in	r _y =	6.5094	in



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/25/2012

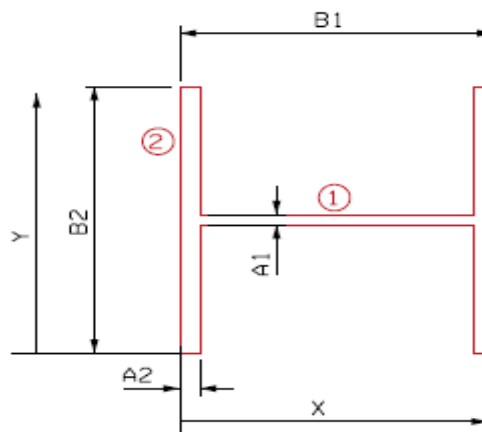
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam WF14x 193

- $A_1 = t_w = 0.8900$ in
- $A_2 = t_f = 1.4380$ in
- $B_1 = d = 15.5000$ in
- $B_2 = b_f = 15.7100$ in



Member U134-L135

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		11.2354	7.8550	88.2538	0.7416	0.0000	0.0000	0.7416
2	Flange Plates		45.1820	7.8550	354.9043	929.2577	0.0000	0.0000	929.2577
Total			56.42		443.16	930.00		0.00	930.00
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	7.8550	in	$S_{top} = 118.40$ in ³	y-bar =	7.8550	in	$S_{top} = 118.40$ in ³
$I_x =$	930.00	in ⁴	$S_{bott.} = 118.40$ in ³	$I_x =$	930.00	in ⁴	$S_{bott.} = 118.40$ in ³
$C_{top} =$	7.8550	in	$A = 56.4173$ in ²	$C_{top} =$	7.8550	in	$A = 56.4173$ in ²
$C_{bottom} =$	7.8550	in	$r_x = 4.0601$ in	$C_{bottom} =$	7.8550	in	$r_x = 4.0601$ in



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		11.2354	7.7500	87.0740	149.2106	0.0000	0.0000	149.2106
2	Left Flange		22.5910	0.7190	16.2429	3.8929	7.0310	1116.7842	1120.6771
	Right Flange		22.5910	14.7810	333.9173	3.8929	7.0310	1116.7842	1120.6771
Total			56.42		437.23	157.00		2233.57	2390.56
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	7.7500	in	S _{right} =	308.46	in ³	x-bar =	7.7500	in	S _{right} =	308.46	in ³
I _y =	2390.56	in ⁴	S _{left} =	308.46	in ³	I _y =	2390.56	in ⁴	S _{left} =	308.46	in ³
C _{right} =	7.7500	in	A =	56.4173	in ²	C _{right} =	7.7500	in	A =	56.4173	in ²
C _{left} =	7.7500	in	r _y =	6.5094	in	C _{left} =	7.7500	in	r _y =	6.5094	in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

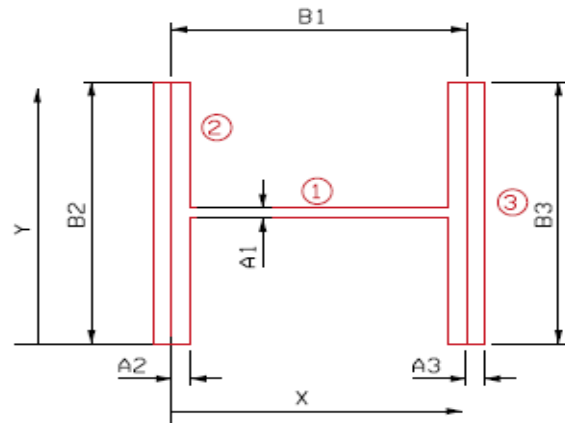
Element Dimensions (without Section Losses):

Rolled Beam CB24x130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.3125$ in
- $B_3 = b = 14.0000$ in



Member U0-L0

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		8.7500	7.0000	61.2500	142.9167	0.0000	0.0000	142.9167
Total			46.53		325.72	551.20		0.00	551.20
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	7.0000	in	$S_{top} = 78.74$	in^3	y-bar =	7.0000	in	$S_{top} = 78.74$	in^3		
$I_x =$	551.20	in^4	$S_{bott.} = 78.74$	in^3	$I_x =$	551.20	in^4	$S_{bott.} = 78.74$	in^3		
$c_{top} =$	7.0000	in	A =	46.5316	in^2	$c_{top} =$	7.0000	in	A =	46.5316	in^2
$c_{bottom} =$	7.0000	in	$r_x =$	3.4418	in	$c_{bottom} =$	7.0000	in	$r_x =$	3.4418	in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y, gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	12.8056	12.4375	159.2699	538.6056	0.0000	0.0000	538.6056	
2	Left Flange	12.4880	0.7585	9.4721	0.8280	11.6790	1703.3512	1704.1792	
	Right Flange	12.4880	24.1165	301.1669	0.8280	11.6790	1703.3512	1704.1792	
3	Left Plate	4.3750	0.1563	0.6836	0.0356	12.2813	659.8773	659.9129	
	Right Plate	4.3750	24.7188	108.1445	0.0356	12.2813	659.8773	659.9129	
Total		46.53		578.74	540.33		4726.46	5266.79	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.4375	in	S _{right} = 423.46 in ³	x-bar =	12.4375	in	S _{right} = 423.46 in ³
I _y =	5266.79	n ⁴	S _{left} = 423.46 in ³	I _y =	5266.79	n ⁴	S _{left} = 423.46 in ³
C _{right} =	12.4375	in	A = 46.5316 in ²	C _{right} =	12.4375	in	A = 46.5316 in ²
C _{left} =	12.4375	in	r _y = 10.6390 in	C _{left} =	12.4375	in	r _y = 10.6390 in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

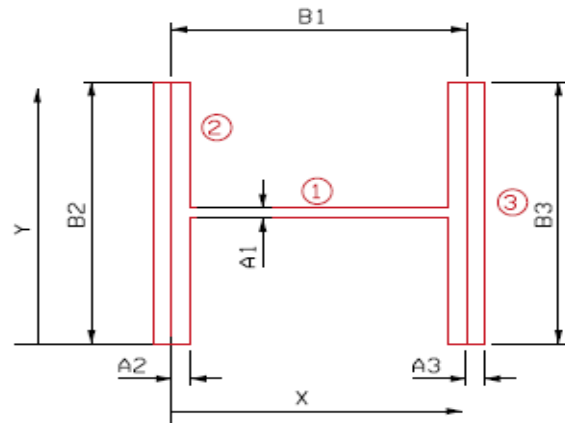
Element Dimensions (without Section Losses):

Rolled Beam CB24x130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.5625$ in
- $B_3 = b = 14.0000$ in



Member U1-L1

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		15.7500	7.0000	110.2500	257.2500	0.0000	0.0000	257.2500
Total			53.53		374.72	665.54		0.00	665.54
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	7.0000	in	$S_{top} = 95.08$	in ³	y-bar =	7.0000	in	$S_{top} = 95.08$	in ³		
$I_x =$	665.54	in ⁴	$S_{bott.} = 95.08$	in ³	$I_x =$	665.54	in ⁴	$S_{bott.} = 95.08$	in ³		
$c_{top} =$	7.0000	in	A =	53.5316	in ²	$c_{top} =$	7.0000	in	A =	53.5316	in ²
$c_{bottom} =$	7.0000	in	$r_x =$	3.5260	in	$c_{bottom} =$	7.0000	in	$r_x =$	3.5260	in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y, gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	12.8056	12.6875	162.4713	538.6056	0.0000	0.0000	538.6056	
2	Left Flange	12.4880	1.0085	12.5941	0.8280	11.6790	1703.3512	1704.1792	
	Right Flange	12.4880	24.3665	304.2889	0.8280	11.6790	1703.3512	1704.1792	
3	Left Plate	7.8750	0.2813	2.2148	0.2076	12.4063	1212.0809	1212.2886	
	Right Plate	7.8750	25.0938	197.6133	0.2076	12.4063	1212.0809	1212.2886	
Total		53.53		679.18	540.68		5830.86	6371.54	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.6875	in	S _{right} = 502.19 in ³	x-bar =	12.6875	in	S _{right} = 502.19 in ³
I _y =	6371.54	n ⁴	S _{left} = 502.19 in ³	I _y =	6371.54	n ⁴	S _{left} = 502.19 in ³
C _{right} =	12.6875	in	A = 53.5316 in ²	C _{right} =	12.6875	in	A = 53.5316 in ²
C _{left} =	12.6875	in	r _y = 10.9098 in	C _{left} =	12.6875	in	r _y = 10.9098 in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

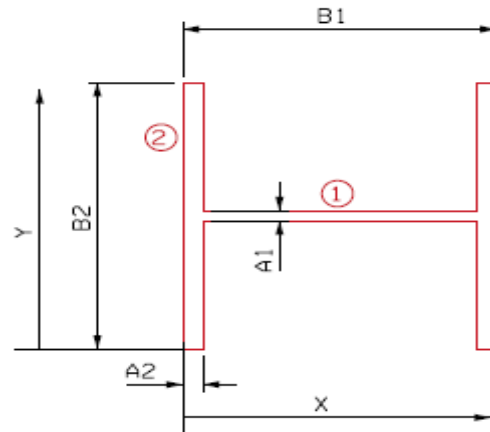
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x140

- $A_1 = t_w = 0.6010$ in
- $A_2 = t_f = 0.9700$ in
- $B_1 = d = 24.4060$ in
- $B_2 = b_f = 14.0310$ in



Member U2-L2

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		13.5021	7.0155	94.7237	0.4064	0.0000	0.0000	0.4064
2	Flange Plates		27.2201	7.0155	190.9629	446.5667	0.0000	0.0000	446.5667
Total			40.72		285.69	446.97		0.00	446.97
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0155	in	$S_{top} =$	63.71	in ³	y-bar =	7.0155	in	$S_{top} =$	63.71	in ³
$I_x =$	446.97	in ⁴	$S_{bott.} =$	63.71	in ³	$I_x =$	446.97	in ⁴	$S_{bott.} =$	63.71	in ³
$C_{top} =$	7.0155	in	A =	40.7222	in ²	$C_{top} =$	7.0155	in	A =	40.7222	in ²
$C_{bottom} =$	7.0155	in	$r_x =$	3.3130	in	$C_{bottom} =$	7.0155	in	$r_x =$	3.3130	in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	13.5021	12.2030	164.7657	567.8982	0.0000	0.0000	567.8982	
2	Left Flange	13.6101	0.4850	6.6009	1.0671	11.7180	1868.8195	1869.8866	
	Right Flange	13.6101	23.9210	325.5665	1.0671	11.7180	1868.8195	1869.8866	
Total		40.72		496.93	570.03		3737.64	4307.67	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.2030	in	S _{right} =	353.00	in ³	x-bar =	12.2030	in	S _{right} =	353.00	in ³
I _y =	4307.67	in ⁴	S _{left} =	353.00	in ³	I _y =	4307.67	in ⁴	S _{left} =	353.00	in ³
C _{right} =	12.2030	in	A =	40.7222	in ²	C _{right} =	12.2030	in	A =	40.7222	in ²
C _{left} =	12.2030	in	r _y =	10.2850	in	C _{left} =	12.2030	in	r _y =	10.2850	in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

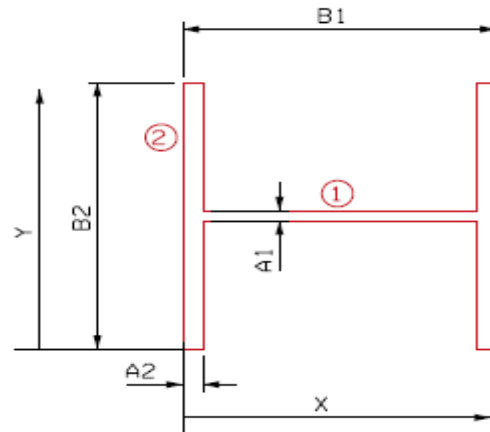
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x100

- $A_1 = t_w = 0.4700$ in
- $A_2 = t_f = 0.7670$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 12.0000$ in



Member U3-L3

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		10.5590	6.0000	63.3541	0.1944	0.0000	0.0000	0.1944
2	Flange Plates		18.4080	6.0000	110.4480	220.8960	0.0000	0.0000	220.8960
Total			28.97		173.80	221.09		0.00	221.09
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0000	in	$S_{top} =$	36.85	in ³	y-bar =	6.0000	in	$S_{top} =$	36.85	in ³
$I_x =$	221.09	in ⁴	$S_{bott.} =$	36.85	in ³	$I_x =$	221.09	in ⁴	$S_{bott.} =$	36.85	in ³
$c_{top} =$	6.0000	in	A =	28.9670	in ²	$c_{top} =$	6.0000	in	A =	28.9670	in ²
$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in	$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	12.0000	126.7082	444.1134	0.0000	0.0000	444.1134
2	Left Flange		9.2040	0.3835	3.5297	0.4512	11.6165	1242.0160	1242.4673
	Right Flange		9.2040	23.6165	217.3663	0.4512	11.6165	1242.0160	1242.4673
Total			28.97		347.60	445.02		2484.03	2929.05
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.0000	in	S _{right} =	244.09	in ³	x-bar =	12.0000	in	S _{right} =	244.09	in ³
I _y =	2929.05	in ⁴	S _{left} =	244.09	in ³	I _y =	2929.05	in ⁴	S _{left} =	244.09	in ³
C _{right} =	12.0000	in	A =	28.9670	in ²	C _{right} =	12.0000	in	A =	28.9670	in ²
C _{left} =	12.0000	in	r _y =	10.0557	in	C _{left} =	12.0000	in	r _y =	10.0557	in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

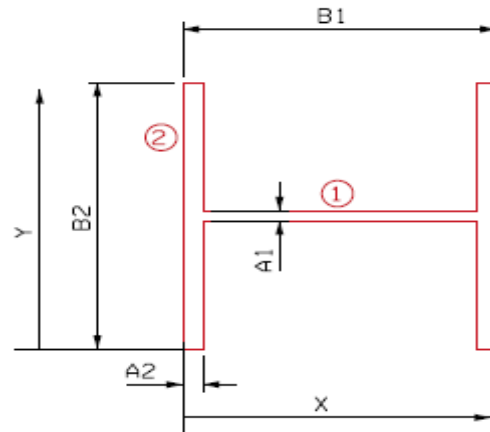
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x100

- $A_1 = t_w = 0.4700$ in
- $A_2 = t_f = 0.7670$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 12.0000$ in



Member U4-L4

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		10.5590	6.0000	63.3541	0.1944	0.0000	0.0000	0.1944
2	Flange Plates		18.4080	6.0000	110.4480	220.8960	0.0000	0.0000	220.8960
Total			28.97		173.80	221.09		0.00	221.09
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0000	in	$S_{top} =$	36.85	in ³	y-bar =	6.0000	in	$S_{top} =$	36.85	in ³
$I_x =$	221.09	in ⁴	$S_{bott.} =$	36.85	in ³	$I_x =$	221.09	in ⁴	$S_{bott.} =$	36.85	in ³
$c_{top} =$	6.0000	in	A =	28.9670	in ²	$c_{top} =$	6.0000	in	A =	28.9670	in ²
$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in	$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	12.0000	126.7082	444.1134	0.0000	0.0000	444.1134
2	Left Flange		9.2040	0.3835	3.5297	0.4512	11.6165	1242.0160	1242.4673
	Right Flange		9.2040	23.6165	217.3663	0.4512	11.6165	1242.0160	1242.4673
Total			28.97		347.60	445.02		2484.03	2929.05
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.0000	in	S _{right} =	244.09	in ³	x-bar =	12.0000	in	S _{right} =	244.09	in ³
I _y =	2929.05	in ⁴	S _{left} =	244.09	in ³	I _y =	2929.05	in ⁴	S _{left} =	244.09	in ³
C _{right} =	12.0000	in	A =	28.9670	in ²	C _{right} =	12.0000	in	A =	28.9670	in ²
C _{left} =	12.0000	in	r _y =	10.0557	in	C _{left} =	12.0000	in	r _y =	10.0557	in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

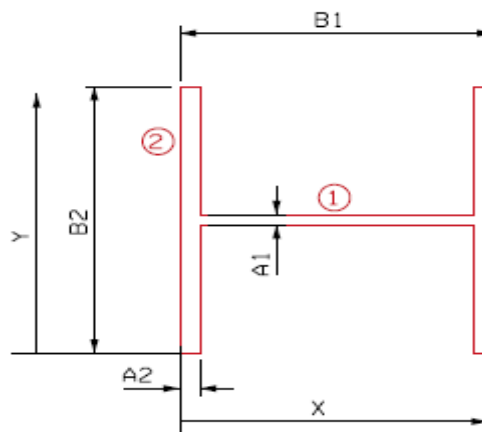
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x74

- $A_1 = t_w = 0.4120$ in
- $A_2 = t_f = 0.6800$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 9.0000$ in



Member U5-L5

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		9.3277	4.5000	41.9746	0.1319	0.0000	0.0000	0.1319
2	Flange Plates		12.2400	4.5000	55.0800	82.6200	0.0000	0.0000	82.6200
Total			21.57		97.05	82.75		0.00	82.75
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties				
y-bar =	4.5000	in	S _{top} =	18.39 in ³	y-bar =	4.5000	in	S _{top} =	18.39 in ³
I _x =	82.75	in ⁴	S _{bottom} =	18.39 in ³	I _x =	82.75	in ⁴	S _{bottom} =	18.39 in ³
c _{top} =	4.5000	in	A =	21.5677 in ²	c _{top} =	4.5000	in	A =	21.5677 in ²
c _{bottom} =	4.5000	in	r _x =	1.9588 in	c _{bottom} =	4.5000	in	r _x =	1.9588 in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		9.3277	12.0000	111.9322	398.4238	0.0000	0.0000	398.4238
2	Left Flange		6.1200	0.3400	2.0808	0.2358	11.6600	832.0483	832.2841
	Right Flange		6.1200	23.6600	144.7992	0.2358	11.6600	832.0483	832.2841
Total			21.57		258.81	398.90		1664.10	2062.99
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.0000	in	S _{right} =	171.92	in ³	x-bar =	12.0000	in	S _{right} =	171.92	in ³
I _y =	2062.99	in ⁴	S _{left} =	171.92	in ³	I _y =	2062.99	in ⁴	S _{left} =	171.92	in ³
C _{right} =	12.0000	in	A =	21.5677	in ²	C _{right} =	12.0000	in	A =	21.5677	in ²
C _{left} =	12.0000	in	r _y =	9.7802	in	C _{left} =	12.0000	in	r _y =	9.7802	in



Made By DWC
Checked By ADK

Date 1/26/2012
Date 2/13/2012

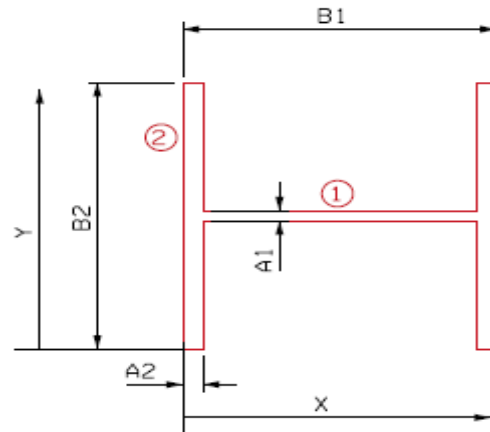
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in



Member U6-L6

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
Total			37.78		264.47	408.29		0.00	408.29
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0625	14.0000	-0.8750	7.0000	-6.1250	-14.2917	0.0000	0.0000	-14.2917
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.88		-6.13	-14.29		0.00	-14.29

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	$S_{top} =$	58.33	in ³	y-bar =	7.0000	in	$S_{top} =$	56.29	in ³
$I_x =$	408.29	in ⁴	$S_{bott.} =$	58.33	in ³	$I_x =$	394.00	in ⁴	$S_{bott.} =$	56.29	in ³
$c_{top} =$	7.0000	in	A =	37.7816	in ²	$c_{top} =$	7.0000	in	A =	36.9066	in ²
$c_{bottom} =$	7.0000	in	$r_x =$	3.2873	in	$c_{bottom} =$	7.0000	in	$r_x =$	3.2673	in



Made By DWC
Checked By ADK

Date 1/26/2012
Date 2/13/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.1250	155.2681	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	0.4460	5.5696	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	23.8040	297.2644	0.8280	11.6790	1703.3512	1704.1792
Total			37.78		458.10	540.26		3406.70	3946.96
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	14.0000	0.0625	-0.8750	0.0313	-0.0273	-0.0003	12.3805	-134.1166	-134.1169
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.88		-0.03	0.00		-134.12	-134.12

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.1250	in	S _{right} =	325.52	in ³	x-bar =	12.4117	in	S _{right} =	322.08	in ³
I _y =	3946.96	in ⁴	S _{left} =	325.52	in ³	I _y =	3812.85	in ⁴	S _{left} =	307.20	in ³
C _{right} =	12.1250	in	A =	37.7816	in ²	C _{right} =	11.8383	in	A =	36.9066	in ²
C _{left} =	12.1250	in	r _y =	10.2210	in	C _{left} =	12.4117	in	r _y =	10.1642	in



Made By NRF
Checked By SFH

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

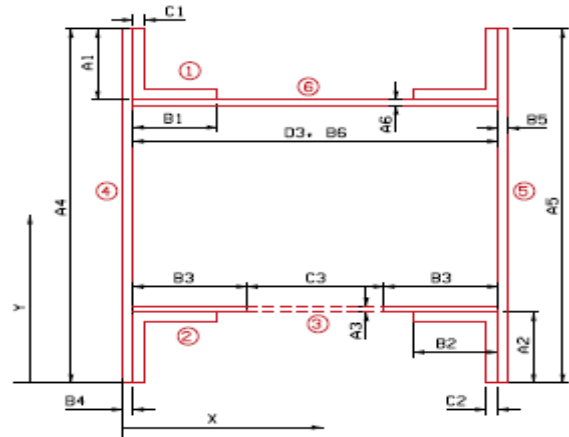
$A_4 = h = 20.0000$ in
 $B_4 = t = 0.6250$ in

Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 0.6250$ in

Cover Plate:

$A_6 = t = 0.3750$ in
 $B_6 = l = 23.5000$ in



Member U7-L7

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	2.7188	16.1875	44.0098	0.0319	5.8612	93.3992	93.4310	
	Vertical Leg	3.0000	18.0000	54.0000	4.0000	7.6737	176.6572	180.6572	
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	6.5138	115.3553	115.3872	
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	8.3263	207.9816	211.9816	
3	Perforated Plate	6.0000	4.2500	25.5000	0.1250	6.0763	221.5282	221.6532	
4	Plate	12.5000	10.0000	125.0000	416.6667	0.3263	1.3309	417.9975	
5	Plate	12.5000	10.0000	125.0000	416.6667	0.3263	1.3309	417.9975	
6	Cover Plate	8.8125	15.8125	139.3477	0.1033	5.4862	265.2425	265.3457	
Total		51.25		529.22	841.63		1082.83	1924.45	
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	
1	0.1250	20.0000	-2.5000	10.0000	-25.0000	-83.3333	0.0004	0.0000	-83.3333
2	0.1250	20.0000	-2.5000	10.0000	-25.0000	-83.3333	0.0004	0.0000	-83.3333
3	23.5000	0.1250	-2.9375	15.6875	-46.0820	-0.0038	5.6871	-95.0092	-95.0130
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-7.94	-96.08	-166.67		-95.01	-261.68	



Made By NRF
Checked By SFH

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	10.3263 in	S _{top} =	198.94 in ³	y-bar =	10.0004 in	S _{top} =	166.28 in ³
I _x =	1924.45 in ⁴	S _{bott.} =	186.36 in ³	I _x =	1662.77 in ⁴	S _{bott.} =	166.27 in ³
C _{top} =	9.6737 in	A =	51.2500 in ²	C _{top} =	9.9996 in	A =	43.3125 in ²
C _{bottom} =	10.3263 in	r _x =	6.1278 in	C _{bottom} =	10.0004 in	r _x =	6.1960 in

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1 (Left)	Horizontal Leg		1.3594	2.8125	3.8232	1.4886	9.5625	124.3032	125.7917
	Vertical Leg		1.5000	0.8125	1.2188	0.0176	11.5625	200.5371	200.5547
1 (Right)	Horizontal Leg		1.3594	21.9375	29.8213	1.4886	9.5625	124.3032	125.7917
	Vertical Leg		1.5000	23.9375	35.9063	0.0176	11.5625	200.5371	200.5547
2 (Left)	Horizontal Leg		1.3594	2.8125	3.8232	1.4886	9.5625	124.3032	125.7917
	Vertical Leg		1.5000	0.8125	1.2188	0.0176	11.5625	200.5371	200.5547
2 (Right)	Horizontal Leg		1.3594	21.9375	29.8213	1.4886	9.5625	124.3032	125.7917
	Vertical Leg		1.5000	23.9375	35.9063	0.0176	11.5625	200.5371	200.5547
3 (Left)	Perforated Plate		3.0000	3.6250	10.8750	9.0000	8.7500	229.6875	238.6875
3 (Right)	Perforated Plate		3.0000	21.1250	63.3750	9.0000	8.7500	229.6875	238.6875
4	Plate		12.5000	0.3125	3.9063	0.4069	12.0625	1818.7988	1819.2057
5	Plate		12.5000	24.4375	305.4688	0.4069	12.0625	1818.7988	1819.2057
6	Cover Plate		8.8125	12.3750	109.0547	405.5586	0.0000	0.0000	405.5586
Total			51.25		634.22	430.40		5396.33	5826.73
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	20.0000	0.1250	-2.5000	0.0625	-0.1563	-0.0033	12.3125	-378.9941	-378.9974
2	20.0000	0.1250	-2.5000	24.6875	-61.7188	-0.0033	12.3125	-378.9941	-378.9974
3	0.1250	23.5000	-2.9375	12.3750	-36.3516	-135.1862	0.0000	0.0000	-135.1862
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-7.94		-98.23	-135.19		-757.99	-893.18

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3750 in	S _{right} =	470.85 in ³	x-bar =	12.3750 in	S _{right} =	398.67 in ³
I _y =	5826.73 in ⁴	S _{left} =	470.85 in ³	I _y =	4933.55 in ⁴	S _{left} =	398.67 in ³
C _{right} =	12.3750 in	A =	51.2500 in ²	C _{right} =	12.3750 in	A =	43.3125 in ²
C _{left} =	12.3750 in	r _y =	10.6627 in	C _{left} =	12.3750 in	r _y =	10.6727 in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

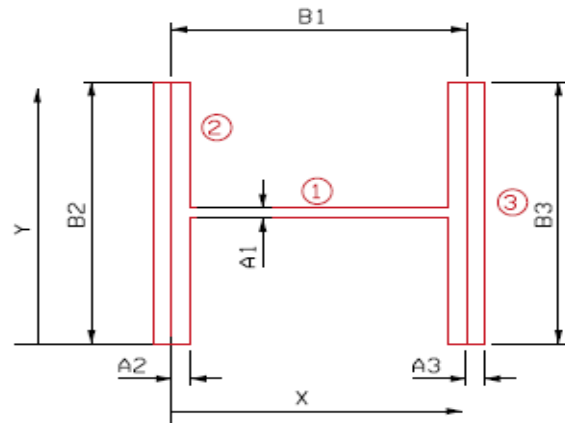
Element Dimensions (without Section Losses):

Rolled Beam CB24x130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.6875$ in
- $B_3 = b = 14.0000$ in



Member U8-L8

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		19.2500	7.0000	134.7500	314.4167	0.0000	0.0000	314.4167
Total			57.03		399.22	722.70		0.00	722.70
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	7.0000	in	$S_{top} = 103.24$	in ³	y-bar =	7.0000	in	$S_{top} = 103.24$	in ³		
$I_x =$	722.70	in ⁴	$S_{bott.} = 103.24$	in ³	$I_x =$	722.70	in ⁴	$S_{bott.} = 103.24$	in ³		
$c_{top} =$	7.0000	in	A =	57.0316	in ²	$c_{top} =$	7.0000	in	A =	57.0316	in ²
$c_{bottom} =$	7.0000	in	$r_x =$	3.5598	in	$c_{bottom} =$	7.0000	in	$r_x =$	3.5598	in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y, gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	12.8056	12.8125	164.0720	538.6056	0.0000	0.0000	538.6056	
2	Left Flange	12.4880	1.1335	14.1551	0.8280	11.6790	1703.3512	1704.1792	
	Right Flange	12.4880	24.4915	305.8499	0.8280	11.6790	1703.3512	1704.1792	
3	Left Plate	9.6250	0.3438	3.3086	0.3791	12.4688	1496.3961	1496.7752	
	Right Plate	9.6250	25.2813	243.3320	0.3791	12.4688	1496.3961	1496.7752	
Total		57.03		730.72	541.02		6399.49	6940.51	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
x-bar =	12.8125	in	S _{right} =	541.70	in ³	x-bar =	12.8125	in	S _{right} =	541.70	in ³
I _y =	6940.51	in ⁴	S _{left} =	541.70	in ³	I _y =	6940.51	in ⁴	S _{left} =	541.70	in ³
C _{right} =	12.8125	in	A =	57.0316	in ²	C _{right} =	12.8125	in	A =	57.0316	in ²
C _{left} =	12.8125	in	r _y =	11.0316	in	C _{left} =	12.8125	in	r _y =	11.0316	in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

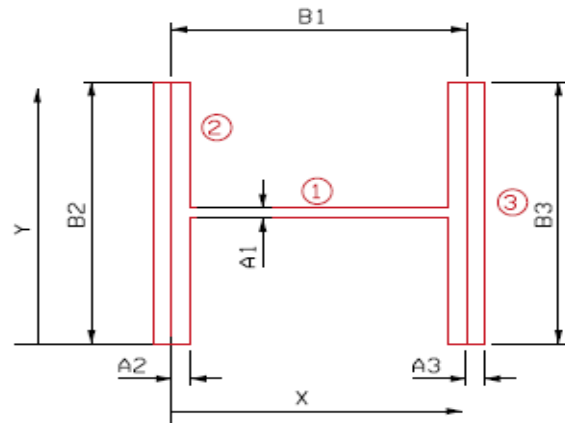
Element Dimensions (without Section Losses):

Rolled Beam CB24x130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.9375$ in
- $B_3 = b = 14.0000$ in



Member U9-L9

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		26.2500	7.0000	183.7500	428.7500	0.0000	0.0000	428.7500
Total			64.03		448.22	837.04		0.00	837.04
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	S _{top} =	119.58	in ³	y-bar =	7.0000	in	S _{top} =	119.58	in ³
I _x =	837.04	in ⁴	S _{bott.} =	119.58	in ³	I _x =	837.04	in ⁴	S _{bott.} =	119.58	in ³
c _{top} =	7.0000	in	A =	64.0316	in ²	c _{top} =	7.0000	in	A =	64.0316	in ²
c _{bottom} =	7.0000	in	r _x =	3.6156	in	c _{bottom} =	7.0000	in	r _x =	3.6156	in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	13.0625	167.2734	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	1.3835	17.2771	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	24.7415	308.9719	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		13.1250	0.4688	6.1523	0.9613	12.5938	2081.6583	2082.6196
	Right Plate		13.1250	25.6563	336.7383	0.9613	12.5938	2081.6583	2082.6196
Total			64.03		836.41	542.18		7570.02	8112.20
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	13.0625	in	S _{right} = 621.03 in ³	x-bar =	13.0625	in	S _{right} = 621.03 in ³
I _y =	8112.20	n ⁴	S _{left} = 621.03 in ³	I _y =	8112.20	n ⁴	S _{left} = 621.03 in ³
C _{right} =	13.0625	in	A = 64.0316 in ²	C _{right} =	13.0625	in	A = 64.0316 in ²
C _{left} =	13.0625	in	r _y = 11.2557 in	C _{left} =	13.0625	in	r _y = 11.2557 in



Made By NRF
Checked By SFH

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

$A_4 = h = 22.0000$ in
 $B_4 = t = 0.8750$ in

Right Web Plate:

$A_5 = h = 22.0000$ in
 $B_5 = t = 0.8750$ in

Cover Plate:

$A_6 = t = 0.3750$ in
 $B_6 = l = 23.5000$ in



Member U10-L10

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	18.1875	49.4473	0.0319	6.8858	128.9074	128.9393
	Vertical Leg	3.0000	20.0000	60.0000	4.0000	8.6983	226.9812	230.9812
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	7.4892	152.4896	152.5215
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	9.3017	259.5649	263.5649
3	Perforated Plate	6.0000	4.2500	25.5000	0.1250	7.0517	298.3589	298.4839
4	Plate	19.2500	11.0000	211.7500	776.4167	0.3017	1.7522	778.1689
5	Plate	19.2500	11.0000	211.7500	776.4167	0.3017	1.7522	778.1689
6	Cover Plate	8.8125	17.8125	156.9727	0.1033	6.5108	373.5663	373.6696
Total		64.75		731.79	1561.13		1443.37	3004.50
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By NRF
Checked By SFH

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	11.3017 in	S _{top} =	280.84 in ³	y-bar =	11.3017 in	S _{top} =	280.84 in ³
I _x =	3004.50 in ⁴	S _{bott.} =	265.84 in ³	I _x =	3004.50 in ⁴	S _{bott.} =	265.84 in ³
C _{top} =	10.6983 in	A =	64.7500 in ²	C _{top} =	10.6983 in	A =	64.7500 in ²
C _{bottom} =	11.3017 in	r _x =	6.8119 in	C _{bottom} =	11.3017 in	r _x =	6.8119 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	3.0625	4.1631	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	1.0625	1.5938	0.0176	11.5625	200.5371	200.5547	
1 (Right)	Horizontal Leg	1.3594	22.1875	30.1611	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	24.1875	36.2813	0.0176	11.5625	200.5371	200.5547	
2 (Left)	Horizontal Leg	1.3594	3.0625	4.1631	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	1.0625	1.5938	0.0176	11.5625	200.5371	200.5547	
2 (Right)	Horizontal Leg	1.3594	22.1875	30.1611	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	24.1875	36.2813	0.0176	11.5625	200.5371	200.5547	
3 (Left)	Perforated Plate	3.0000	3.8750	11.6250	9.0000	8.7500	229.6875	238.6875	
3 (Right)	Perforated Plate	3.0000	21.3750	64.1250	9.0000	8.7500	229.6875	238.6875	
4	Plate	19.2500	0.4375	8.4219	1.2282	12.1875	2859.3018	2860.5299	
5	Plate	19.2500	24.8125	477.6406	1.2282	12.1875	2859.3018	2860.5299	
6	Cover Plate	8.8125	12.6250	111.2578	405.5586	0.0000	0.0000	405.5586	
Total		64.75		817.47	432.04		7477.34	7909.38	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.6250 in	S _{right} =	626.49 in ³	x-bar =	12.6250 in	S _{right} =	626.49 in ³
I _y =	7909.38 in ⁴	S _{left} =	626.49 in ³	I _y =	7909.38 in ⁴	S _{left} =	626.49 in ³
C _{right} =	12.6250 in	A =	64.7500 in ²	C _{right} =	12.6250 in	A =	64.7500 in ²
C _{left} =	12.6250 in	r _y =	11.0523 in	C _{left} =	12.6250 in	r _y =	11.0523 in



Made By NRF
Checked By SFH

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.6250$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

$A_4 = h = 20.0000$ in
 $B_4 = t = 0.5000$ in

Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 0.5000$ in

Cover Plate:

$A_6 = t = 0.5000$ in
 $B_6 = l = 23.5000$ in



Member U11-L11

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	16.1875	44.0098	0.0319	5.6961	88.2123	88.2442
	Vertical Leg	3.0000	18.0000	54.0000	4.0000	7.5086	169.1386	173.1386
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	6.6789	121.2761	121.3079
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	8.4914	216.3100	220.3100
3	Perforated Plate	7.5000	4.3125	32.3438	0.2441	6.1789	286.3381	286.5823
4	Plate	10.0000	10.0000	100.0000	333.3333	0.4914	2.4144	335.7478
5	Plate	10.0000	10.0000	100.0000	333.3333	0.4914	2.4144	335.7478
6	Cover Plate	11.7500	15.7500	185.0625	0.2448	5.2586	324.9251	325.1699
Total		50.69		531.78	675.22		1211.03	1886.25
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By NRF
Checked By SFH

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	10.4914	in	S _{top} =	198.37	in ³	y-bar =	10.4914	in	S _{top} =	198.37	in ³
I _x =	1886.25	in ⁴	S _{bott.} =	179.79	in ³	I _x =	1886.25	in ⁴	S _{bott.} =	179.79	in ³
C _{top} =	9.5086	in	A =	50.6875	in ²	C _{top} =	9.5086	in	A =	50.6875	in ²
C _{bottom} =	10.4914	in	r _x =	6.1003	in	C _{bottom} =	10.4914	in	r _x =	6.1003	in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	2.6875	3.6533	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.6875	1.0313	0.0176	11.5625	200.5371	200.5547	
1 (Right)	Horizontal Leg	1.3594	21.8125	29.6514	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.8125	35.7188	0.0176	11.5625	200.5371	200.5547	
2 (Left)	Horizontal Leg	1.3594	2.6875	3.6533	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.6875	1.0313	0.0176	11.5625	200.5371	200.5547	
2 (Right)	Horizontal Leg	1.3594	21.8125	29.6514	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.8125	35.7188	0.0176	11.5625	200.5371	200.5547	
3 (Left)	Perforated Plate	3.7500	3.5000	13.1250	11.2500	8.7500	287.1094	298.3594	
3 (Right)	Perforated Plate	3.7500	21.0000	78.7500	11.2500	8.7500	287.1094	298.3594	
4	Plate	10.0000	0.2500	2.5000	0.2083	12.0000	1440.0000	1440.2083	
5	Plate	10.0000	24.2500	242.5000	0.2083	12.0000	1440.0000	1440.2083	
6	Cover Plate	11.7500	12.2500	143.9375	540.7448	0.0000	0.0000	540.7448	
Total		50.69		620.92	569.69		4753.58	5323.27	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
x-bar =	12.2500	in	S _{right} =	434.55	in ³	x-bar =	12.2500	in	S _{right} =	434.55	in ³
I _y =	5323.27	in ⁴	S _{left} =	434.55	in ³	I _y =	5323.27	in ⁴	S _{left} =	434.55	in ³
C _{right} =	12.2500	in	A =	50.6875	in ²	C _{right} =	12.2500	in	A =	50.6875	in ²
C _{left} =	12.2500	in	r _y =	10.2480	in	C _{left} =	12.2500	in	r _y =	10.2480	in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x160

- $A_1 = t_w = 0.6650$ in
- $A_2 = t_f = 1.1240$ in
- $B_1 = d = 24.7140$ in
- $B_2 = b_f = 14.0950$ in



Member U12-L12

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		14.9399	7.0475	105.2889	0.5506	0.0000	0.0000	0.5506
2	Flange Plates		31.6856	7.0475	223.3040	524.5783	0.0000	0.0000	524.5783
Total			46.63		328.59	525.13		0.00	525.13
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	7.0475	in	$S_{top} = 74.51$	in^3	y-bar =	7.0475	in	$S_{top} = 74.51$	in^3		
$I_x =$	525.13	in^4	$S_{bott.} = 74.51$	in^3	$I_x =$	525.13	in^4	$S_{bott.} = 74.51$	in^3		
$c_{top} =$	7.0475	in	A =	46.6255	in^2	$c_{top} =$	7.0475	in	A =	46.6255	in^2
$c_{bottom} =$	7.0475	in	$r_x =$	3.3560	in	$c_{bottom} =$	7.0475	in	$r_x =$	3.3560	in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	12.3570	184.6122	628.3732	0.0000	0.0000	628.3732
2	Left Flange		15.8428	0.5620	8.9036	1.6679	11.7950	2204.0796	2205.7476
	Right Flange		15.8428	24.1520	382.6348	1.6679	11.7950	2204.0796	2205.7476
Total			46.63		576.15	631.71		4408.16	5039.87
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3570	in	S _{right} = 407.86 in ³	x-bar =	12.3570	in	S _{right} = 407.86 in ³
I _y =	5039.87	in ⁴	S _{left} = 407.86 in ³	I _y =	5039.87	in ⁴	S _{left} = 407.86 in ³
C _{right} =	12.3570	in	A = 46.6255 in ²	C _{right} =	12.3570	in	A = 46.6255 in ²
C _{left} =	12.3570	in	r _y = 10.3968 in	C _{left} =	12.3570	in	r _y = 10.3968 in



Made By DWC
Checked By KMW

Date 1/30/2012
Date 2/8/2012

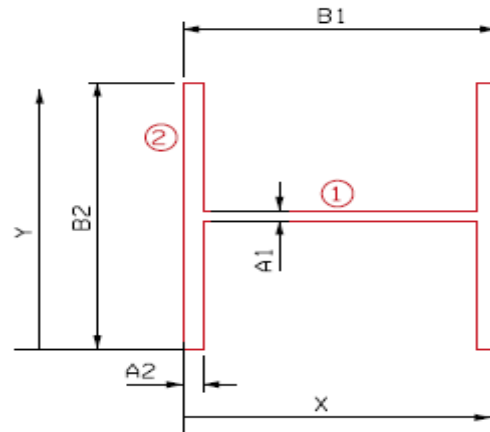
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in



Member U13-L13

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
Total			37.78		264.47	408.29		0.00	408.29
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1250	12.0000	-1.5000	7.0000	-10.5000	-18.0000	0.0000	0.0000	-18.0000
2	0.0625	14.0000	-0.8750	7.0000	-6.1250	-14.2917	0.0000	0.0000	-14.2917
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.38		-16.63	-32.29		0.00	-32.29

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	$S_{top} =$	58.33	in ³	y-bar =	7.0000	in	$S_{top} =$	53.71	in ³
$I_x =$	408.29	in ⁴	$S_{bott.} =$	58.33	in ³	$I_x =$	376.00	in ⁴	$S_{bott.} =$	53.71	in ³
$c_{top} =$	7.0000	in	A =	37.7816	in ²	$c_{top} =$	7.0000	in	A =	35.4066	in ²
$c_{bottom} =$	7.0000	in	$r_x =$	3.2873	in	$c_{bottom} =$	7.0000	in	$r_x =$	3.2587	in



Made By DWC
Checked By KMW

Date 1/30/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.1250	155.2681	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	0.4460	5.5696	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	23.8040	297.2644	0.8280	11.6790	1703.3512	1704.1792
Total			37.78		458.10	540.26		3406.70	3946.96
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	12.0000	0.1250	-1.5000	24.1875	-36.2813	-0.0020	12.2747	-226.0008	-226.0027
2	14.0000	0.0625	-0.8750	0.0313	-0.0273	-0.0003	11.8816	-123.5257	-123.5260
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.38		-36.31	0.00		-349.53	-349.53

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.1250	in	S _{right} =	325.52	in ³	x-bar =	11.9128	in	S _{right} =	291.59	in ³
I _y =	3946.96	in ⁴	S _{left} =	325.52	in ³	I _y =	3597.44	in ⁴	S _{left} =	301.98	in ³
c _{right} =	12.1250	in	A =	37.7816	in ²	c _{right} =	12.3372	in	A =	35.4066	in ²
c _{left} =	12.1250	in	r _y =	10.2210	in	c _{left} =	11.9128	in	r _y =	10.0799	in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x100

- $A_1 = t_w = 0.4700$ in
- $A_2 = t_f = 0.7670$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 12.0000$ in



Member U14-L14

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		10.5590	6.0000	63.3541	0.1944	0.0000	0.0000	0.1944
2	Flange Plates		18.4080	6.0000	110.4480	220.8960	0.0000	0.0000	220.8960
Total			28.97		173.80	221.09		0.00	221.09
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0000	in	$S_{top} =$	36.85	in ³	y-bar =	6.0000	in	$S_{top} =$	36.85	in ³
$I_x =$	221.09	in ⁴	$S_{bott.} =$	36.85	in ³	$I_x =$	221.09	in ⁴	$S_{bott.} =$	36.85	in ³
$c_{top} =$	6.0000	in	A =	28.9670	in ²	$c_{top} =$	6.0000	in	A =	28.9670	in ²
$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in	$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	12.0000	126.7082	444.1134	0.0000	0.0000	444.1134
2	Left Flange		9.2040	0.3835	3.5297	0.4512	11.6165	1242.0160	1242.4673
	Right Flange		9.2040	23.6165	217.3663	0.4512	11.6165	1242.0160	1242.4673
Total			28.97		347.60	445.02		2484.03	2929.05
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.0000	in	S _{right} =	244.09	in ³	x-bar =	12.0000	in	S _{right} =	244.09	in ³
I _y =	2929.05	in ⁴	S _{left} =	244.09	in ³	I _y =	2929.05	in ⁴	S _{left} =	244.09	in ³
C _{right} =	12.0000	in	A =	28.9670	in ²	C _{right} =	12.0000	in	A =	28.9670	in ²
C _{left} =	12.0000	in	r _y =	10.0557	in	C _{left} =	12.0000	in	r _y =	10.0557	in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

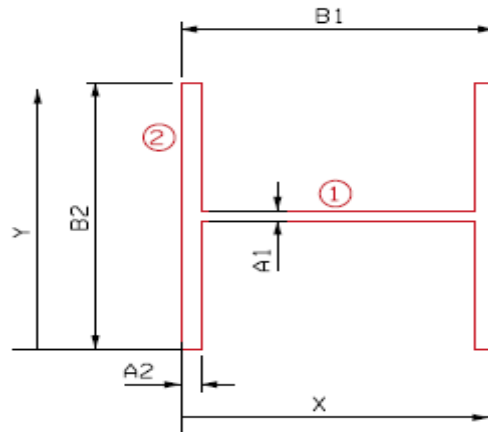
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x74

- $A_1 = t_w = 0.4120$ in
- $A_2 = t_f = 0.6800$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 9.0000$ in



Member U15-L15

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		9.3277	4.5000	41.9746	0.1319	0.0000	0.0000	0.1319
2	Flange Plates		12.2400	4.5000	55.0800	82.6200	0.0000	0.0000	82.6200
Total			21.57		97.05	82.75		0.00	82.75
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	4.5000	in	S _{top} = 18.39 in ³	y-bar =	4.5000	in	S _{top} = 18.39 in ³
I _x =	82.75	in ⁴	S _{bottom} = 18.39 in ³	I _x =	82.75	in ⁴	S _{bottom} = 18.39 in ³
c _{top} =	4.5000	in	A = 21.5677 in ²	c _{top} =	4.5000	in	A = 21.5677 in ²
c _{bottom} =	4.5000	in	r _x = 1.9588 in	c _{bottom} =	4.5000	in	r _x = 1.9588 in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		9.3277	12.0000	111.9322	398.4238	0.0000	0.0000	398.4238
2	Left Flange		6.1200	0.3400	2.0808	0.2358	11.6600	832.0483	832.2841
	Right Flange		6.1200	23.6600	144.7992	0.2358	11.6600	832.0483	832.2841
Total			21.57		258.81	398.90		1664.10	2062.99
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.0000	in	S _{right} =	171.92	in ³	x-bar =	12.0000	in	S _{right} =	171.92	in ³
I _y =	2062.99	in ⁴	S _{left} =	171.92	in ³	I _y =	2062.99	in ⁴	S _{left} =	171.92	in ³
C _{right} =	12.0000	in	A =	21.5677	in ²	C _{right} =	12.0000	in	A =	21.5677	in ²
C _{left} =	12.0000	in	r _y =	9.7802	in	C _{left} =	12.0000	in	r _y =	9.7802	in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

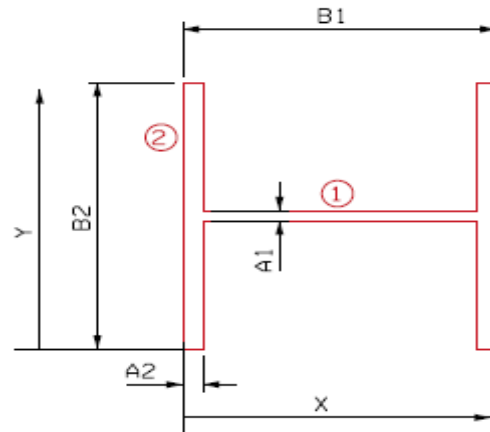
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x100

- $A_1 = t_w = 0.4700$ in
- $A_2 = t_f = 0.7670$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 12.0000$ in



Member U16-L16

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		10.5590	6.0000	63.3541	0.1944	0.0000	0.0000	0.1944
2	Flange Plates		18.4080	6.0000	110.4480	220.8960	0.0000	0.0000	220.8960
Total			28.97		173.80	221.09		0.00	221.09
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0000	in	$S_{top} =$	36.85	in ³	y-bar =	6.0000	in	$S_{top} =$	36.85	in ³
$I_x =$	221.09	in ⁴	$S_{bott.} =$	36.85	in ³	$I_x =$	221.09	in ⁴	$S_{bott.} =$	36.85	in ³
$c_{top} =$	6.0000	in	A =	28.9670	in ²	$c_{top} =$	6.0000	in	A =	28.9670	in ²
$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in	$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	12.0000	126.7082	444.1134	0.0000	0.0000	444.1134
2	Left Flange		9.2040	0.3835	3.5297	0.4512	11.6165	1242.0160	1242.4673
	Right Flange		9.2040	23.6165	217.3663	0.4512	11.6165	1242.0160	1242.4673
Total			28.97		347.60	445.02		2484.03	2929.05
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.0000	in	S _{right} =	244.09	in ³	x-bar =	12.0000	in	S _{right} =	244.09	in ³
I _y =	2929.05	in ⁴	S _{left} =	244.09	in ³	I _y =	2929.05	in ⁴	S _{left} =	244.09	in ³
C _{right} =	12.0000	in	A =	28.9670	in ²	C _{right} =	12.0000	in	A =	28.9670	in ²
C _{left} =	12.0000	in	r _y =	10.0557	in	C _{left} =	12.0000	in	r _y =	10.0557	in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in



Member U17-L17

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
Total			37.78		264.47	408.29		0.00	408.29
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	7.0000	in	$S_{top} = 58.33$ in ³	y-bar =	7.0000	in	$S_{top} = 58.33$ in ³
$I_x =$	408.29	in ⁴	$S_{bott.} = 58.33$ in ³	$I_x =$	408.29	in ⁴	$S_{bott.} = 58.33$ in ³
$c_{top} =$	7.0000	in	$A = 37.7816$ in ²	$c_{top} =$	7.0000	in	$A = 37.7816$ in ²
$c_{bottom} =$	7.0000	in	$r_x = 3.2873$ in	$c_{bottom} =$	7.0000	in	$r_x = 3.2873$ in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.1250	155.2681	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	0.4460	5.5696	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	23.8040	297.2644	0.8280	11.6790	1703.3512	1704.1792
Total			37.78		458.10	540.26		3406.70	3946.96
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.1250	in	S _{right} =	325.52	in ³	x-bar =	12.1250	in	S _{right} =	325.52	in ³
I _y =	3946.96	in ⁴	S _{left} =	325.52	in ³	I _y =	3946.96	in ⁴	S _{left} =	325.52	in ³
C _{right} =	12.1250	in	A =	37.7816	in ²	C _{right} =	12.1250	in	A =	37.7816	in ²
C _{left} =	12.1250	in	r _y =	10.2210	in	C _{left} =	12.1250	in	r _y =	10.2210	in



Made By DWC
Checked By KMW

Date 1/30/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x160

- $A_1 = t_w = 0.6650$ in
- $A_2 = t_f = 1.1240$ in
- $B_1 = d = 24.7140$ in
- $B_2 = b_f = 14.0950$ in



Member U18-L18

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		14.9399	7.0475	105.2889	0.5506	0.0000	0.0000	0.5506
2	Flange Plates		31.6856	7.0475	223.3040	524.5783	0.0000	0.0000	524.5783
Total			46.63		328.59	525.13		0.00	525.13
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0625	14.0950	-0.8809	7.0475	-6.2084	-14.5846	0.1461	-0.0188	-14.6034
2	0.0625	14.0950	-0.8809	7.0475	-6.2084	-14.5846	0.1461	-0.0188	-14.6034
3	0.1250	6.3825	-0.7978	3.1913	-2.5460	-2.7083	4.0023	-12.7799	-15.4882
4	0.1250	6.3825	-0.7978	3.1913	-2.5460	-2.7083	4.0023	-12.7799	-15.4882
5	6.0000	0.0625	-0.3750	6.7463	-2.5298	-0.0001	0.4473	-0.0750	-0.0752
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-3.73		-20.04	-34.59		-25.67	-60.26

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	7.0475	in	$S_{top} = 74.51$	in^3	y-bar =	7.1936	in	$S_{top} = 67.36$	in^3		
$I_x =$	525.13	in^4	$S_{bott.} = 74.51$	in^3	$I_x =$	464.87	in^4	$S_{bott.} = 64.62$	in^3		
$c_{top} =$	7.0475	in	A =	46.6255	in^2	$c_{top} =$	6.9014	in	A =	42.8930	in^2
$c_{bottom} =$	7.0475	in	$r_x =$	3.3560	in	$c_{bottom} =$	7.1936	in	$r_x =$	3.2921	in



Made By DWC
Checked By KMW

Date 1/30/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	12.3570	184.6122	628.3732	0.0000	0.0000	628.3732
2	Left Flange		15.8428	0.5620	8.9036	1.6679	11.7950	2204.0796	2205.7476
	Right Flange		15.8428	24.1520	382.6348	1.6679	11.7950	2204.0796	2205.7476
Total			46.63		576.15	631.71		4408.16	5039.87
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	14.0950	0.0625	-0.8809	0.0313	-0.0275	-0.0003	12.3258	-133.8356	-133.8359
2	14.0950	0.0625	-0.8809	24.6828	-21.7440	-0.0003	12.3258	-133.8356	-133.8359
3	6.3825	0.1250	-0.7978	1.0615	-0.8469	-0.0010	11.2955	-101.7916	-101.7926
4	6.3825	0.1250	-0.7978	23.6525	-18.8703	-0.0010	11.2955	-101.7916	-101.7926
5	0.0625	6.0000	-0.3750	12.3570	-4.6339	-1.1250	0.0000	0.0000	-1.1250
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-3.73		-46.12	-1.13		-471.25	-472.38

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3570	in	S _{right} = 407.86 in ³	x-bar =	12.3570	in	S _{right} = 369.63 in ³
I _y =	5039.87	in ⁴	S _{left} = 407.86 in ³	I _y =	4567.49	in ⁴	S _{left} = 369.63 in ³
C _{right} =	12.3570	in	A = 46.6255 in ²	C _{right} =	12.3570	in	A = 42.8930 in ²
C _{left} =	12.3570	in	r _y = 10.3968 in	C _{left} =	12.3570	in	r _y = 10.3192 in



Made By NRF
Checked By SFH

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.6250$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

$A_4 = h = 20.0000$ in
 $B_4 = t = 0.5000$ in

Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 0.5000$ in

Cover Plate:

$A_6 = t = 0.5000$ in
 $B_6 = l = 23.5000$ in



Member U19-L19

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	16.1875	44.0098	0.0319	5.6961	88.2123	88.2442
	Vertical Leg	3.0000	18.0000	54.0000	4.0000	7.5086	169.1386	173.1386
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	6.6789	121.2761	121.3079
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	8.4914	216.3100	220.3100
3	Perforated Plate	7.5000	4.3125	32.3438	0.2441	6.1789	286.3381	286.5823
4	Plate	10.0000	10.0000	100.0000	333.3333	0.4914	2.4144	335.7478
5	Plate	10.0000	10.0000	100.0000	333.3333	0.4914	2.4144	335.7478
6	Cover Plate	11.7500	15.7500	185.0625	0.2448	5.2586	324.9251	325.1699
Total		50.69		531.78	675.22		1211.03	1886.25
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By NRF
Checked By SFH

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	10.4914 in	S _{top} =	198.37 in ³	y-bar =	10.4914 in	S _{top} =	198.37 in ³
I _x =	1886.25 in ⁴	S _{bott.} =	179.79 in ³	I _x =	1886.25 in ⁴	S _{bott.} =	179.79 in ³
C _{top} =	9.5086 in	A =	50.6875 in ²	C _{top} =	9.5086 in	A =	50.6875 in ²
C _{bottom} =	10.4914 in	r _x =	6.1003 in	C _{bottom} =	10.4914 in	r _x =	6.1003 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	2.6875	3.6533	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.6875	1.0313	0.0176	11.5625	200.5371	200.5547	
1 (Right)	Horizontal Leg	1.3594	21.8125	29.6514	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.8125	35.7188	0.0176	11.5625	200.5371	200.5547	
2 (Left)	Horizontal Leg	1.3594	2.6875	3.6533	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.6875	1.0313	0.0176	11.5625	200.5371	200.5547	
2 (Right)	Horizontal Leg	1.3594	21.8125	29.6514	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.8125	35.7188	0.0176	11.5625	200.5371	200.5547	
3 (Left)	Perforated Plate	3.7500	3.5000	13.1250	11.2500	8.7500	287.1094	298.3594	
3 (Right)	Perforated Plate	3.7500	21.0000	78.7500	11.2500	8.7500	287.1094	298.3594	
4	Plate	10.0000	0.2500	2.5000	0.2083	12.0000	1440.0000	1440.2083	
5	Plate	10.0000	24.2500	242.5000	0.2083	12.0000	1440.0000	1440.2083	
6	Cover Plate	11.7500	12.2500	143.9375	540.7448	0.0000	0.0000	540.7448	
Total		50.69		620.92	569.69		4753.58	5323.27	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2500 in	S _{right} =	434.55 in ³	x-bar =	12.2500 in	S _{right} =	434.55 in ³
I _y =	5323.27 in ⁴	S _{left} =	434.55 in ³	I _y =	5323.27 in ⁴	S _{left} =	434.55 in ³
C _{right} =	12.2500 in	A =	50.6875 in ²	C _{right} =	12.2500 in	A =	50.6875 in ²
C _{left} =	12.2500 in	r _y =	10.2480 in	C _{left} =	12.2500 in	r _y =	10.2480 in



Made By NRF
Checked By SFH

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

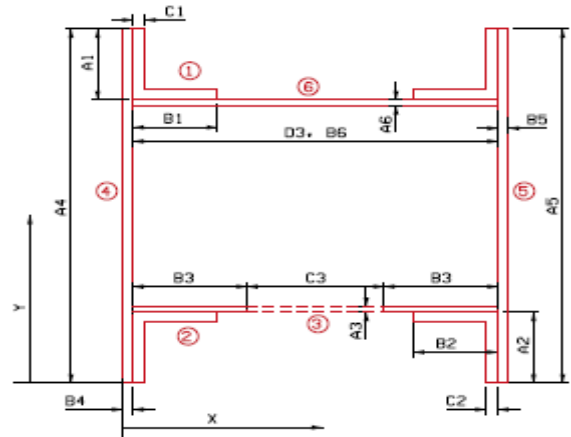
$A_4 = h = 22.0000$ in
 $B_4 = t = 0.8750$ in

Right Web Plate:

$A_5 = h = 22.0000$ in
 $B_5 = t = 0.8750$ in

Cover Plate:

$A_6 = t = 0.3750$ in
 $B_6 = l = 23.5000$ in



Member U20-L20

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	18.1875	49.4473	0.0319	6.8858	128.9074	128.9393
	Vertical Leg	3.0000	20.0000	60.0000	4.0000	8.6983	226.9812	230.9812
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	7.4892	152.4896	152.5215
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	9.3017	259.5649	263.5649
3	Perforated Plate	6.0000	4.2500	25.5000	0.1250	7.0517	298.3589	298.4839
4	Plate	19.2500	11.0000	211.7500	776.4167	0.3017	1.7522	778.1689
5	Plate	19.2500	11.0000	211.7500	776.4167	0.3017	1.7522	778.1689
6	Cover Plate	8.8125	17.8125	156.9727	0.1033	6.5108	373.5663	373.6696
Total		64.75		731.79	1561.13		1443.37	3004.50
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By NRF
Checked By SFH

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	11.3017 in	S _{top} =	280.84 in ³	y-bar =	11.3017 in	S _{top} =	280.84 in ³
I _x =	3004.50 in ⁴	S _{bott.} =	265.84 in ³	I _x =	3004.50 in ⁴	S _{bott.} =	265.84 in ³
C _{top} =	10.6983 in	A =	64.7500 in ²	C _{top} =	10.6983 in	A =	64.7500 in ²
C _{bottom} =	11.3017 in	r _x =	6.8119 in	C _{bottom} =	11.3017 in	r _x =	6.8119 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	3.0625	4.1631	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	1.0625	1.5938	0.0176	11.5625	200.5371	200.5547	
1 (Right)	Horizontal Leg	1.3594	22.1875	30.1611	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	24.1875	36.2813	0.0176	11.5625	200.5371	200.5547	
2 (Left)	Horizontal Leg	1.3594	3.0625	4.1631	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	1.0625	1.5938	0.0176	11.5625	200.5371	200.5547	
2 (Right)	Horizontal Leg	1.3594	22.1875	30.1611	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	24.1875	36.2813	0.0176	11.5625	200.5371	200.5547	
3 (Left)	Perforated Plate	3.0000	3.8750	11.6250	9.0000	8.7500	229.6875	238.6875	
3 (Right)	Perforated Plate	3.0000	21.3750	64.1250	9.0000	8.7500	229.6875	238.6875	
4	Plate	19.2500	0.4375	8.4219	1.2282	12.1875	2859.3018	2860.5299	
5	Plate	19.2500	24.8125	477.6406	1.2282	12.1875	2859.3018	2860.5299	
6	Cover Plate	8.8125	12.6250	111.2578	405.5586	0.0000	0.0000	405.5586	
Total		64.75		817.47	432.04		7477.34	7909.38	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.6250 in	S _{right} =	626.49 in ³	x-bar =	12.6250 in	S _{right} =	626.49 in ³
I _y =	7909.38 in ⁴	S _{left} =	626.49 in ³	I _y =	7909.38 in ⁴	S _{left} =	626.49 in ³
C _{right} =	12.6250 in	A =	64.7500 in ²	C _{right} =	12.6250 in	A =	64.7500 in ²
C _{left} =	12.6250 in	r _y =	11.0523 in	C _{left} =	12.6250 in	r _y =	11.0523 in



Made By NRF
Checked By SFH

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_t = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_t = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

$A_4 = h = 20.0000$ in
 $B_4 = t = 0.5000$ in

Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 0.5000$ in

Cover Plate:

$A_6 = t = 0.3750$ in
 $B_6 = l = 23.5000$ in



Member U21-L21

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	16.1875	44.0098	0.0319	5.8259	92.2783	92.3102
	Vertical Leg	3.0000	18.0000	54.0000	4.0000	7.6384	175.0368	179.0368
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	6.5491	116.6081	116.6399
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	8.3616	209.7476	213.7476
3	Perforated Plate	6.0000	4.2500	25.5000	0.1250	6.1116	224.1078	224.2328
4	Plate	10.0000	10.0000	100.0000	333.3333	0.3616	1.3073	334.6407
5	Plate	10.0000	10.0000	100.0000	333.3333	0.3616	1.3073	334.6407
6	Cover Plate	8.8125	15.8125	139.3477	0.1033	5.4509	261.8425	261.9458
Total		46.25		479.22	674.96		1082.24	1757.19
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By NRF
Checked By SFH

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	10.3616 in	S _{top} =	182.31 in ³	y-bar =	10.3616 in	S _{top} =	182.31 in ³
I _x =	1757.19 in ⁴	S _{bott.} =	169.59 in ³	I _x =	1757.19 in ⁴	S _{bott.} =	169.59 in ³
C _{top} =	9.6384 in	A =	46.2500 in ²	C _{top} =	9.6384 in	A =	46.2500 in ²
C _{bottom} =	10.3616 in	r _x =	6.1639 in	C _{bottom} =	10.3616 in	r _x =	6.1639 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	2.6875	3.6533	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.6875	1.0313	0.0176	11.5625	200.5371	200.5547	
1 (Right)	Horizontal Leg	1.3594	21.8125	29.6514	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.8125	35.7188	0.0176	11.5625	200.5371	200.5547	
2 (Left)	Horizontal Leg	1.3594	2.6875	3.6533	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.6875	1.0313	0.0176	11.5625	200.5371	200.5547	
2 (Right)	Horizontal Leg	1.3594	21.8125	29.6514	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.8125	35.7188	0.0176	11.5625	200.5371	200.5547	
3 (Left)	Perforated Plate	3.0000	3.5000	10.5000	9.0000	8.7500	229.6875	238.6875	
3 (Right)	Perforated Plate	3.0000	21.0000	63.0000	9.0000	8.7500	229.6875	238.6875	
4	Plate	10.0000	0.2500	2.5000	0.2083	12.0000	1440.0000	1440.2083	
5	Plate	10.0000	24.2500	242.5000	0.2083	12.0000	1440.0000	1440.2083	
6	Cover Plate	8.8125	12.2500	107.9531	405.5586	0.0000	0.0000	405.5586	
Total		46.25		566.56	430.00		4638.74	5068.74	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2500 in	S _{right} =	413.77 in ³	x-bar =	12.2500 in	S _{right} =	413.77 in ³
I _y =	5068.74 in ⁴	S _{left} =	413.77 in ³	I _y =	5068.74 in ⁴	S _{left} =	413.77 in ³
C _{right} =	12.2500 in	A =	46.2500 in ²	C _{right} =	12.2500 in	A =	46.2500 in ²
C _{left} =	12.2500 in	r _y =	10.4687 in	C _{left} =	12.2500 in	r _y =	10.4687 in



Made By DWC
Checked By KMW

Date 1/30/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

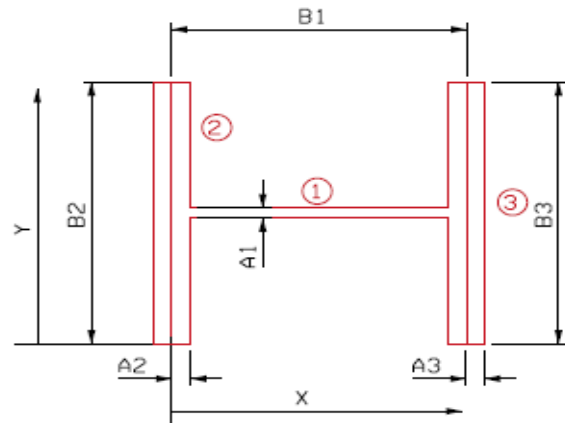
Element Dimensions (without Section Losses):

Rolled Beam CB24x130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.3750$ in
- $B_3 = b = 14.0000$ in



Member U22-L22

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		10.5000	7.0000	73.5000	171.5000	0.0000	0.0000	171.5000
Total			48.28		337.97	579.79		0.00	579.79
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.2500	14.0000	-3.5000	7.0000	-24.5000	-57.1667	0.0000	0.0000	-57.1667
2	0.1875	14.0000	-2.6250	7.0000	-18.3750	-42.8750	0.0000	0.0000	-42.8750
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-6.13		-42.88	-100.04		0.00	-100.04

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	7.0000	in	$S_{top} = 82.83$	in ³	y-bar =	7.0000	in	$S_{top} = 68.54$	in ³		
$I_x =$	579.79	in ⁴	$S_{bott.} = 82.83$	in ³	$I_x =$	479.75	in ⁴	$S_{bott.} = 68.54$	in ³		
$c_{top} =$	7.0000	in	A =	48.2816	in ²	$c_{top} =$	7.0000	in	A =	42.1566	in ²
$c_{bottom} =$	7.0000	in	$r_x =$	3.4653	in	$c_{bottom} =$	7.0000	in	$r_x =$	3.3734	in



Made By DWC
Checked By KMW

Date 1/30/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.5000	160.0703	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	0.8210	10.2526	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	24.1790	301.9474	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		5.2500	0.1875	0.9844	0.0615	12.3125	795.8877	795.9492
	Right Plate		5.2500	24.8125	130.2656	0.0615	12.3125	795.8877	795.9492
Total			48.28		603.52	540.38		4998.48	5538.86
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	14.0000	0.2500	-3.5000	0.1250	-0.4375	-0.0182	12.6299	-558.3011	-558.3193
2	14.0000	0.1875	-2.6250	24.9063	-65.3789	-0.0077	12.1513	-387.5946	-387.6023
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-6.13		-65.82	-0.03		-945.90	-945.92

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.5000	in	S _{right} = 443.11 in ³	x-bar =	12.7549	in	S _{right} = 375.08 in ³
I _y =	5538.86	in ⁴	S _{left} = 443.11 in ³	I _y =	4592.94	in ⁴	S _{left} = 360.09 in ³
C _{right} =	12.5000	in	A = 48.2816 in ²	C _{right} =	12.2451	in	A = 42.1566 in ²
C _{left} =	12.5000	in	r _y = 10.7107 in	C _{left} =	12.7549	in	r _y = 10.4379 in



Made By DWC
Checked By KMW

Date 1/30/2012
Date 2/8/2012

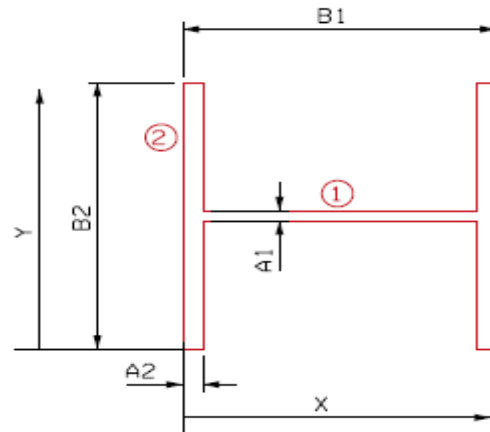
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x140

- $A_1 = t_w = 0.6010$ in
- $A_2 = t_f = 0.9700$ in
- $B_1 = d = 24.4060$ in
- $B_2 = b_f = 14.0310$ in



Member U23-L23

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		13.5021	7.0155	94.7237	0.4064	0.0000	0.0000	0.4064
2	Flange Plates		27.2201	7.0155	190.9629	446.5667	0.0000	0.0000	446.5667
Total			40.72		285.69	446.97		0.00	446.97
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	22.4660	0.0625	-1.4041	7.2848	-10.2287	-0.0005	0.1578	-0.0350	-0.0354
2	0.1250	7.0155	-0.8769	3.5078	-3.0761	-3.5967	3.6192	-11.4868	-15.0835
3	0.1250	3.5078	-0.4385	3.5078	-1.5380	-0.4496	3.6192	-5.7434	-6.1930
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.72		-14.84	-4.05		-17.27	-21.31

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	7.0155	in	$S_{top} = 63.71$ in ³	y-bar =	7.1270	in	$S_{top} = 61.65$ in ³
$I_x =$	446.97	in ⁴	$S_{bott.} = 63.71$ in ³	$I_x =$	425.66	in ⁴	$S_{bott.} = 59.73$ in ³
$c_{top} =$	7.0155	in	$A = 40.7222$ in ²	$c_{top} =$	6.9040	in	$A = 38.0027$ in ²
$c_{bottom} =$	7.0155	in	$r_x = 3.3130$ in	$c_{bottom} =$	7.1270	in	$r_x = 3.3468$ in



Made By DWC
Checked By KMW

Date 1/30/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		13.5021	12.2030	164.7657	567.8982	0.0000	0.0000	567.8982
2	Left Flange		13.6101	0.4850	6.6009	1.0671	11.7180	1868.8195	1869.8866
	Right Flange		13.6101	23.9210	325.5665	1.0671	11.7180	1868.8195	1869.8866
Total			40.72		496.93	570.03		3737.64	4307.67
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0625	22.4660	-1.4041	12.2030	-17.1345	-59.0576	0.4188	-0.2463	-59.3039
2	7.0155	0.1250	-0.8769	24.3435	-21.3477	-0.0011	12.5593	-138.3243	-138.3254
3	3.5078	0.1250	-0.4385	24.2185	-10.6191	-0.0006	12.4343	-67.7923	-67.7928
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.72		-49.10	-59.06		-206.36	-265.42

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.2030	in	S _{right} =	353.00	in ³	x-bar =	11.7842	in	S _{right} =	320.26	in ³
I _y =	4307.67	in ⁴	S _{left} =	353.00	in ³	I _y =	4042.25	in ⁴	S _{left} =	343.02	in ³
C _{right} =	12.2030	in	A =	40.7222	in ²	C _{right} =	12.6218	in	A =	38.0027	in ²
C _{left} =	12.2030	in	r _y =	10.2850	in	C _{left} =	11.7842	in	r _y =	10.3135	in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

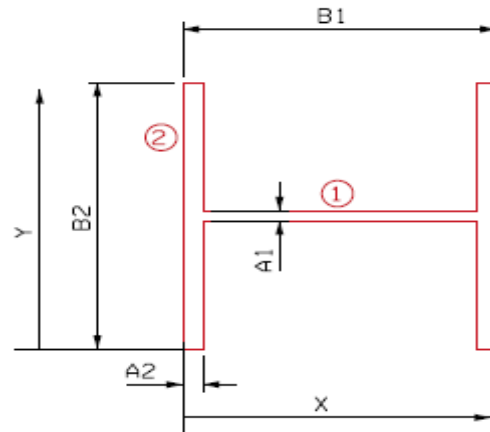
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam **CB24x 100**

- $A_1 = t_w = 0.4700$ in
- $A_2 = t_f = 0.7670$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 12.0000$ in



Member U24-L24

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		10.5590	6.0000	63.3541	0.1944	0.0000	0.0000	0.1944
2	Flange Plates		18.4080	6.0000	110.4480	220.8960	0.0000	0.0000	220.8960
Total			28.97		173.80	221.09		0.00	221.09
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	6.0000	in	$S_{top} = 36.85$	in^3	y-bar =	6.0000	in	$S_{top} = 36.85$	in^3		
$I_x =$	221.09	in^4	$S_{bott.} = 36.85$	in^3	$I_x =$	221.09	in^4	$S_{bott.} = 36.85$	in^3		
$c_{top} =$	6.0000	in	A =	28.9670	in^2	$c_{top} =$	6.0000	in	A =	28.9670	in^2
$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in	$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	12.0000	126.7082	444.1134	0.0000	0.0000	444.1134
2	Left Flange		9.2040	0.3835	3.5297	0.4512	11.6165	1242.0160	1242.4673
	Right Flange		9.2040	23.6165	217.3663	0.4512	11.6165	1242.0160	1242.4673
Total			28.97		347.60	445.02		2484.03	2929.05
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.0000	in	S _{right} =	244.09	in ³	x-bar =	12.0000	in	S _{right} =	244.09	in ³
I _y =	2929.05	in ⁴	S _{left} =	244.09	in ³	I _y =	2929.05	in ⁴	S _{left} =	244.09	in ³
C _{right} =	12.0000	in	A =	28.9670	in ²	C _{right} =	12.0000	in	A =	28.9670	in ²
C _{left} =	12.0000	in	r _y =	10.0557	in	C _{left} =	12.0000	in	r _y =	10.0557	in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

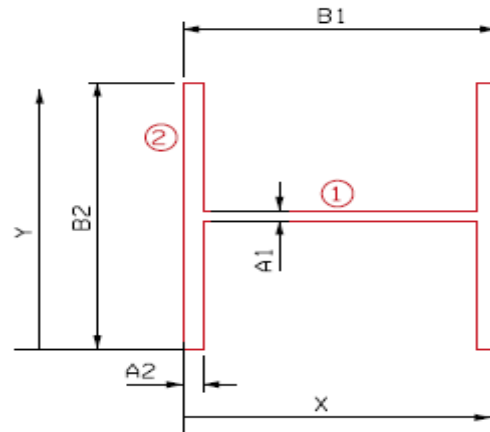
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam **CB24x 74**

- $A_1 = t_w = 0.4120$ in
- $A_2 = t_f = 0.6800$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 9.0000$ in



Member U25-L25

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		9.3277	4.5000	41.9746	0.1319	0.0000	0.0000	0.1319
2	Flange Plates		12.2400	4.5000	55.0800	82.6200	0.0000	0.0000	82.6200
Total			21.57		97.05	82.75		0.00	82.75
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	4.5000	in	$S_{top} =$	18.39	in ³	y-bar =	4.5000	in	$S_{top} =$	18.39	in ³
$I_x =$	82.75	in ⁴	$S_{bott.} =$	18.39	in ³	$I_x =$	82.75	in ⁴	$S_{bott.} =$	18.39	in ³
$c_{top} =$	4.5000	in	A =	21.5677	in ²	$c_{top} =$	4.5000	in	A =	21.5677	in ²
$c_{bottom} =$	4.5000	in	$r_x =$	1.9588	in	$c_{bottom} =$	4.5000	in	$r_x =$	1.9588	in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		9.3277	12.0000	111.9322	398.4238	0.0000	0.0000	398.4238
2	Left Flange		6.1200	0.3400	2.0808	0.2358	11.6600	832.0483	832.2841
	Right Flange		6.1200	23.6600	144.7992	0.2358	11.6600	832.0483	832.2841
Total			21.57		258.81	398.90		1664.10	2062.99
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.0000	in	S _{right} =	171.92	in ³	x-bar =	12.0000	in	S _{right} =	171.92	in ³
I _y =	2062.99	in ⁴	S _{left} =	171.92	in ³	I _y =	2062.99	in ⁴	S _{left} =	171.92	in ³
C _{right} =	12.0000	in	A =	21.5677	in ²	C _{right} =	12.0000	in	A =	21.5677	in ²
C _{left} =	12.0000	in	r _y =	9.7802	in	C _{left} =	12.0000	in	r _y =	9.7802	in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 100

- $A_1 = t_w = 0.4700$ in
- $A_2 = t_f = 0.7670$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 12.0000$ in



Member U26-L26

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		10.5590	6.0000	63.3541	0.1944	0.0000	0.0000	0.1944
2	Flange Plates		18.4080	6.0000	110.4480	220.8960	0.0000	0.0000	220.8960
Total			28.97		173.80	221.09		0.00	221.09
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	6.0000	in	$S_{top} = 36.85$	in^3	y-bar =	6.0000	in	$S_{top} = 36.85$	in^3		
$I_x =$	221.09	in^4	$S_{bott.} = 36.85$	in^3	$I_x =$	221.09	in^4	$S_{bott.} = 36.85$	in^3		
$c_{top} =$	6.0000	in	A =	28.9670	in^2	$c_{top} =$	6.0000	in	A =	28.9670	in^2
$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in	$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	12.0000	126.7082	444.1134	0.0000	0.0000	444.1134
2	Left Flange		9.2040	0.3835	3.5297	0.4512	11.6165	1242.0160	1242.4673
	Right Flange		9.2040	23.6165	217.3663	0.4512	11.6165	1242.0160	1242.4673
Total			28.97		347.60	445.02		2484.03	2929.05
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.0000	in	S _{right} =	244.09	in ³	x-bar =	12.0000	in	S _{right} =	244.09	in ³
I _y =	2929.05	in ⁴	S _{left} =	244.09	in ³	I _y =	2929.05	in ⁴	S _{left} =	244.09	in ³
C _{right} =	12.0000	in	A =	28.9670	in ²	C _{right} =	12.0000	in	A =	28.9670	in ²
C _{left} =	12.0000	in	r _y =	10.0557	in	C _{left} =	12.0000	in	r _y =	10.0557	in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

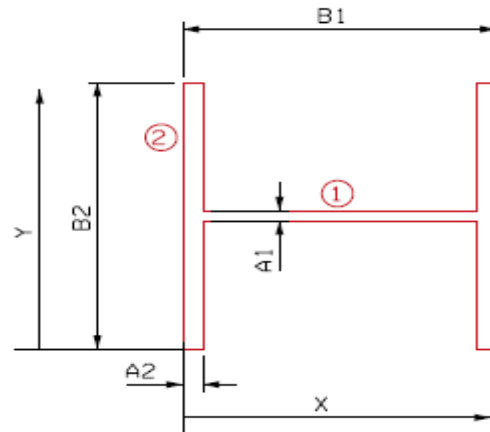
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam **CB24x 130**

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in



Member U27-L27

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
Total			37.78		264.47	408.29		0.00	408.29
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	S _{top} =	58.33	in ³	y-bar =	7.0000	in	S _{top} =	58.33	in ³
I _x =	408.29	in ⁴	S _{bott.} =	58.33	in ³	I _x =	408.29	in ⁴	S _{bott.} =	58.33	in ³
c _{top} =	7.0000	in	A =	37.7816	in ²	c _{top} =	7.0000	in	A =	37.7816	in ²
c _{bottom} =	7.0000	in	r _x =	3.2873	in	c _{bottom} =	7.0000	in	r _x =	3.2873	in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.1250	155.2681	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	0.4460	5.5696	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	23.8040	297.2644	0.8280	11.6790	1703.3512	1704.1792
Total			37.78		458.10	540.26		3406.70	3946.96
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.1250	in	S _{right} =	325.52	in ³	x-bar =	12.1250	in	S _{right} =	325.52	in ³
I _y =	3946.96	in ⁴	S _{left} =	325.52	in ³	I _y =	3946.96	in ⁴	S _{left} =	325.52	in ³
C _{right} =	12.1250	in	A =	37.7816	in ²	C _{right} =	12.1250	in	A =	37.7816	in ²
C _{left} =	12.1250	in	r _y =	10.2210	in	C _{left} =	12.1250	in	r _y =	10.2210	in



Made By DWC
Checked By KMW

Date 1/31/2012
Date 2/9/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

$A_4 = h = 20.0000$ in
 $B_4 = t = 0.5000$ in

Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 0.5000$ in

Cover Plate:

$A_6 = t = 0.3750$ in
 $B_6 = l = 23.5000$ in



Member U28-L28

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	16.1875	44.0098	0.0319	5.8259	92.2783	92.3102
	Vertical Leg	3.0000	18.0000	54.0000	4.0000	7.6384	175.0368	179.0368
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	6.5491	116.6081	116.6399
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	8.3616	209.7476	213.7476
3	Perforated Plate	6.0000	4.2500	25.5000	0.1250	6.1116	224.1078	224.2328
4	Plate	10.0000	10.0000	100.0000	333.3333	0.3616	1.3073	334.6407
5	Plate	10.0000	10.0000	100.0000	333.3333	0.3616	1.3073	334.6407
6	Cover Plate	8.8125	15.8125	139.3477	0.1033	5.4509	261.8425	261.9458
Total		46.25		479.22	674.96		1082.24	1757.19
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	15.5000	0.1875	-2.9063	15.9063	-46.2275	-0.0085	5.9171	-101.7532
2	0.1250	20.0000	-2.5000	10.0000	-25.0000	-83.3333	0.0108	-0.0003
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-5.41	-71.23	-83.34		-101.75	-185.10



Made By DWC
Checked By KMW

Date 1/31/2012
Date 2/9/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	10.3616 in	S _{top} =	182.31 in ³	y-bar =	9.9892 in	S _{top} =	157.04 in ³
I _x =	1757.19 in ⁴	S _{bott.} =	169.59 in ³	I _x =	1572.10 in ⁴	S _{bott.} =	157.38 in ³
C _{top} =	9.6384 in	A =	46.2500 in ²	C _{top} =	10.0108 in	A =	40.8438 in ²
C _{bottom} =	10.3616 in	r _x =	6.1639 in	C _{bottom} =	9.9892 in	r _x =	6.2041 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	2.6875	3.6533	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.6875	1.0313	0.0176	11.5625	200.5371	200.5547	
1 (Right)	Horizontal Leg	1.3594	21.8125	29.6514	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.8125	35.7188	0.0176	11.5625	200.5371	200.5547	
2 (Left)	Horizontal Leg	1.3594	2.6875	3.6533	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.6875	1.0313	0.0176	11.5625	200.5371	200.5547	
2 (Right)	Horizontal Leg	1.3594	21.8125	29.6514	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.8125	35.7188	0.0176	11.5625	200.5371	200.5547	
3 (Left)	Perforated Plate	3.0000	3.5000	10.5000	9.0000	8.7500	229.6875	238.6875	
3 (Right)	Perforated Plate	3.0000	21.0000	63.0000	9.0000	8.7500	229.6875	238.6875	
4	Plate	10.0000	0.2500	2.5000	0.2083	12.0000	1440.0000	1440.2083	
5	Plate	10.0000	24.2500	242.5000	0.2083	12.0000	1440.0000	1440.2083	
6	Cover Plate	8.8125	12.2500	107.9531	405.5586	0.0000	0.0000	405.5586	
Total		46.25		566.56	430.00		4638.74	5068.74	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1875	15.5000	-2.9063	12.2500	-35.6016	-58.1855	0.7460	-1.6173	-59.8028
2	20.0000	0.1250	-2.5000	0.0625	-0.1563	-0.0033	12.9335	-418.1875	-418.1907
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-5.41		-35.76	-58.19		-419.80	-477.99

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2500 in	S _{right} =	413.77 in ³	x-bar =	12.9960 in	S _{right} =	399.06 in ³
I _y =	5068.74 in ⁴	S _{left} =	413.77 in ³	I _y =	4590.74 in ⁴	S _{left} =	353.24 in ³
C _{right} =	12.2500 in	A =	46.2500 in ²	C _{right} =	11.5040 in	A =	40.8438 in ²
C _{left} =	12.2500 in	r _y =	10.4687 in	C _{left} =	12.9960 in	r _y =	10.6018 in



Made By NRF
Checked By SFH

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

$A_4 = h = 20.0000$ in
 $B_4 = t = 0.5625$ in

Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 0.5625$ in

Cover Plate:

$A_6 = t = 0.3750$ in
 $B_6 = l = 23.5000$ in



Member U29-L29

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	16.1875	44.0098	0.0319	5.8445	92.8666	92.8985
	Vertical Leg	3.0000	18.0000	54.0000	4.0000	7.6570	175.8876	179.8876
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	6.5305	115.9487	115.9806
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	8.3430	208.8184	212.8184
3	Perforated Plate	6.0000	4.2500	25.5000	0.1250	6.0930	222.7500	222.8750
4	Plate	11.2500	10.0000	112.5000	375.0000	0.3430	1.3238	376.3238
5	Plate	11.2500	10.0000	112.5000	375.0000	0.3430	1.3238	376.3238
6	Cover Plate	8.8125	15.8125	139.3477	0.1033	5.4695	263.6269	263.7302
Total		48.75		504.22	758.29		1082.55	1840.84
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By NRF
Checked By SFH

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	10.3430 in	S _{top} =	190.62 in ³	y-bar =	10.3430 in	S _{top} =	190.62 in ³
I _x =	1840.84 in ⁴	S _{bott.} =	177.98 in ³	I _x =	1840.84 in ⁴	S _{bott.} =	177.98 in ³
C _{top} =	9.6570 in	A =	48.7500 in ²	C _{top} =	9.6570 in	A =	48.7500 in ²
C _{bottom} =	10.3430 in	r _x =	6.1450 in	C _{bottom} =	10.3430 in	r _x =	6.1450 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	2.7500	3.7383	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.7500	1.1250	0.0176	11.5625	200.5371	200.5547	
1 (Right)	Horizontal Leg	1.3594	21.8750	29.7363	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.8750	35.8125	0.0176	11.5625	200.5371	200.5547	
2 (Left)	Horizontal Leg	1.3594	2.7500	3.7383	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.7500	1.1250	0.0176	11.5625	200.5371	200.5547	
2 (Right)	Horizontal Leg	1.3594	21.8750	29.7363	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.8750	35.8125	0.0176	11.5625	200.5371	200.5547	
3 (Left)	Perforated Plate	3.0000	3.5625	10.6875	9.0000	8.7500	229.6875	238.6875	
3 (Right)	Perforated Plate	3.0000	21.0625	63.1875	9.0000	8.7500	229.6875	238.6875	
4	Plate	11.2500	0.2813	3.1641	0.2966	12.0313	1628.4485	1628.7451	
5	Plate	11.2500	24.3438	273.8672	0.2966	12.0313	1628.4485	1628.7451	
6	Cover Plate	8.8125	12.3125	108.5039	405.5586	0.0000	0.0000	405.5586	
Total		48.75		600.23	430.18		5015.63	5445.81	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3125 in	S _{right} =	442.30 in ³	x-bar =	12.3125 in	S _{right} =	442.30 in ³
I _y =	5445.81 in ⁴	S _{left} =	442.30 in ³	I _y =	5445.81 in ⁴	S _{left} =	442.30 in ³
C _{right} =	12.3125 in	A =	48.7500 in ²	C _{right} =	12.3125 in	A =	48.7500 in ²
C _{left} =	12.3125 in	r _y =	10.5692 in	C _{left} =	12.3125 in	r _y =	10.5692 in



Made By NRF
Checked By SFH

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.6250$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.6250$ in

Perforated Plate:

$A_3 = t = 0.6250$ in
 $B_3 = l = 5.2500$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 22.0000$ in

Left Web Plate:

$A_4 = h = 24.0000$ in
 $B_4 = t = 1.3750$ in

Right Web Plate:

$A_5 = h = 24.0000$ in
 $B_5 = t = 1.3750$ in

Cover Plate:

$A_6 = t = 0.5000$ in
 $B_6 = l = 22.0000$ in



Member U30-L30

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	4.2188	20.3125	85.6934	0.1373	7.9713	268.0673	268.2046
	Vertical Leg	5.0000	22.0000	110.0000	6.6667	9.6588	466.4636	473.1303
2	Horizontal Leg	4.2188	3.6875	15.5566	0.1373	8.6537	315.9264	316.0637
	Vertical Leg	5.0000	2.0000	10.0000	6.6667	10.3412	534.7004	541.3671
3	Perforated Plate	6.5625	4.3125	28.3008	0.2136	8.0287	423.0172	423.2309
4	Plate	33.0000	12.0000	396.0000	1584.0000	0.3412	3.8414	1587.8414
5	Plate	33.0000	12.0000	396.0000	1584.0000	0.3412	3.8414	1587.8414
6	Cover Plate	11.0000	19.7500	217.2500	0.2292	7.4088	603.7961	604.0252
Total		102.00		1258.80	3182.05		2619.65	5801.70
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00	0.00	0.00	0.00



Made By NRF
Checked By SFH

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	12.3412 in	S _{top} =	497.62 in ³	y-bar =	12.3412 in	S _{top} =	497.62 in ³
I _x =	5801.70 in ⁴	S _{bott.} =	470.11 in ³	I _x =	5801.70 in ⁴	S _{bott.} =	470.11 in ³
C _{top} =	11.6588 in	A =	102.0000 in ²	C _{top} =	11.6588 in	A =	102.0000 in ²
C _{bottom} =	12.3412 in	r _x =	7.5418 in	C _{bottom} =	12.3412 in	r _x =	7.5418 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.1094	3.6875	7.7783	2.0023	8.6875	159.2001	161.2024	
	Vertical Leg	2.5000	1.6875	4.2188	0.0814	10.6875	285.5566	285.6380	
1 (Right)	Horizontal Leg	2.1094	21.0625	44.4287	2.0023	8.6875	159.2001	161.2024	
	Vertical Leg	2.5000	23.0625	57.6563	0.0814	10.6875	285.5566	285.6380	
2 (Left)	Horizontal Leg	2.1094	3.6875	7.7783	2.0023	8.6875	159.2001	161.2024	
	Vertical Leg	2.5000	1.6875	4.2188	0.0814	10.6875	285.5566	285.6380	
2 (Right)	Horizontal Leg	2.1094	21.0625	44.4287	2.0023	8.6875	159.2001	161.2024	
	Vertical Leg	2.5000	23.0625	57.6563	0.0814	10.6875	285.5566	285.6380	
3 (Left)	Perforated Plate	3.2813	4.0000	13.1250	7.5366	8.3750	230.1489	237.6855	
3 (Right)	Perforated Plate	3.2813	20.7500	68.0859	7.5366	8.3750	230.1489	237.6855	
4	Plate	33.0000	0.6875	22.6875	5.1992	11.6875	4507.7227	4512.9219	
5	Plate	33.0000	24.0625	794.0625	5.1992	11.6875	4507.7227	4512.9219	
6	Cover Plate	11.0000	12.3750	136.1250	443.6667	0.0000	0.0000	443.6667	
Total		102.00		1262.25	477.47		11254.77	11732.24	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3750 in	S _{right} =	948.06 in ³	x-bar =	12.3750 in	S _{right} =	948.06 in ³
I _y =	11732.24 in ⁴	S _{left} =	948.06 in ³	I _y =	11732.24 in ⁴	S _{left} =	948.06 in ³
C _{right} =	12.3750 in	A =	102.0000 in ²	C _{right} =	12.3750 in	A =	102.0000 in ²
C _{left} =	12.3750 in	r _y =	10.7248 in	C _{left} =	12.3750 in	r _y =	10.7248 in



Made By NRF
Checked By SFH

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.5000$ in

Perforated Plate:

$A_3 = t = 0.6250$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

$A_4 = h = 24.0000$ in
 $B_4 = t = 0.5000$ in

Right Web Plate:

$A_5 = h = 24.0000$ in
 $B_5 = t = 0.5000$ in

Cover Plate:

$A_6 = t = 0.5000$ in
 $B_6 = l = 23.5000$ in



Member U31-L31

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.5000	20.2500	70.8750	0.0729	7.6765	206.2504	206.3233
	Vertical Leg	4.0000	22.0000	88.0000	5.3333	9.4265	355.4358	360.7691
2	Horizontal Leg	3.5000	3.7500	13.1250	0.0729	8.8235	272.4894	272.5623
	Vertical Leg	4.0000	2.0000	8.0000	5.3333	10.5735	447.1954	452.5288
3	Perforated Plate	7.5000	4.3125	32.3438	0.2441	8.2610	511.8306	512.0748
4	Plate	12.0000	12.0000	144.0000	576.0000	0.5735	3.9468	579.9468
5	Plate	12.0000	12.0000	144.0000	576.0000	0.5735	3.9468	579.9468
6	Cover Plate	11.7500	19.7500	232.0625	0.2448	7.1765	605.1507	605.3954
Total		58.25		732.41	1163.30		2406.25	3569.55
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By NRF
Checked By SFH

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	12.5735 in	S _{top} =	312.39 in ³	y-bar =	12.5735 in	S _{top} =	312.39 in ³
I _x =	3569.55 in ⁴	S _{bott.} =	283.89 in ³	I _x =	3569.55 in ⁴	S _{bott.} =	283.89 in ³
C _{top} =	11.4265 in	A =	58.2500 in ²	C _{top} =	11.4265 in	A =	58.2500 in ²
C _{bottom} =	12.5735 in	r _x =	7.8281 in	C _{bottom} =	12.5735 in	r _x =	7.8281 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.7500	2.7500	4.8125	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	0.7500	1.5000	0.0417	11.5000	264.5000	264.5417	
1 (Right)	Horizontal Leg	1.7500	21.7500	38.0625	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	23.7500	47.5000	0.0417	11.5000	264.5000	264.5417	
2 (Left)	Horizontal Leg	1.7500	2.7500	4.8125	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	0.7500	1.5000	0.0417	11.5000	264.5000	264.5417	
2 (Right)	Horizontal Leg	1.7500	21.7500	38.0625	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	23.7500	47.5000	0.0417	11.5000	264.5000	264.5417	
3 (Left)	Perforated Plate	3.7500	3.5000	13.1250	11.2500	8.7500	287.1094	298.3594	
3 (Right)	Perforated Plate	3.7500	21.0000	78.7500	11.2500	8.7500	287.1094	298.3594	
4	Plate	12.0000	0.2500	3.0000	0.2500	12.0000	1728.0000	1728.2500	
5	Plate	12.0000	24.2500	291.0000	0.2500	12.0000	1728.0000	1728.2500	
6	Cover Plate	11.7500	12.2500	143.9375	540.7448	0.0000	0.0000	540.7448	
Total		58.25		713.56	571.06		5719.97	6291.03	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2500 in	S _{right} =	513.55 in ³	x-bar =	12.2500 in	S _{right} =	513.55 in ³
I _y =	6291.03 in ⁴	S _{left} =	513.55 in ³	I _y =	6291.03 in ⁴	S _{left} =	513.55 in ³
C _{right} =	12.2500 in	A =	58.2500 in ²	C _{right} =	12.2500 in	A =	58.2500 in ²
C _{left} =	12.2500 in	r _y =	10.3923 in	C _{left} =	12.2500 in	r _y =	10.3923 in



Made By NRF
Checked By SFH

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

$A_4 = h = 22.0000$ in
 $B_4 = t = 0.6250$ in

Right Web Plate:

$A_5 = h = 22.0000$ in
 $B_5 = t = 0.6250$ in

Cover Plate:

$A_6 = t = 0.3750$ in
 $B_6 = l = 23.5000$ in



Member U32-L32

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	18.1875	49.4473	0.0319	6.8241	126.6060	126.6379
	Vertical Leg	3.0000	20.0000	60.0000	4.0000	8.6366	223.7703	227.7703
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	7.5509	155.0143	155.0462
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	9.3634	263.0223	267.0223
3	Perforated Plate	6.0000	4.2500	25.5000	0.1250	7.1134	303.6066	303.7316
4	Plate	13.7500	11.0000	151.2500	554.5833	0.3634	1.8163	556.3996
5	Plate	13.7500	11.0000	151.2500	554.5833	0.3634	1.8163	556.3996
6	Cover Plate	8.8125	17.8125	156.9727	0.1033	6.4491	366.5146	366.6179
Total		53.75		610.79	1117.46		1442.17	2559.63
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By NRF
Checked By SFH

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	11.3634 in	S _{top} =	240.64 in ³	y-bar =	11.3634 in	S _{top} =	240.64 in ³
I _x =	2559.63 in ⁴	S _{bott.} =	225.25 in ³	I _x =	2559.63 in ⁴	S _{bott.} =	225.25 in ³
C _{top} =	10.6366 in	A =	53.7500 in ²	C _{top} =	10.6366 in	A =	53.7500 in ²
C _{bottom} =	11.3634 in	r _x =	6.9008 in	C _{bottom} =	11.3634 in	r _x =	6.9008 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	2.8125	3.8232	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.8125	1.2188	0.0176	11.5625	200.5371	200.5547	
1 (Right)	Horizontal Leg	1.3594	21.9375	29.8213	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.9375	35.9063	0.0176	11.5625	200.5371	200.5547	
2 (Left)	Horizontal Leg	1.3594	2.8125	3.8232	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.8125	1.2188	0.0176	11.5625	200.5371	200.5547	
2 (Right)	Horizontal Leg	1.3594	21.9375	29.8213	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.9375	35.9063	0.0176	11.5625	200.5371	200.5547	
3 (Left)	Perforated Plate	3.0000	3.6250	10.8750	9.0000	8.7500	229.6875	238.6875	
3 (Right)	Perforated Plate	3.0000	21.1250	63.3750	9.0000	8.7500	229.6875	238.6875	
4	Plate	13.7500	0.3125	4.2969	0.4476	12.0625	2000.6787	2001.1263	
5	Plate	13.7500	24.4375	336.0156	0.4476	12.0625	2000.6787	2001.1263	
6	Cover Plate	8.8125	12.3750	109.0547	405.5586	0.0000	0.0000	405.5586	
Total		53.75		665.16	430.48		5760.09	6190.57	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3750 in	S _{right} =	500.25 in ³	x-bar =	12.3750 in	S _{right} =	500.25 in ³
I _y =	6190.57 in ⁴	S _{left} =	500.25 in ³	I _y =	6190.57 in ⁴	S _{left} =	500.25 in ³
C _{right} =	12.3750 in	A =	53.7500 in ²	C _{right} =	12.3750 in	A =	53.7500 in ²
C _{left} =	12.3750 in	r _y =	10.7319 in	C _{left} =	12.3750 in	r _y =	10.7319 in



Made By NRF
Checked By SFH

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

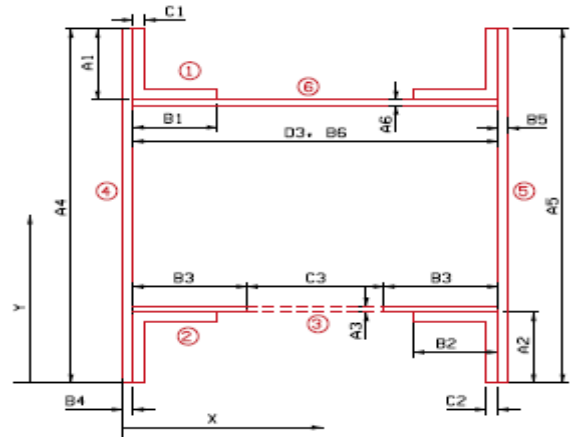
$A_4 = h = 20.0000$ in
 $B_4 = t = 0.5000$ in

Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 0.5000$ in

Cover Plate:

$A_6 = t = 0.3750$ in
 $B_6 = l = 23.5000$ in



Member U33-L33

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	16.1875	44.0098	0.0319	5.8259	92.2783	92.3102
	Vertical Leg	3.0000	18.0000	54.0000	4.0000	7.6384	175.0368	179.0368
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	6.5491	116.6081	116.6399
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	8.3616	209.7476	213.7476
3	Perforated Plate	6.0000	4.2500	25.5000	0.1250	6.1116	224.1078	224.2328
4	Plate	10.0000	10.0000	100.0000	333.3333	0.3616	1.3073	334.6407
5	Plate	10.0000	10.0000	100.0000	333.3333	0.3616	1.3073	334.6407
6	Cover Plate	8.8125	15.8125	139.3477	0.1033	5.4509	261.8425	261.9458
Total		46.25		479.22	674.96		1082.24	1757.19
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By NRF
Checked By SFH

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	10.3616 in	S _{top} =	182.31 in ³	y-bar =	10.3616 in	S _{top} =	182.31 in ³
I _x =	1757.19 in ⁴	S _{bott.} =	169.59 in ³	I _x =	1757.19 in ⁴	S _{bott.} =	169.59 in ³
C _{top} =	9.6384 in	A =	46.2500 in ²	C _{top} =	9.6384 in	A =	46.2500 in ²
C _{bottom} =	10.3616 in	r _x =	6.1639 in	C _{bottom} =	10.3616 in	r _x =	6.1639 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	2.6875	3.6533	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.6875	1.0313	0.0176	11.5625	200.5371	200.5547	
1 (Right)	Horizontal Leg	1.3594	21.8125	29.6514	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.8125	35.7188	0.0176	11.5625	200.5371	200.5547	
2 (Left)	Horizontal Leg	1.3594	2.6875	3.6533	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.6875	1.0313	0.0176	11.5625	200.5371	200.5547	
2 (Right)	Horizontal Leg	1.3594	21.8125	29.6514	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.8125	35.7188	0.0176	11.5625	200.5371	200.5547	
3 (Left)	Perforated Plate	3.0000	3.5000	10.5000	9.0000	8.7500	229.6875	238.6875	
3 (Right)	Perforated Plate	3.0000	21.0000	63.0000	9.0000	8.7500	229.6875	238.6875	
4	Plate	10.0000	0.2500	2.5000	0.2083	12.0000	1440.0000	1440.2083	
5	Plate	10.0000	24.2500	242.5000	0.2083	12.0000	1440.0000	1440.2083	
6	Cover Plate	8.8125	12.2500	107.9531	405.5586	0.0000	0.0000	405.5586	
Total		46.25		566.56	430.00		4638.74	5068.74	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2500 in	S _{right} =	413.77 in ³	x-bar =	12.2500 in	S _{right} =	413.77 in ³
I _y =	5068.74 in ⁴	S _{left} =	413.77 in ³	I _y =	5068.74 in ⁴	S _{left} =	413.77 in ³
C _{right} =	12.2500 in	A =	46.2500 in ²	C _{right} =	12.2500 in	A =	46.2500 in ²
C _{left} =	12.2500 in	r _y =	10.4687 in	C _{left} =	12.2500 in	r _y =	10.4687 in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam **CB24x 100**

- $A_1 = t_w = 0.4700$ in
- $A_2 = t_f = 0.7670$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 12.0000$ in



Member U34-L34

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x, gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		10.5590	6.0000	63.3541	0.1944	0.0000	0.0000	0.1944
2	Flange Plates		18.4080	6.0000	110.4480	220.8960	0.0000	0.0000	220.8960
Total			28.97		173.80	221.09		0.00	221.09
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	6.0000	in	$S_{top} = 36.85$	in^3	y-bar =	6.0000	in	$S_{top} = 36.85$	in^3		
$I_x =$	221.09	in^4	$S_{bott.} = 36.85$	in^3	$I_x =$	221.09	in^4	$S_{bott.} = 36.85$	in^3		
$c_{top} =$	6.0000	in	A =	28.9670	in^2	$c_{top} =$	6.0000	in	A =	28.9670	in^2
$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in	$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate	10.5590	12.0000	126.7082	444.1134	0.0000	0.0000	444.1134
2	Left Flange	9.2040	0.3835	3.5297	0.4512	11.6165	1242.0160	1242.4673
	Right Flange	9.2040	23.6165	217.3663	0.4512	11.6165	1242.0160	1242.4673
Total		28.97		347.60	445.02		2484.03	2929.05
Section Losses		A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.0000	in	S _{right} = 244.09 in ³	x-bar =	12.0000	in	S _{right} = 244.09 in ³
I _y =	2929.05	in ⁴	S _{left} = 244.09 in ³	I _y =	2929.05	in ⁴	S _{left} = 244.09 in ³
C _{right} =	12.0000	in	A = 28.9670 in ²	C _{right} =	12.0000	in	A = 28.9670 in ²
C _{left} =	12.0000	in	r _y = 10.0557 in	C _{left} =	12.0000	in	r _y = 10.0557 in



Made By NRF
Checked By SFH

Date 1/20/2012
Date 1/25/2012

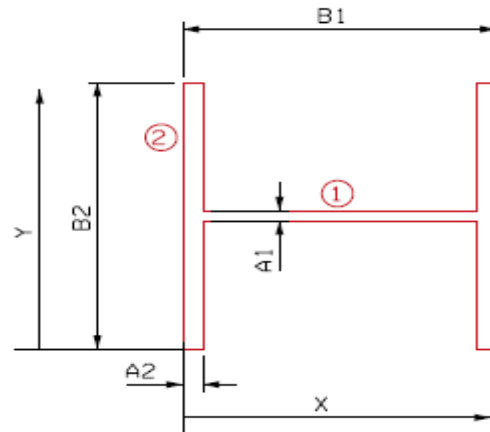
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam **CB24x 80**

- $A_1 = t_w = 0.4530$ in
- $A_2 = t_f = 0.7400$ in
- $B_1 = d = 24.1200$ in
- $B_2 = b_f = 9.0410$ in



Member U35-L35

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x, gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		10.2559	4.5205	46.3619	0.1754	0.0000	0.0000	0.1754
2	Flange Plates		13.3807	4.5205	60.4874	91.1444	0.0000	0.0000	91.1444
Total			23.64		106.85	91.32		0.00	91.32
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	4.5205	in	$S_{top} = 20.20$	in^3	y-bar =	4.5205	in	$S_{top} = 20.20$	in^3		
$I_x =$	91.32	in^4	$S_{bott.} = 20.20$	in^3	$I_x =$	91.32	in^4	$S_{bott.} = 20.20$	in^3		
$c_{top} =$	4.5205	in	A =	23.6366	in^2	$c_{top} =$	4.5205	in	A =	23.6366	in^2
$c_{bottom} =$	4.5205	in	$r_x =$	1.9656	in	$c_{bottom} =$	4.5205	in	$r_x =$	1.9656	in



Made By NRF
Checked By SFH

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.2559	12.0600	123.6864	438.0727	0.0000	0.0000	438.0727
2	Left Flange		6.6903	0.3700	2.4754	0.3053	11.6900	914.2758	914.5811
	Right Flange		6.6903	23.7500	158.8956	0.3053	11.6900	914.2758	914.5811
Total			23.64		285.06	438.68		1828.55	2267.23
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.0600	in	S _{right} =	188.00	in ³	x-bar =	12.0600	in	S _{right} =	188.00	in ³
I _y =	2267.23	in ⁴	S _{left} =	188.00	in ³	I _y =	2267.23	in ⁴	S _{left} =	188.00	in ³
C _{right} =	12.0600	in	A =	23.6366	in ²	C _{right} =	12.0600	in	A =	23.6366	in ²
C _{left} =	12.0600	in	r _y =	9.7939	in	C _{left} =	12.0600	in	r _y =	9.7939	in



Made By DWC
Checked By KMW

Date 1/31/2012
Date 2/9/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam **CB24x 150**

- $A_1 = t_w = 0.6330$ in
- $A_2 = t_f = 1.0480$ in
- $B_1 = d = 24.5620$ in
- $B_2 = b_f = 14.0630$ in



Member U36-L36

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x, gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		14.2210	7.0315	99.9948	0.4748	0.0000	0.0000	0.4748
2	Flange Plates		29.4760	7.0315	207.2608	485.7848	0.0000	0.0000	485.7848
Total			43.70		307.26	486.26		0.00	486.26
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1250	4.0000	-0.5000	2.0000	-1.0000	-0.6667	5.0719	-12.8622	-13.5289
2	12.2810	0.1250	-1.5351	7.2855	-11.1842	-0.0020	0.2136	-0.0700	-0.0720
3	0.2500	1.5000	-0.3750	8.0980	-3.0368	-0.0703	1.0261	-0.3948	-0.4651
4	1.5000	0.2500	-0.3750	7.2230	-2.7086	-0.0020	0.1511	-0.0086	-0.0105
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.79		-17.93	-0.74		-13.34	-14.08

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	7.0315	in	$S_{top} = 69.15$	in^3	y-bar =	7.0719	in	$S_{top} = 67.54$	in^3		
$I_x =$	486.26	in^4	$S_{bott.} = 69.15$	in^3	$I_x =$	472.18	in^4	$S_{bott.} = 66.77$	in^3		
$c_{top} =$	7.0315	in	A =	43.6970	in^2	$c_{top} =$	6.9911	in	A =	40.9119	in^2
$c_{bottom} =$	7.0315	in	$r_x =$	3.3359	in	$c_{bottom} =$	7.0719	in	$r_x =$	3.3973	in



Made By DWC
Checked By KMW

Date 1/31/2012
Date 2/9/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	14.2210	12.2810	174.6478	598.1357	0.0000	0.0000	598.1357	
2	Left Flange	14.7380	0.5240	7.7227	1.3489	11.7570	2037.1936	2038.5425	
	Right Flange	14.7380	24.0380	354.2726	1.3489	11.7570	2037.1936	2038.5425	
Total		43.70		536.64	600.83		4074.39	4675.22	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	4.0000	0.1250	-0.5000	0.0625	-0.0313	-0.0007	12.3980	-76.8557	-76.8563
2	0.1250	12.2810	-1.5351	6.1405	-9.4264	-19.2943	6.3200	-61.3173	-80.6117
3	1.5000	0.2500	-0.3750	23.6390	-8.8646	-0.0020	11.1785	-46.8592	-46.8612
4	0.2500	1.5000	-0.3750	22.7640	-8.5365	-0.0703	10.3035	-39.8105	-39.8808
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.79		-26.86	-19.37		-224.84	-244.21

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2810	in	S _{right} = 380.69 in ³	x-bar =	12.4605	in	S _{right} = 366.16 in ³
I _y =	4675.22	in ⁴	S _{left} = 380.69 in ³	I _y =	4431.01	in ⁴	S _{left} = 355.60 in ³
C _{right} =	12.2810	in	A = 43.6970 in ²	C _{right} =	12.1015	in	A = 40.9119 in ²
C _{left} =	12.2810	in	r _y = 10.3437 in	C _{left} =	12.4605	in	r _y = 10.4070 in



Made By NRF
Checked By SFH

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

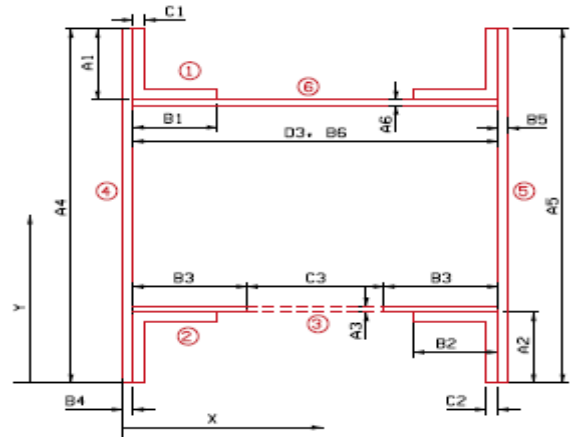
$A_4 = h = 20.0000$ in
 $B_4 = t = 0.5625$ in

Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 0.5625$ in

Cover Plate:

$A_6 = t = 0.3750$ in
 $B_6 = l = 23.5000$ in



Member U37-L37

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	16.1875	44.0098	0.0319	5.8445	92.8666	92.8985
	Vertical Leg	3.0000	18.0000	54.0000	4.0000	7.6570	175.8876	179.8876
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	6.5305	115.9487	115.9806
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	8.3430	208.8184	212.8184
3	Perforated Plate	6.0000	4.2500	25.5000	0.1250	6.0930	222.7500	222.8750
4	Plate	11.2500	10.0000	112.5000	375.0000	0.3430	1.3238	376.3238
5	Plate	11.2500	10.0000	112.5000	375.0000	0.3430	1.3238	376.3238
6	Cover Plate	8.8125	15.8125	139.3477	0.1033	5.4695	263.6269	263.7302
Total		48.75		504.22	758.29		1082.55	1840.84
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By NRF
Checked By SFH

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	10.3430 in	S _{top} =	190.62 in ³	y-bar =	10.3430 in	S _{top} =	190.62 in ³
I _x =	1840.84 in ⁴	S _{bott.} =	177.98 in ³	I _x =	1840.84 in ⁴	S _{bott.} =	177.98 in ³
C _{top} =	9.6570 in	A =	48.7500 in ²	C _{top} =	9.6570 in	A =	48.7500 in ²
C _{bottom} =	10.3430 in	r _x =	6.1450 in	C _{bottom} =	10.3430 in	r _x =	6.1450 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	2.7500	3.7383	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.7500	1.1250	0.0176	11.5625	200.5371	200.5547	
1 (Right)	Horizontal Leg	1.3594	21.8750	29.7363	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.8750	35.8125	0.0176	11.5625	200.5371	200.5547	
2 (Left)	Horizontal Leg	1.3594	2.7500	3.7383	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.7500	1.1250	0.0176	11.5625	200.5371	200.5547	
2 (Right)	Horizontal Leg	1.3594	21.8750	29.7363	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.8750	35.8125	0.0176	11.5625	200.5371	200.5547	
3 (Left)	Perforated Plate	3.0000	3.5625	10.6875	9.0000	8.7500	229.6875	238.6875	
3 (Right)	Perforated Plate	3.0000	21.0625	63.1875	9.0000	8.7500	229.6875	238.6875	
4	Plate	11.2500	0.2813	3.1641	0.2966	12.0313	1628.4485	1628.7451	
5	Plate	11.2500	24.3438	273.8672	0.2966	12.0313	1628.4485	1628.7451	
6	Cover Plate	8.8125	12.3125	108.5039	405.5586	0.0000	0.0000	405.5586	
Total		48.75		600.23	430.18		5015.63	5445.81	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3125 in	S _{right} =	442.30 in ³	x-bar =	12.3125 in	S _{right} =	442.30 in ³
I _y =	5445.81 in ⁴	S _{left} =	442.30 in ³	I _y =	5445.81 in ⁴	S _{left} =	442.30 in ³
C _{right} =	12.3125 in	A =	48.7500 in ²	C _{right} =	12.3125 in	A =	48.7500 in ²
C _{left} =	12.3125 in	r _y =	10.5692 in	C _{left} =	12.3125 in	r _y =	10.5692 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

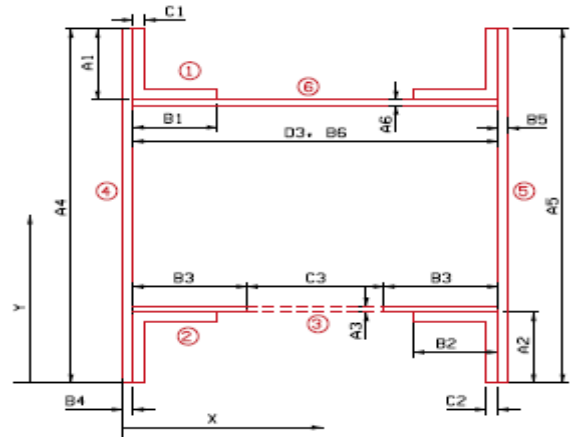
$A_4 = h = 22.0000$ in
 $B_4 = t = 0.6250$ in

Right Web Plate:

$A_5 = h = 22.0000$ in
 $B_5 = t = 0.6250$ in

Cover Plate:

$A_6 = t = 0.3750$ in
 $B_6 = l = 23.5000$ in



Member U38-L38

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	18.1875	49.4473	0.0319	6.8241	126.6060	126.6379
	Vertical Leg	3.0000	20.0000	60.0000	4.0000	8.6366	223.7703	227.7703
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	7.5509	155.0143	155.0462
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	9.3634	263.0223	267.0223
3	Perforated Plate	6.0000	4.2500	25.5000	0.1250	7.1134	303.6066	303.7316
4	Plate	13.7500	11.0000	151.2500	554.5833	0.3634	1.8163	556.3996
5	Plate	13.7500	11.0000	151.2500	554.5833	0.3634	1.8163	556.3996
6	Cover Plate	8.8125	17.8125	156.9727	0.1033	6.4491	366.5146	366.6179
Total		53.75		610.79	1117.46		1442.17	2559.63
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	11.3634 in	S _{top} =	240.64 in ³	y-bar =	11.3634 in	S _{top} =	240.64 in ³
I _x =	2559.63 in ⁴	S _{bott.} =	225.25 in ³	I _x =	2559.63 in ⁴	S _{bott.} =	225.25 in ³
C _{top} =	10.6366 in	A =	53.7500 in ²	C _{top} =	10.6366 in	A =	53.7500 in ²
C _{bottom} =	11.3634 in	r _x =	6.9008 in	C _{bottom} =	11.3634 in	r _x =	6.9008 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	2.8125	3.8232	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.8125	1.2188	0.0176	11.5625	200.5371	200.5547	
1 (Right)	Horizontal Leg	1.3594	21.9375	29.8213	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.9375	35.9063	0.0176	11.5625	200.5371	200.5547	
2 (Left)	Horizontal Leg	1.3594	2.8125	3.8232	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.8125	1.2188	0.0176	11.5625	200.5371	200.5547	
2 (Right)	Horizontal Leg	1.3594	21.9375	29.8213	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.9375	35.9063	0.0176	11.5625	200.5371	200.5547	
3 (Left)	Perforated Plate	3.0000	3.6250	10.8750	9.0000	8.7500	229.6875	238.6875	
3 (Right)	Perforated Plate	3.0000	21.1250	63.3750	9.0000	8.7500	229.6875	238.6875	
4	Plate	13.7500	0.3125	4.2969	0.4476	12.0625	2000.6787	2001.1263	
5	Plate	13.7500	24.4375	336.0156	0.4476	12.0625	2000.6787	2001.1263	
6	Cover Plate	8.8125	12.3750	109.0547	405.5586	0.0000	0.0000	405.5586	
Total		53.75		665.16	430.48		5760.09	6190.57	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3750 in	S _{right} =	500.25 in ³	x-bar =	12.3750 in	S _{right} =	500.25 in ³
I _y =	6190.57 in ⁴	S _{left} =	500.25 in ³	I _y =	6190.57 in ⁴	S _{left} =	500.25 in ³
C _{right} =	12.3750 in	A =	53.7500 in ²	C _{right} =	12.3750 in	A =	53.7500 in ²
C _{left} =	12.3750 in	r _y =	10.7319 in	C _{left} =	12.3750 in	r _y =	10.7319 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

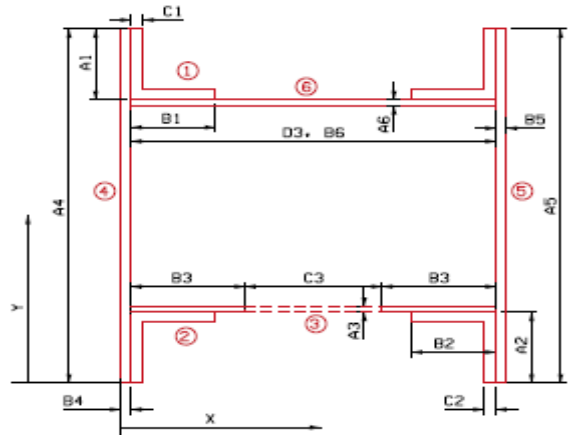
$A_4 = h = 24.0000$ in
 $B_4 = t = 0.6875$ in

Right Web Plate:

$A_5 = h = 24.0000$ in
 $B_5 = t = 0.6875$ in

Cover Plate:

$A_6 = t = 0.3750$ in
 $B_6 = l = 23.5000$ in



Member U39-L39

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	20.1875	54.8848	0.0319	7.8103	165.8469	165.8788
	Vertical Leg	3.0000	22.0000	66.0000	4.0000	9.6228	277.7962	281.7962
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	8.5647	199.4303	199.4621
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	10.3772	323.0573	327.0573
3	Perforated Plate	6.0000	4.2500	25.5000	0.1250	8.1272	396.3059	396.4309
4	Plate	16.5000	12.0000	198.0000	792.0000	0.3772	2.3473	794.3473
5	Plate	16.5000	12.0000	198.0000	792.0000	0.3772	2.3473	794.3473
6	Cover Plate	8.8125	19.8125	174.5977	0.1033	7.4353	487.1907	487.2939
Total		59.25		733.35	1592.29		1854.32	3446.61
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	12.3772 in	S _{top} =	296.54 in ³	y-bar =	12.3772 in	S _{top} =	296.54 in ³
I _x =	3446.61 in ⁴	S _{bott.} =	278.47 in ³	I _x =	3446.61 in ⁴	S _{bott.} =	278.47 in ³
C _{top} =	11.6228 in	A =	59.2500 in ²	C _{top} =	11.6228 in	A =	59.2500 in ²
C _{bottom} =	12.3772 in	r _x =	7.6270 in	C _{bottom} =	12.3772 in	r _x =	7.6270 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	2.8750	3.9082	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.8750	1.3125	0.0176	11.5625	200.5371	200.5547	
1 (Right)	Horizontal Leg	1.3594	22.0000	29.9063	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	24.0000	36.0000	0.0176	11.5625	200.5371	200.5547	
2 (Left)	Horizontal Leg	1.3594	2.8750	3.9082	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.8750	1.3125	0.0176	11.5625	200.5371	200.5547	
2 (Right)	Horizontal Leg	1.3594	22.0000	29.9063	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	24.0000	36.0000	0.0176	11.5625	200.5371	200.5547	
3 (Left)	Perforated Plate	3.0000	3.6875	11.0625	9.0000	8.7500	229.6875	238.6875	
3 (Right)	Perforated Plate	3.0000	21.1875	63.5625	9.0000	8.7500	229.6875	238.6875	
4	Plate	16.5000	0.3438	5.6719	0.6499	12.0938	2413.2700	2413.9199	
5	Plate	16.5000	24.5313	404.7656	0.6499	12.0938	2413.2700	2413.9199	
6	Cover Plate	8.8125	12.4375	109.6055	405.5586	0.0000	0.0000	405.5586	
Total		59.25		736.92	430.88		6585.28	7016.16	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.4375 in	S _{right} =	564.11 in ³	x-bar =	12.4375 in	S _{right} =	564.11 in ³
I _y =	7016.16 in ⁴	S _{left} =	564.11 in ³	I _y =	7016.16 in ⁴	S _{left} =	564.11 in ³
C _{right} =	12.4375 in	A =	59.2500 in ²	C _{right} =	12.4375 in	A =	59.2500 in ²
C _{left} =	12.4375 in	r _y =	10.8819 in	C _{left} =	12.4375 in	r _y =	10.8819 in



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.6250$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.6250$ in

Perforated Plate:

$A_3 = t = 0.3750$ in
 $B_3 = l = 5.2500$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 22.0000$ in

Left Web Plate:

$A_4 = h = 26.0000$ in
 $B_4 = t = 1.4375$ in

Right Web Plate:

$A_5 = h = 26.0000$ in
 $B_5 = t = 1.4375$ in

Cover Plate:

$A_6 = t = 0.5000$ in
 $B_6 = l = 22.0000$ in



Member U40-L40

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	4.2188	22.3125	94.1309	0.1373	8.7432	322.4995	322.6368
	Vertical Leg	5.0000	24.0000	120.0000	6.6667	10.4307	544.0021	550.6688
2	Horizontal Leg	4.2188	3.6875	15.5566	0.1373	9.8818	411.9571	412.0945
	Vertical Leg	5.0000	2.0000	10.0000	6.6667	11.5693	669.2384	675.9051
3	Perforated Plate	3.9375	4.1875	16.4883	0.0461	9.3818	346.5683	346.6144
4	Plate	37.3750	13.0000	485.8750	2105.4583	0.5693	12.1114	2117.5698
5	Plate	37.3750	13.0000	485.8750	2105.4583	0.5693	12.1114	2117.5698
6	Cover Plate	11.0000	21.7500	239.2500	0.2292	8.1807	736.1703	736.3995
Total		108.13		1467.18	4224.80		3054.66	7279.46
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	13.5693 in	S _{top} =	585.60 in ³	y-bar =	13.5693 in	S _{top} =	585.60 in ³
I _x =	7279.46 in ⁴	S _{bott.} =	536.47 in ³	I _x =	7279.46 in ⁴	S _{bott.} =	536.47 in ³
C _{top} =	12.4307 in	A =	108.1250 in ²	C _{top} =	12.4307 in	A =	108.1250 in ²
C _{bottom} =	13.5693 in	r _x =	8.2051 in	C _{bottom} =	13.5693 in	r _x =	8.2051 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.1094	3.7500	7.9102	2.0023	8.6875	159.2001	161.2024	
	Vertical Leg	2.5000	1.7500	4.3750	0.0814	10.6875	285.5566	285.6380	
1 (Right)	Horizontal Leg	2.1094	21.1250	44.5605	2.0023	8.6875	159.2001	161.2024	
	Vertical Leg	2.5000	23.1250	57.8125	0.0814	10.6875	285.5566	285.6380	
2 (Left)	Horizontal Leg	2.1094	3.7500	7.9102	2.0023	8.6875	159.2001	161.2024	
	Vertical Leg	2.5000	1.7500	4.3750	0.0814	10.6875	285.5566	285.6380	
2 (Right)	Horizontal Leg	2.1094	21.1250	44.5605	2.0023	8.6875	159.2001	161.2024	
	Vertical Leg	2.5000	23.1250	57.8125	0.0814	10.6875	285.5566	285.6380	
3 (Left)	Perforated Plate	1.9688	4.0625	7.9980	4.5220	8.3750	138.0894	142.6113	
3 (Right)	Perforated Plate	1.9688	20.8125	40.9746	4.5220	8.3750	138.0894	142.6113	
4	Plate	37.3750	0.7188	26.8633	6.4360	11.7188	5132.6752	5139.1112	
5	Plate	37.3750	24.1563	902.8398	6.4360	11.7188	5132.6752	5139.1112	
6	Cover Plate	11.0000	12.4375	136.8125	443.6667	0.0000	0.0000	443.6667	
Total		108.13		1344.80	473.92		12320.56	12794.47	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.4375 in	S _{right} =	1028.70 in ³	x-bar =	12.4375 in	S _{right} =	1028.70 in ³
I _y =	12794.47 in ⁴	S _{left} =	1028.70 in ³	I _y =	12794.47 in ⁴	S _{left} =	1028.70 in ³
C _{right} =	12.4375 in	A =	108.1250 in ²	C _{right} =	12.4375 in	A =	108.1250 in ²
C _{left} =	12.4375 in	r _y =	10.8780 in	C _{left} =	12.4375 in	r _y =	10.8780 in



Made By DWC
Checked By KMW

Date 2/1/2012
Date 2/9/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

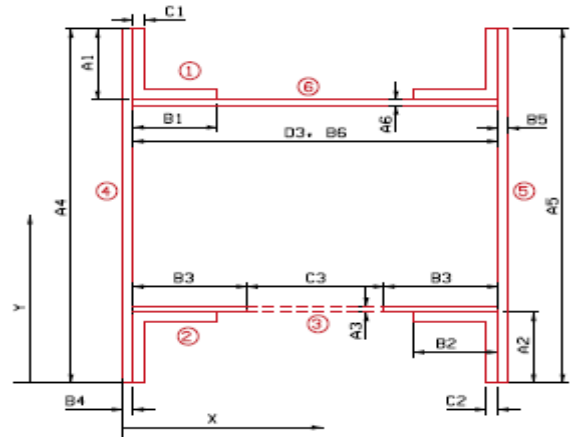
$A_4 = h = 24.0000$ in
 $B_4 = t = 0.5625$ in

Right Web Plate:

$A_5 = h = 24.0000$ in
 $B_5 = t = 0.5625$ in

Cover Plate:

$A_6 = t = 0.3750$ in
 $B_6 = l = 23.5000$ in



Member U41-L41

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	2.7188	20.1875	54.8848	0.0319	7.7678	164.0470	164.0788	
	Vertical Leg	3.0000	22.0000	66.0000	4.0000	9.5803	275.3479	279.3479	
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	8.6072	201.4144	201.4462	
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	10.4197	325.7088	329.7088	
3	Perforated Plate	6.0000	4.2500	25.5000	0.1250	8.1697	400.4615	400.5865	
4	Plate	13.5000	12.0000	162.0000	648.0000	0.4197	2.3777	650.3777	
5	Plate	13.5000	12.0000	162.0000	648.0000	0.4197	2.3777	650.3777	
6	Cover Plate	8.8125	19.8125	174.5977	0.1033	7.3928	481.6372	481.7405	
Total		53.25		661.35	1304.29		1853.37	3157.66	
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	
1	0.1250	24.0000	-3.0000	12.0000	-36.0000	-144.0000	0.4447	-0.5934	-144.5934
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				-3.00	-36.00	-144.00		-0.59	-144.59



Made By DWC
Checked By KMW

Date 2/1/2012
Date 2/9/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	12.4197 in	S _{top} =	272.67 in ³	y-bar =	12.4447 in	S _{top} =	260.75 in ³
I _x =	3157.66 in ⁴	S _{bott.} =	254.25 in ³	I _x =	3013.07 in ⁴	S _{bott.} =	242.12 in ³
C _{top} =	11.5803 in	A =	53.2500 in ²	C _{top} =	11.5553 in	A =	50.2500 in ²
C _{bottom} =	12.4197 in	r _x =	7.7006 in	C _{bottom} =	12.4447 in	r _x =	7.7435 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	2.7500	3.7383	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.7500	1.1250	0.0176	11.5625	200.5371	200.5547	
1 (Right)	Horizontal Leg	1.3594	21.8750	29.7363	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.8750	35.8125	0.0176	11.5625	200.5371	200.5547	
2 (Left)	Horizontal Leg	1.3594	2.7500	3.7383	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.7500	1.1250	0.0176	11.5625	200.5371	200.5547	
2 (Right)	Horizontal Leg	1.3594	21.8750	29.7363	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.8750	35.8125	0.0176	11.5625	200.5371	200.5547	
3 (Left)	Perforated Plate	3.0000	3.5625	10.6875	9.0000	8.7500	229.6875	238.6875	
3 (Right)	Perforated Plate	3.0000	21.0625	63.1875	9.0000	8.7500	229.6875	238.6875	
4	Plate	13.5000	0.2813	3.7969	0.3560	12.0313	1954.1382	1954.4941	
5	Plate	13.5000	24.3438	328.6406	0.3560	12.0313	1954.1382	1954.4941	
6	Cover Plate	8.8125	12.3125	108.5039	405.5586	0.0000	0.0000	405.5586	
Total		53.25		655.64	430.30		5667.01	6097.31	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	24.0000	0.1250	-3.0000	0.0625	-0.1875	-0.0039	12.9813	-505.5458	-505.5497
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-3.00		-0.19	0.00		-505.55	-505.55

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3125 in	S _{right} =	495.21 in ³	x-bar =	13.0438 in	S _{right} =	482.83 in ³
I _y =	6097.31 in ⁴	S _{left} =	495.21 in ³	I _y =	5591.76 in ⁴	S _{left} =	428.69 in ³
C _{right} =	12.3125 in	A =	53.2500 in ²	C _{right} =	11.5812 in	A =	50.2500 in ²
C _{left} =	12.3125 in	r _y =	10.7006 in	C _{left} =	13.0438 in	r _y =	10.5489 in



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

$A_4 = h = 20.0000$ in
 $B_4 = t = 0.5625$ in

Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 0.5625$ in

Cover Plate:

$A_6 = t = 0.3750$ in
 $B_6 = l = 23.5000$ in



Member U42-L42

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	16.1875	44.0098	0.0319	5.8445	92.8666	92.8985
	Vertical Leg	3.0000	18.0000	54.0000	4.0000	7.6570	175.8876	179.8876
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	6.5305	115.9487	115.9806
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	8.3430	208.8184	212.8184
3	Perforated Plate	6.0000	4.2500	25.5000	0.1250	6.0930	222.7500	222.8750
4	Plate	11.2500	10.0000	112.5000	375.0000	0.3430	1.3238	376.3238
5	Plate	11.2500	10.0000	112.5000	375.0000	0.3430	1.3238	376.3238
6	Cover Plate	8.8125	15.8125	139.3477	0.1033	5.4695	263.6269	263.7302
Total		48.75		504.22	758.29		1082.55	1840.84
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	2.0000	0.1250	-0.2500	10.0000	-2.5000	-0.0003	0.3448	-0.0297
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.25	-2.50	0.00		-0.03	-0.03



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	10.3430 in	S _{top} =	190.62 in ³	y-bar =	10.3448 in	S _{top} =	190.65 in ³
I _x =	1840.84 in ⁴	S _{bott.} =	177.98 in ³	I _x =	1840.81 in ⁴	S _{bott.} =	177.95 in ³
C _{top} =	9.6570 in	A =	48.7500 in ²	C _{top} =	9.6552 in	A =	48.5000 in ²
C _{bottom} =	10.3430 in	r _x =	6.1450 in	C _{bottom} =	10.3448 in	r _x =	6.1607 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	2.7500	3.7383	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.7500	1.1250	0.0176	11.5625	200.5371	200.5547	
1 (Right)	Horizontal Leg	1.3594	21.8750	29.7363	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.8750	35.8125	0.0176	11.5625	200.5371	200.5547	
2 (Left)	Horizontal Leg	1.3594	2.7500	3.7383	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.7500	1.1250	0.0176	11.5625	200.5371	200.5547	
2 (Right)	Horizontal Leg	1.3594	21.8750	29.7363	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.8750	35.8125	0.0176	11.5625	200.5371	200.5547	
3 (Left)	Perforated Plate	3.0000	3.5625	10.6875	9.0000	8.7500	229.6875	238.6875	
3 (Right)	Perforated Plate	3.0000	21.0625	63.1875	9.0000	8.7500	229.6875	238.6875	
4	Plate	11.2500	0.2813	3.1641	0.2966	12.0313	1628.4485	1628.7451	
5	Plate	11.2500	24.3438	273.8672	0.2966	12.0313	1628.4485	1628.7451	
6	Cover Plate	8.8125	12.3125	108.5039	405.5586	0.0000	0.0000	405.5586	
Total		48.75		600.23	430.18		5015.63	5445.81	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1250	2.0000	-0.2500	4.0000	-1.0000	-0.0833	8.3553	-17.4530	-17.5363
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.25		-1.00	-0.08		-17.45	-17.54

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3125 in	S _{right} =	442.30 in ³	x-bar =	12.3553 in	S _{right} =	442.41 in ³
I _y =	5445.81 in ⁴	S _{left} =	442.30 in ³	I _y =	5428.27 in ⁴	S _{left} =	439.35 in ³
C _{right} =	12.3125 in	A =	48.7500 in ²	C _{right} =	12.2697 in	A =	48.5000 in ²
C _{left} =	12.3125 in	r _y =	10.5692 in	C _{left} =	12.3553 in	r _y =	10.5794 in



Made By DWC
Checked By KMW

Date 2/1/2012
Date 2/9/2012

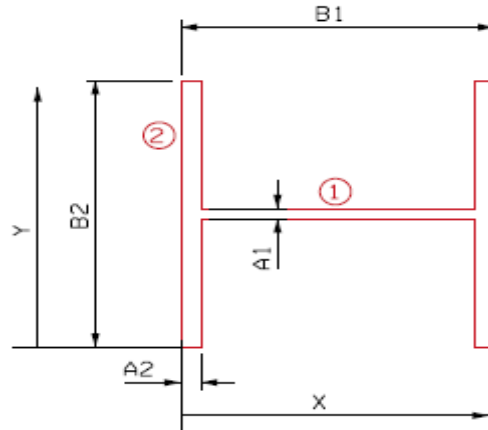
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 160

- $A_1 = t_w = 0.6650$ in
- $A_2 = t_f = 1.1240$ in
- $B_1 = d = 24.7140$ in
- $B_2 = b_f = 14.0950$ in



Member U43-L43

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		14.9399	7.0475	105.2889	0.5506	0.0000	0.0000	0.5506
2	Flange Plates		31.6856	7.0475	223.3040	524.5783	0.0000	0.0000	524.5783
Total			46.63		328.59	525.13		0.00	525.13
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0625	14.0950	-0.8809	7.0475	-6.2084	-14.5846	0.0000	0.0000	-14.5846
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.88		-6.21	-14.58		0.00	-14.58

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	7.0475	in	$S_{top} = 74.51$	in ³	y-bar =	7.0475	in	$S_{top} = 72.44$	in ³		
$I_x =$	525.13	in ⁴	$S_{bott.} = 74.51$	in ³	$I_x =$	510.54	in ⁴	$S_{bott.} = 72.44$	in ³		
$c_{top} =$	7.0475	in	A =	46.6255	in ²	$c_{top} =$	7.0475	in	A =	45.7445	in ²
$c_{bottom} =$	7.0475	in	$r_x =$	3.3560	in	$c_{bottom} =$	7.0475	in	$r_x =$	3.3408	in



Made By DWC
Checked By KMW

Date 2/1/2012
Date 2/9/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	12.3570	184.6122	628.3732	0.0000	0.0000	628.3732
2	Left Flange		15.8428	0.5620	8.9036	1.6679	11.7950	2204.0796	2205.7476
	Right Flange		15.8428	24.1520	382.6348	1.6679	11.7950	2204.0796	2205.7476
Total			46.63		576.15	631.71		4408.16	5039.87
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	14.0950	0.0625	-0.8809	0.0313	-0.0275	-0.0003	12.5631	-139.0400	-139.0403
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.88		-0.03	0.00		-139.04	-139.04

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3570	in	S _{right} = 407.86 in ³	x-bar =	12.5944	in	S _{right} = 404.37 in ³
I _y =	5039.87	in ⁴	S _{left} = 407.86 in ³	I _y =	4900.83	in ⁴	S _{left} = 389.13 in ³
C _{right} =	12.3570	in	A = 46.6255 in ²	C _{right} =	12.1196	in	A = 45.7445 in ²
C _{left} =	12.3570	in	r _y = 10.3968 in	C _{left} =	12.5944	in	r _y = 10.3506 in



Made By NRF
Checked By SFH

Date 1/20/2012
Date 1/25/2012

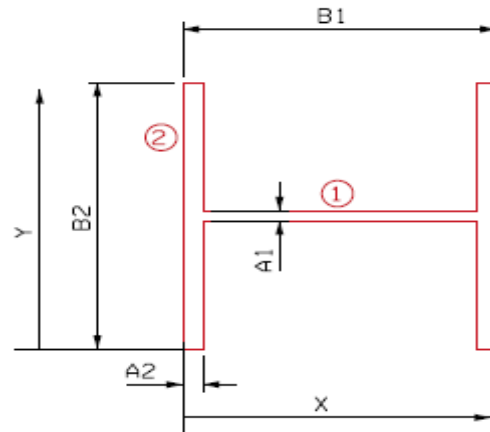
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 100

- $A_1 = t_w = 0.4700$ in
- $A_2 = t_f = 0.7670$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 12.0000$ in



Member U44-L44

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		10.5590	6.0000	63.3541	0.1944	0.0000	0.0000	0.1944
2	Flange Plates		18.4080	6.0000	110.4480	220.8960	0.0000	0.0000	220.8960
Total			28.97		173.80	221.09		0.00	221.09
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	6.0000	in	$S_{top} = 36.85$	in ³	y-bar =	6.0000	in	$S_{top} = 36.85$	in ³		
$I_x =$	221.09	in ⁴	$S_{bott.} = 36.85$	in ³	$I_x =$	221.09	in ⁴	$S_{bott.} = 36.85$	in ³		
$c_{top} =$	6.0000	in	A =	28.9670	in ²	$c_{top} =$	6.0000	in	A =	28.9670	in ²
$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in	$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in



Made By NRF
Checked By SFH

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	12.0000	126.7082	444.1134	0.0000	0.0000	444.1134
2	Left Flange		9.2040	0.3835	3.5297	0.4512	11.6165	1242.0160	1242.4673
	Right Flange		9.2040	23.6165	217.3663	0.4512	11.6165	1242.0160	1242.4673
Total			28.97		347.60	445.02		2484.03	2929.05
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.0000	in	S _{right} =	244.09	in ³	x-bar =	12.0000	in	S _{right} =	244.09	in ³
I _y =	2929.05	in ⁴	S _{left} =	244.09	in ³	I _y =	2929.05	in ⁴	S _{left} =	244.09	in ³
C _{right} =	12.0000	in	A =	28.9670	in ²	C _{right} =	12.0000	in	A =	28.9670	in ²
C _{left} =	12.0000	in	r _y =	10.0557	in	C _{left} =	12.0000	in	r _y =	10.0557	in



Made By NRF
Checked By SFH

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 87

- $A_1 = t_w = 0.4800$ in
- $A_2 = t_f = 0.8070$ in
- $B_1 = d = 24.1600$ in
- $B_2 = b_f = 9.0250$ in



Member U45-L45

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		10.8221	4.5125	48.8346	0.2078	0.0000	0.0000	0.2078
2	Flange Plates		14.5664	4.5125	65.7307	98.8699	0.0000	0.0000	98.8699
Total			25.39		114.57	99.08		0.00	99.08
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	4.5125	in	$S_{top} = 21.96$ in ³	y-bar =	4.5125	in	$S_{top} = 21.96$ in ³
$I_x =$	99.08	in ⁴	$S_{bott.} = 21.96$ in ³	$I_x =$	99.08	in ⁴	$S_{bott.} = 21.96$ in ³
$c_{top} =$	4.5125	in	$A = 25.3884$ in ²	$c_{top} =$	4.5125	in	$A = 25.3884$ in ²
$c_{bottom} =$	4.5125	in	$r_x = 1.9755$ in	$c_{bottom} =$	4.5125	in	$r_x = 1.9755$ in



Made By NRF
Checked By SFH

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.8221	12.0800	130.7307	458.4252	0.0000	0.0000	458.4252
2	Left Flange		7.2832	0.4035	2.9388	0.3953	11.6765	992.9928	993.3881
	Right Flange		7.2832	23.7565	173.0227	0.3953	11.6765	992.9928	993.3881
Total			25.39		306.69	459.22		1985.99	2445.20
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.0800	in	S _{right} =	202.42	in ³	x-bar =	12.0800	in	S _{right} =	202.42	in ³
I _y =	2445.20	in ⁴	S _{left} =	202.42	in ³	I _y =	2445.20	in ⁴	S _{left} =	202.42	in ³
C _{right} =	12.0800	in	A =	25.3884	in ²	C _{right} =	12.0800	in	A =	25.3884	in ²
C _{left} =	12.0800	in	r _y =	9.8138	in	C _{left} =	12.0800	in	r _y =	9.8138	in



Made By NRF
Checked By SFH

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 100

- $A_1 = t_w = 0.4700$ in
- $A_2 = t_f = 0.7670$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 12.0000$ in



Member U46-L46

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x, gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		10.5590	6.0000	63.3541	0.1944	0.0000	0.0000	0.1944
2	Flange Plates		18.4080	6.0000	110.4480	220.8960	0.0000	0.0000	220.8960
Total			28.97		173.80	221.09		0.00	221.09
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	6.0000	in	$S_{top} = 36.85$	in^3	y-bar =	6.0000	in	$S_{top} = 36.85$	in^3		
$I_x =$	221.09	in^4	$S_{bott.} = 36.85$	in^3	$I_x =$	221.09	in^4	$S_{bott.} = 36.85$	in^3		
$c_{top} =$	6.0000	in	A =	28.9670	in^2	$c_{top} =$	6.0000	in	A =	28.9670	in^2
$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in	$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in



Made By NRF
Checked By SFH

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	12.0000	126.7082	444.1134	0.0000	0.0000	444.1134
2	Left Flange		9.2040	0.3835	3.5297	0.4512	11.6165	1242.0160	1242.4673
	Right Flange		9.2040	23.6165	217.3663	0.4512	11.6165	1242.0160	1242.4673
Total			28.97		347.60	445.02		2484.03	2929.05
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.0000	in	S _{right} =	244.09	in ³	x-bar =	12.0000	in	S _{right} =	244.09	in ³
I _y =	2929.05	in ⁴	S _{left} =	244.09	in ³	I _y =	2929.05	in ⁴	S _{left} =	244.09	in ³
C _{right} =	12.0000	in	A =	28.9670	in ²	C _{right} =	12.0000	in	A =	28.9670	in ²
C _{left} =	12.0000	in	r _y =	10.0557	in	C _{left} =	12.0000	in	r _y =	10.0557	in



Made By NRF
Checked By SFH

Date 1/20/2012
Date 1/25/2012

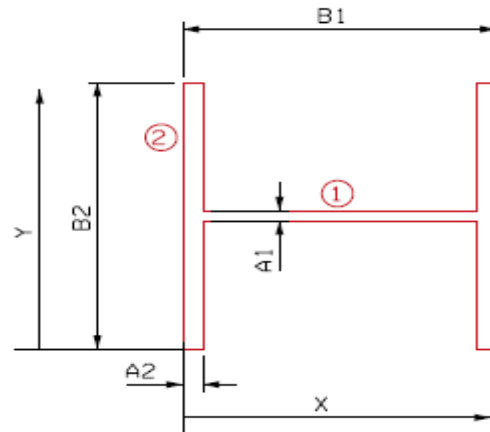
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 160

- $A_1 = t_w = 0.6650$ in
- $A_2 = t_f = 1.1240$ in
- $B_1 = d = 24.7140$ in
- $B_2 = b_f = 14.0950$ in



Member U47-L47

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		14.9399	7.0475	105.2889	0.5506	0.0000	0.0000	0.5506
2	Flange Plates		31.6856	7.0475	223.3040	524.5783	0.0000	0.0000	524.5783
Total			46.63		328.59	525.13		0.00	525.13
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	7.0475	in	$S_{top} = 74.51$ in ³	y-bar =	7.0475	in	$S_{top} = 74.51$ in ³
$I_x =$	525.13	in ⁴	$S_{bott.} = 74.51$ in ³	$I_x =$	525.13	in ⁴	$S_{bott.} = 74.51$ in ³
$c_{top} =$	7.0475	in	$A = 46.6255$ in ²	$c_{top} =$	7.0475	in	$A = 46.6255$ in ²
$c_{bottom} =$	7.0475	in	$r_x = 3.3560$ in	$c_{bottom} =$	7.0475	in	$r_x = 3.3560$ in



Made By NRF
Checked By SFH

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate	14.9399	12.3570	184.6122	628.3732	0.0000	0.0000	628.3732
2	Left Flange	15.8428	0.5620	8.9036	1.6679	11.7950	2204.0796	2205.7476
	Right Flange	15.8428	24.1520	382.6348	1.6679	11.7950	2204.0796	2205.7476
Total		46.63		576.15	631.71		4408.16	5039.87
Section Losses		A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3570	in	S _{right} = 407.86 in ³	x-bar =	12.3570	in	S _{right} = 407.86 in ³
I _y =	5039.87	in ⁴	S _{left} = 407.86 in ³	I _y =	5039.87	in ⁴	S _{left} = 407.86 in ³
C _{right} =	12.3570	in	A = 46.6255 in ²	C _{right} =	12.3570	in	A = 46.6255 in ²
C _{left} =	12.3570	in	r _y = 10.3968 in	C _{left} =	12.3570	in	r _y = 10.3968 in



Made By DWC
Checked By KMW

Date 2/1/2012
Date 2/9/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

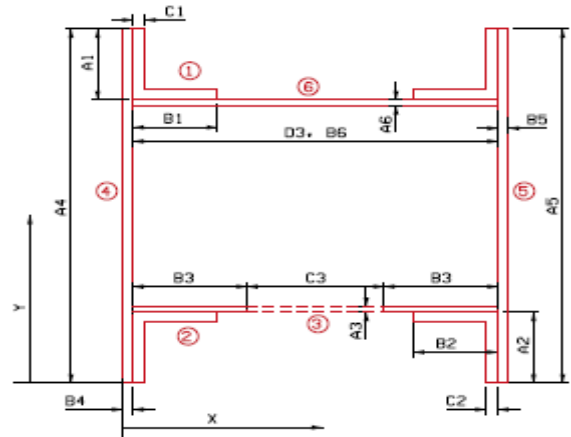
$A_4 = h = 20.0000$ in
 $B_4 = t = 0.5625$ in

Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 0.5625$ in

Cover Plate:

$A_6 = t = 0.3750$ in
 $B_6 = l = 23.5000$ in



Member U48-L48

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	2.7188	16.1875	44.0098	0.0319	5.8445	92.8666	92.8985	
	Vertical Leg	3.0000	18.0000	54.0000	4.0000	7.6570	175.8876	179.8876	
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	6.5305	115.9487	115.9806	
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	8.3430	208.8184	212.8184	
3	Perforated Plate	6.0000	4.2500	25.5000	0.1250	6.0930	222.7500	222.8750	
4	Plate	11.2500	10.0000	112.5000	375.0000	0.3430	1.3238	376.3238	
5	Plate	11.2500	10.0000	112.5000	375.0000	0.3430	1.3238	376.3238	
6	Cover Plate	8.8125	15.8125	139.3477	0.1033	5.4695	263.6269	263.7302	
Total		48.75		504.22	758.29		1082.55	1840.84	
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	
1	0.3125	20.0000	-6.2500	10.0000	-62.5000	-208.3333	0.7021	-3.0811	-211.4144
2	0.2500	2.0000	-0.5000	19.0000	-9.5000	-0.1667	8.2979	-34.4274	-34.5941
3	0.1250	3.6250	-0.4531	1.8125	-0.8213	-0.4962	8.8896	-35.8083	-36.3045
4	2.0000	0.2500	-0.5000	4.1250	-2.0625	-0.0026	6.5771	-21.6292	-21.6318
5	2.0000	0.2500	-0.5000	4.1250	-2.0625	-0.0026	6.5771	-21.6292	-21.6318
6	0.1250	3.6250	-0.4531	1.8125	-0.8213	-0.4962	8.8896	-35.8083	-36.3045
7	0.1875	20.0000	-3.7500	10.0000	-37.5000	-125.0000	0.7021	-1.8486	-126.8486
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-12.41		-115.27	-334.50		-154.23	-488.73



Made By DWC
Checked By KMW

Date 2/1/2012
Date 2/9/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	10.3430 in	S _{top} =	190.62 in ³	y-bar =	10.7021 in	S _{top} =	145.42 in ³
I _x =	1840.84 in ⁴	S _{bott.} =	177.98 in ³	I _x =	1352.11 in ⁴	S _{bott.} =	126.34 in ³
C _{top} =	9.6570 in	A =	48.7500 in ²	C _{top} =	9.2979 in	A =	36.3438 in ²
C _{bottom} =	10.3430 in	r _x =	6.1450 in	C _{bottom} =	10.7021 in	r _x =	6.0995 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	2.7500	3.7383	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.7500	1.1250	0.0176	11.5625	200.5371	200.5547	
1 (Right)	Horizontal Leg	1.3594	21.8750	29.7363	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.8750	35.8125	0.0176	11.5625	200.5371	200.5547	
2 (Left)	Horizontal Leg	1.3594	2.7500	3.7383	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.7500	1.1250	0.0176	11.5625	200.5371	200.5547	
2 (Right)	Horizontal Leg	1.3594	21.8750	29.7363	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.8750	35.8125	0.0176	11.5625	200.5371	200.5547	
3 (Left)	Perforated Plate	3.0000	3.5625	10.6875	9.0000	8.7500	229.6875	238.6875	
3 (Right)	Perforated Plate	3.0000	21.0625	63.1875	9.0000	8.7500	229.6875	238.6875	
4	Plate	11.2500	0.2813	3.1641	0.2966	12.0313	1628.4485	1628.7451	
5	Plate	11.2500	24.3438	273.8672	0.2966	12.0313	1628.4485	1628.7451	
6	Cover Plate	8.8125	12.3125	108.5039	405.5586	0.0000	0.0000	405.5586	
Total		48.75		600.23	430.18		5015.63	5445.81	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	20.0000	0.3125	-6.2500	0.1563	-0.9766	-0.0509	13.1494	-1080.6623	-1080.7131
2	2.0000	0.2500	-0.5000	0.4375	-0.2188	-0.0026	12.8681	-82.7943	-82.7969
3	3.6250	0.1250	-0.4531	0.8750	-0.3965	-0.0006	12.4306	-70.0170	-70.0176
4	0.2500	2.0000	-0.5000	5.5625	-2.7813	-0.1667	7.7431	-29.9780	-30.1446
5	0.2500	2.0000	-0.5000	19.0625	-9.5313	-0.1667	5.7569	-16.5708	-16.7375
6	3.6250	0.1250	-0.4531	23.7500	-10.7617	-0.0006	10.4444	-49.4292	-49.4298
7	20.0000	0.1875	-3.7500	24.5313	-91.9922	-0.0110	11.2256	-472.5553	-472.5663
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-12.41		-116.66	-0.40		-1802.01	-1802.41

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3125 in	S _{right} =	442.30 in ³	x-bar =	13.3056 in	S _{right} =	321.87 in ³
I _y =	5445.81 in ⁴	S _{left} =	442.30 in ³	I _y =	3643.40 in ⁴	S _{left} =	273.82 in ³
C _{right} =	12.3125 in	A =	48.7500 in ²	C _{right} =	11.3194 in	A =	36.3438 in ²
C _{left} =	12.3125 in	r _y =	10.5692 in	C _{left} =	13.3056 in	r _y =	10.0124 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_t = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_t = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

$A_4 = h = 24.0000$ in
 $B_4 = t = 0.5625$ in

Right Web Plate:

$A_5 = h = 24.0000$ in
 $B_5 = t = 0.5625$ in

Cover Plate:

$A_6 = t = 0.3750$ in
 $B_6 = l = 23.5000$ in



Member U49-L49

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	20.1875	54.8848	0.0319	7.7678	164.0470	164.0788
	Vertical Leg	3.0000	22.0000	66.0000	4.0000	9.5803	275.3479	279.3479
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	8.6072	201.4144	201.4462
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	10.4197	325.7088	329.7088
3	Perforated Plate	6.0000	4.2500	25.5000	0.1250	8.1697	400.4615	400.5865
4	Plate	13.5000	12.0000	162.0000	648.0000	0.4197	2.3777	650.3777
5	Plate	13.5000	12.0000	162.0000	648.0000	0.4197	2.3777	650.3777
6	Cover Plate	8.8125	19.8125	174.5977	0.1033	7.3928	481.6372	481.7405
Total		53.25		661.35	1304.29		1853.37	3157.66
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	12.4197 in	S _{top} =	272.67 in ³	y-bar =	12.4197 in	S _{top} =	272.67 in ³
I _x =	3157.66 in ⁴	S _{bott.} =	254.25 in ³	I _x =	3157.66 in ⁴	S _{bott.} =	254.25 in ³
C _{top} =	11.5803 in	A =	53.2500 in ²	C _{top} =	11.5803 in	A =	53.2500 in ²
C _{bottom} =	12.4197 in	r _x =	7.7006 in	C _{bottom} =	12.4197 in	r _x =	7.7006 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	2.7500	3.7383	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.7500	1.1250	0.0176	11.5625	200.5371	200.5547	
1 (Right)	Horizontal Leg	1.3594	21.8750	29.7363	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.8750	35.8125	0.0176	11.5625	200.5371	200.5547	
2 (Left)	Horizontal Leg	1.3594	2.7500	3.7383	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.7500	1.1250	0.0176	11.5625	200.5371	200.5547	
2 (Right)	Horizontal Leg	1.3594	21.8750	29.7363	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.8750	35.8125	0.0176	11.5625	200.5371	200.5547	
3 (Left)	Perforated Plate	3.0000	3.5625	10.6875	9.0000	8.7500	229.6875	238.6875	
3 (Right)	Perforated Plate	3.0000	21.0625	63.1875	9.0000	8.7500	229.6875	238.6875	
4	Plate	13.5000	0.2813	3.7969	0.3560	12.0313	1954.1382	1954.4941	
5	Plate	13.5000	24.3438	328.6406	0.3560	12.0313	1954.1382	1954.4941	
6	Cover Plate	8.8125	12.3125	108.5039	405.5586	0.0000	0.0000	405.5586	
Total		53.25		655.64	430.30		5667.01	6097.31	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3125 in	S _{right} =	495.21 in ³	x-bar =	12.3125 in	S _{right} =	495.21 in ³
I _y =	6097.31 in ⁴	S _{left} =	495.21 in ³	I _y =	6097.31 in ⁴	S _{left} =	495.21 in ³
C _{right} =	12.3125 in	A =	53.2500 in ²	C _{right} =	12.3125 in	A =	53.2500 in ²
C _{left} =	12.3125 in	r _y =	10.7006 in	C _{left} =	12.3125 in	r _y =	10.7006 in



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_t = 0.6250$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_t = 0.6250$ in

Perforated Plate:

$A_3 = t = 0.6250$ in
 $B_3 = l = 5.7500$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.0000$ in

Left Web Plate:

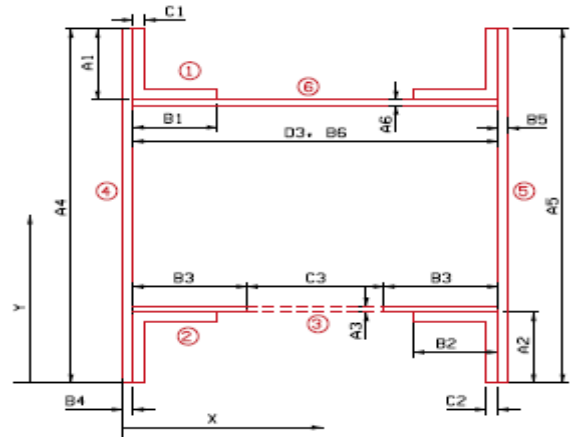
$A_4 = h = 26.0000$ in
 $B_4 = t = 1.7500$ in

Right Web Plate:

$A_5 = h = 26.0000$ in
 $B_5 = t = 1.7500$ in

Cover Plate:

$A_6 = t = 0.5000$ in
 $B_6 = l = 23.0000$ in



Member U50-L50

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	4.2188	22.3125	94.1309	0.1373	9.0145	342.8193	342.9567
	Vertical Leg	5.0000	24.0000	120.0000	6.6667	10.7020	572.6621	579.3287
2	Horizontal Leg	4.2188	3.6875	15.5566	0.1373	9.6105	389.6524	389.7898
	Vertical Leg	5.0000	2.0000	10.0000	6.6667	11.2980	638.2261	644.8928
3	Perforated Plate	7.1875	4.3125	30.9961	0.2340	8.9855	580.3154	580.5494
4	Plate	45.5000	13.0000	591.5000	2563.1667	0.2980	4.0411	2567.2077
5	Plate	45.5000	13.0000	591.5000	2563.1667	0.2980	4.0411	2567.2077
6	Cover Plate	11.5000	21.7500	250.1250	0.2396	8.4520	821.5139	821.7535
Total		128.13		1703.81	5140.41		3353.27	8493.69
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	13.2980 in	S _{top} =	668.69 in ³	y-bar =	13.2980 in	S _{top} =	668.69 in ³
I _x =	8493.69 in ⁴	S _{bott.} =	638.72 in ³	I _x =	8493.69 in ⁴	S _{bott.} =	638.72 in ³
C _{top} =	12.7020 in	A =	128.1250 in ²	C _{top} =	12.7020 in	A =	128.1250 in ²
C _{bottom} =	13.2980 in	r _x =	8.1420 in	C _{bottom} =	13.2980 in	r _x =	8.1420 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.1094	4.0625	8.5693	2.0023	9.1875	178.0527	180.0549	
	Vertical Leg	2.5000	2.0625	5.1563	0.0814	11.1875	312.9004	312.9818	
1 (Right)	Horizontal Leg	2.1094	22.4375	47.3291	2.0023	9.1875	178.0527	180.0549	
	Vertical Leg	2.5000	24.4375	61.0938	0.0814	11.1875	312.9004	312.9818	
2 (Left)	Horizontal Leg	2.1094	4.0625	8.5693	2.0023	9.1875	178.0527	180.0549	
	Vertical Leg	2.5000	2.0625	5.1563	0.0814	11.1875	312.9004	312.9818	
2 (Right)	Horizontal Leg	2.1094	22.4375	47.3291	2.0023	9.1875	178.0527	180.0549	
	Vertical Leg	2.5000	24.4375	61.0938	0.0814	11.1875	312.9004	312.9818	
3 (Left)	Perforated Plate	3.5938	4.6250	16.6211	9.9015	8.6250	267.3413	277.2428	
3 (Right)	Perforated Plate	3.5938	21.8750	78.6133	9.9015	8.6250	267.3413	277.2428	
4	Plate	45.5000	0.8750	39.8125	11.6120	12.3750	6967.8984	6979.5104	
5	Plate	45.5000	25.6250	1165.9375	11.6120	12.3750	6967.8984	6979.5104	
6	Cover Plate	11.5000	13.2500	152.3750	506.9583	0.0000	0.0000	506.9583	
Total		128.13		1697.66	558.32		16434.29	16992.61	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	13.2500 in	S _{right} =	1282.46 in ³	x-bar =	13.2500 in	S _{right} =	1282.46 in ³
I _y =	16992.61 in ⁴	S _{left} =	1282.46 in ³	I _y =	16992.61 in ⁴	S _{left} =	1282.46 in ³
C _{right} =	13.2500 in	A =	128.1250 in ²	C _{right} =	13.2500 in	A =	128.1250 in ²
C _{left} =	13.2500 in	r _y =	11.5163 in	C _{left} =	13.2500 in	r _y =	11.5163 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.5000$ in

Perforated Plate:

$A_3 = t = 0.6250$ in
 $B_3 = l = 5.7500$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.0000$ in

Left Web Plate:

$A_4 = h = 26.0000$ in
 $B_4 = t = 0.8750$ in

Right Web Plate:

$A_5 = h = 26.0000$ in
 $B_5 = t = 0.8750$ in

Cover Plate:

$A_6 = t = 0.5000$ in
 $B_6 = l = 23.0000$ in



Member U51-L51

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.5000	22.2500	77.8750	0.0729	8.7678	269.0606	269.1335
	Vertical Leg	4.0000	24.0000	96.0000	5.3333	10.5178	442.4971	447.8305
2	Horizontal Leg	3.5000	3.7500	13.1250	0.0729	9.7322	331.5045	331.5774
	Vertical Leg	4.0000	2.0000	8.0000	5.3333	11.4822	527.3629	532.6963
3	Perforated Plate	7.1875	4.3125	30.9961	0.2340	9.1697	604.3484	604.5824
4	Plate	22.7500	13.0000	295.7500	1281.5833	0.4822	5.2896	1286.8729
5	Plate	22.7500	13.0000	295.7500	1281.5833	0.4822	5.2896	1286.8729
6	Cover Plate	11.5000	21.7500	250.1250	0.2396	8.2678	786.1014	786.3410
Total		79.19		1067.62	2574.45		2971.45	5545.91
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	13.4822 in	S _{top} =	443.04 in ³	y-bar =	13.4822 in	S _{top} =	443.04 in ³
I _x =	5545.91 in ⁴	S _{bott.} =	411.35 in ³	I _x =	5545.91 in ⁴	S _{bott.} =	411.35 in ³
C _{top} =	12.5178 in	A =	79.1875 in ²	C _{top} =	12.5178 in	A =	79.1875 in ²
C _{bottom} =	13.4822 in	r _x =	8.3687 in	C _{bottom} =	13.4822 in	r _x =	8.3687 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.7500	3.1250	5.4688	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	1.1250	2.2500	0.0417	11.2500	253.1250	253.1667	
1 (Right)	Horizontal Leg	1.7500	21.6250	37.8438	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	23.6250	47.2500	0.0417	11.2500	253.1250	253.1667	
2 (Left)	Horizontal Leg	1.7500	3.1250	5.4688	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	1.1250	2.2500	0.0417	11.2500	253.1250	253.1667	
2 (Right)	Horizontal Leg	1.7500	21.6250	37.8438	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	23.6250	47.2500	0.0417	11.2500	253.1250	253.1667	
3 (Left)	Perforated Plate	3.5938	3.7500	13.4766	9.9015	8.6250	267.3413	277.2428	
3 (Right)	Perforated Plate	3.5938	21.0000	75.4688	9.9015	8.6250	267.3413	277.2428	
4	Plate	22.7500	0.4375	9.9531	1.4515	11.9375	3241.9639	3243.4154	
5	Plate	22.7500	24.3125	553.1094	1.4515	11.9375	3241.9639	3243.4154	
6	Cover Plate	11.5000	12.3750	142.3125	506.9583	0.0000	0.0000	506.9583	
Total		79.19		979.95	536.98		8630.05	9167.02	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3750 in	S _{right} =	740.77 in ³	x-bar =	12.3750 in	S _{right} =	740.77 in ³
I _y =	9167.02 in ⁴	S _{left} =	740.77 in ³	I _y =	9167.02 in ⁴	S _{left} =	740.77 in ³
C _{right} =	12.3750 in	A =	79.1875 in ²	C _{right} =	12.3750 in	A =	79.1875 in ²
C _{left} =	12.3750 in	r _y =	10.7593 in	C _{left} =	12.3750 in	r _y =	10.7593 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.5000$ in

Perforated Plate:

$A_3 = t = 0.6250$ in
 $B_3 = l = 5.7500$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.0000$ in

Left Web Plate:

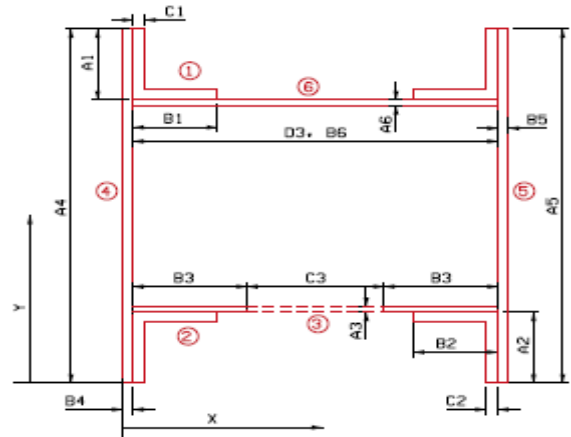
$A_4 = h = 24.0000$ in
 $B_4 = t = 0.8750$ in

Right Web Plate:

$A_5 = h = 24.0000$ in
 $B_5 = t = 0.8750$ in

Cover Plate:

$A_6 = t = 0.5000$ in
 $B_6 = l = 23.0000$ in



Member U52-L52

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.5000	20.2500	70.8750	0.0729	7.8025	213.0758	213.1488
	Vertical Leg	4.0000	22.0000	88.0000	5.3333	9.5525	365.0001	370.3334
2	Horizontal Leg	3.5000	3.7500	13.1250	0.0729	8.6975	264.7635	264.8364
	Vertical Leg	4.0000	2.0000	8.0000	5.3333	10.4475	436.6021	441.9354
3	Perforated Plate	7.1875	4.3125	30.9961	0.2340	8.1350	475.6574	475.8914
4	Plate	21.0000	12.0000	252.0000	1008.0000	0.4475	4.2056	1012.2056
5	Plate	21.0000	12.0000	252.0000	1008.0000	0.4475	4.2056	1012.2056
6	Cover Plate	11.5000	19.7500	227.1250	0.2396	7.3025	613.2527	613.4923
Total		75.69		942.12	2027.29		2376.76	4404.05
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	12.4475	in	S _{top} =	381.22	in ³	y-bar =	12.4475	in	S _{top} =	381.22	in ³
I _x =	4404.05	in ⁴	S _{bott.} =	353.81	in ³	I _x =	4404.05	in ⁴	S _{bott.} =	353.81	in ³
C _{top} =	11.5525	in	A =	75.6875	in ²	C _{top} =	11.5525	in	A =	75.6875	in ²
C _{bottom} =	12.4475	in	r _x =	7.6281	in	C _{bottom} =	12.4475	in	r _x =	7.6281	in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.7500	3.1250	5.4688	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	1.1250	2.2500	0.0417	11.2500	253.1250	253.1667	
1 (Right)	Horizontal Leg	1.7500	21.6250	37.8438	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	23.6250	47.2500	0.0417	11.2500	253.1250	253.1667	
2 (Left)	Horizontal Leg	1.7500	3.1250	5.4688	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	1.1250	2.2500	0.0417	11.2500	253.1250	253.1667	
2 (Right)	Horizontal Leg	1.7500	21.6250	37.8438	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	23.6250	47.2500	0.0417	11.2500	253.1250	253.1667	
3 (Left)	Perforated Plate	3.5938	3.7500	13.4766	9.9015	8.6250	267.3413	277.2428	
3 (Right)	Perforated Plate	3.5938	21.0000	75.4688	9.9015	8.6250	267.3413	277.2428	
4	Plate	21.0000	0.4375	9.1875	1.3398	11.9375	2992.5820	2993.9219	
5	Plate	21.0000	24.3125	510.5625	1.3398	11.9375	2992.5820	2993.9219	
6	Cover Plate	11.5000	12.3750	142.3125	506.9583	0.0000	0.0000	506.9583	
Total		75.69		936.63	536.75		8131.28	8668.04	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.3750	in	S _{right} =	700.45	in ³	x-bar =	12.3750	in	S _{right} =	700.45	in ³
I _y =	8668.04	in ⁴	S _{left} =	700.45	in ³	I _y =	8668.04	in ⁴	S _{left} =	700.45	in ³
C _{right} =	12.3750	in	A =	75.6875	in ²	C _{right} =	12.3750	in	A =	75.6875	in ²
C _{left} =	12.3750	in	r _y =	10.7016	in	C _{left} =	12.3750	in	r _y =	10.7016	in



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_t = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_t = 0.5000$ in

Perforated Plate:

$A_3 = t = 0.6250$ in
 $B_3 = l = 5.7500$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.0000$ in

Left Web Plate:

$A_4 = h = 22.0000$ in
 $B_4 = t = 0.9375$ in

Right Web Plate:

$A_5 = h = 22.0000$ in
 $B_5 = t = 0.9375$ in

Cover Plate:

$A_6 = t = 0.5000$ in
 $B_6 = l = 23.0000$ in



Member U53-L53

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.5000	18.2500	63.8750	0.0729	6.8556	164.4953	164.5682
	Vertical Leg	4.0000	20.0000	80.0000	5.3333	8.6056	296.2224	301.5558
2	Horizontal Leg	3.5000	3.7500	13.1250	0.0729	7.6444	204.5313	204.6042
	Vertical Leg	4.0000	2.0000	8.0000	5.3333	9.3944	353.0223	358.3556
3	Perforated Plate	7.1875	4.3125	30.9961	0.2340	7.0819	360.4813	360.7153
4	Plate	20.6250	11.0000	226.8750	831.8750	0.3944	3.2090	835.0840
5	Plate	20.6250	11.0000	226.8750	831.8750	0.3944	3.2090	835.0840
6	Cover Plate	11.5000	17.7500	204.1250	0.2396	6.3556	464.5207	464.7602
Total		74.94		853.87	1675.04		1849.69	3524.73
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	11.3944 in	S _{top} =	332.35 in ³	y-bar =	11.3944 in	S _{top} =	332.35 in ³
I _x =	3524.73 in ⁴	S _{bott.} =	309.34 in ³	I _x =	3524.73 in ⁴	S _{bott.} =	309.34 in ³
C _{top} =	10.6056 in	A =	74.9375 in ²	C _{top} =	10.6056 in	A =	74.9375 in ²
C _{bottom} =	11.3944 in	r _x =	6.8582 in	C _{bottom} =	11.3944 in	r _x =	6.8582 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.7500	3.1875	5.5781	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	1.1875	2.3750	0.0417	11.2500	253.1250	253.1667	
1 (Right)	Horizontal Leg	1.7500	21.6875	37.9531	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	23.6875	47.3750	0.0417	11.2500	253.1250	253.1667	
2 (Left)	Horizontal Leg	1.7500	3.1875	5.5781	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	1.1875	2.3750	0.0417	11.2500	253.1250	253.1667	
2 (Right)	Horizontal Leg	1.7500	21.6875	37.9531	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	23.6875	47.3750	0.0417	11.2500	253.1250	253.1667	
3 (Left)	Perforated Plate	3.5938	3.8125	13.7012	9.9015	8.6250	267.3413	277.2428	
3 (Right)	Perforated Plate	3.5938	21.0625	75.6934	9.9015	8.6250	267.3413	277.2428	
4	Plate	20.6250	0.4688	9.6680	1.5106	11.9688	2954.5514	2956.0620	
5	Plate	20.6250	24.4063	503.3789	1.5106	11.9688	2954.5514	2956.0620	
6	Cover Plate	11.5000	12.4375	143.0313	506.9583	0.0000	0.0000	506.9583	
Total		74.94		932.04	537.10		8055.22	8592.32	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.4375 in	S _{right} =	690.84 in ³	x-bar =	12.4375 in	S _{right} =	690.84 in ³
I _y =	8592.32 in ⁴	S _{left} =	690.84 in ³	I _y =	8592.32 in ⁴	S _{left} =	690.84 in ³
C _{right} =	12.4375 in	A =	74.9375 in ²	C _{right} =	12.4375 in	A =	74.9375 in ²
C _{left} =	12.4375 in	r _y =	10.7079 in	C _{left} =	12.4375 in	r _y =	10.7079 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_t = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_t = 0.5000$ in

Perforated Plate:

$A_3 = t = 0.6250$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

$A_4 = h = 20.0000$ in
 $B_4 = t = 0.7500$ in

Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 0.7500$ in

Cover Plate:

$A_6 = t = 0.5000$ in
 $B_6 = l = 23.5000$ in



Member U54-L54

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.5000	16.2500	56.8750	0.0729	5.8624	120.2852	120.3581
	Vertical Leg	4.0000	18.0000	72.0000	5.3333	7.6124	231.7917	237.1251
2	Horizontal Leg	3.5000	3.7500	13.1250	0.0729	6.6376	154.2042	154.2771
	Vertical Leg	4.0000	2.0000	8.0000	5.3333	8.3876	281.4104	286.7437
3	Perforated Plate	7.5000	4.3125	32.3438	0.2441	6.0751	276.8055	277.0496
4	Plate	15.0000	10.0000	150.0000	500.0000	0.3876	2.2540	502.2540
5	Plate	15.0000	10.0000	150.0000	500.0000	0.3876	2.2540	502.2540
6	Cover Plate	11.7500	15.7500	185.0625	0.2448	5.3624	337.8694	338.1142
Total		64.25		667.41	1011.30		1406.87	2418.18
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	10.3876 in	S _{top} =	251.57 in ³	y-bar =	10.3876 in	S _{top} =	251.57 in ³
I _x =	2418.18 in ⁴	S _{bott.} =	232.79 in ³	I _x =	2418.18 in ⁴	S _{bott.} =	232.79 in ³
C _{top} =	9.6124 in	A =	64.2500 in ²	C _{top} =	9.6124 in	A =	64.2500 in ²
C _{bottom} =	10.3876 in	r _x =	6.1349 in	C _{bottom} =	10.3876 in	r _x =	6.1349 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.7500	3.0000	5.2500	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	1.0000	2.0000	0.0417	11.5000	264.5000	264.5417	
1 (Right)	Horizontal Leg	1.7500	22.0000	38.5000	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	24.0000	48.0000	0.0417	11.5000	264.5000	264.5417	
2 (Left)	Horizontal Leg	1.7500	3.0000	5.2500	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	1.0000	2.0000	0.0417	11.5000	264.5000	264.5417	
2 (Right)	Horizontal Leg	1.7500	22.0000	38.5000	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	24.0000	48.0000	0.0417	11.5000	264.5000	264.5417	
3 (Left)	Perforated Plate	3.7500	3.7500	14.0625	11.2500	8.7500	287.1094	298.3594	
3 (Right)	Perforated Plate	3.7500	21.2500	79.6875	11.2500	8.7500	287.1094	298.3594	
4	Plate	15.0000	0.3750	5.6250	0.7031	12.1250	2205.2344	2205.9375	
5	Plate	15.0000	24.6250	369.3750	0.7031	12.1250	2205.2344	2205.9375	
6	Cover Plate	11.7500	12.5000	146.8750	540.7448	0.0000	0.0000	540.7448	
Total		64.25		803.13	571.96		6674.44	7246.40	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.5000 in	S _{right} =	579.71 in ³	x-bar =	12.5000 in	S _{right} =	579.71 in ³
I _y =	7246.40 in ⁴	S _{left} =	579.71 in ³	I _y =	7246.40 in ⁴	S _{left} =	579.71 in ³
C _{right} =	12.5000 in	A =	64.2500 in ²	C _{right} =	12.5000 in	A =	64.2500 in ²
C _{left} =	12.5000 in	r _y =	10.6200 in	C _{left} =	12.5000 in	r _y =	10.6200 in



Made By DWC
Checked By KMW

Date 2/2/2012
Date 2/9/2012

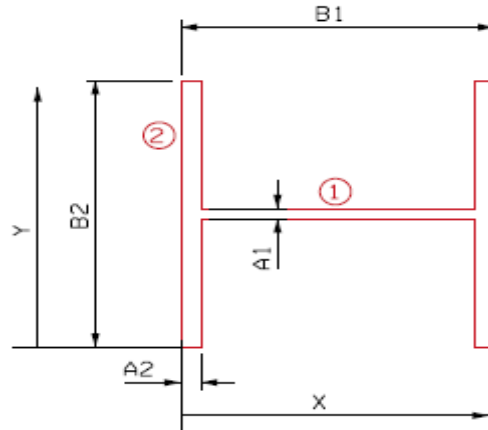
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 120

- $A_1 = t_w = 0.5590$ in
- $A_2 = t_f = 0.9220$ in
- $B_1 = d = 24.3100$ in
- $B_2 = b_f = 12.0890$ in



Member U55-L55

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x, gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		12.5585	6.0445	75.9098	0.3270	0.0000	0.0000	0.3270
2	Flange Plates		22.2921	6.0445	134.7447	271.4881	0.0000	0.0000	271.4881
Total			34.85		210.65	271.82		0.00	271.82
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1250	12.0890	-1.5111	6.0445	-9.1340	-18.4035	0.0000	0.0000	-18.4035
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.51		-9.13	-18.40		0.00	-18.40

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0445	in	$S_{top} =$	44.97	in ³	y-bar =	6.0445	in	$S_{top} =$	41.92	in ³
$I_x =$	271.82	in ⁴	$S_{bott.} =$	44.97	in ³	$I_x =$	253.41	in ⁴	$S_{bott.} =$	41.92	in ³
$c_{top} =$	6.0445	in	A =	34.8506	in ²	$c_{top} =$	6.0445	in	A =	33.3395	in ²
$c_{bottom} =$	6.0445	in	$r_x =$	2.7927	in	$c_{bottom} =$	6.0445	in	$r_x =$	2.7570	in



Made By DWC
Checked By KMW

Date 2/2/2012
Date 2/9/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.5585	12.1550	152.6485	528.2115	0.0000	0.0000	528.2115
2	Left Flange		11.1461	0.4610	5.1383	0.7896	11.6940	1524.2194	1525.0090
	Right Flange		11.1461	23.8490	265.8223	0.7896	11.6940	1524.2194	1525.0090
Total			34.85		423.61	529.79		3048.44	3578.23
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	12.0890	0.1250	-1.5111	0.0625	-0.0944	-0.0020	12.6406	-241.4547	-241.4566
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.51		-0.09	0.00		-241.45	-241.46

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1550	in	S _{right} = 294.38 in ³	x-bar =	12.7031	in	S _{right} = 287.48 in ³
I _y =	3578.23	in ⁴	S _{left} = 294.38 in ³	I _y =	3336.77	in ⁴	S _{left} = 262.67 in ³
C _{right} =	12.1550	in	A = 34.8506 in ²	C _{right} =	11.6069	in	A = 33.3395 in ²
C _{left} =	12.1550	in	r _y = 10.1328 in	C _{left} =	12.7031	in	r _y = 10.0042 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/25/2012

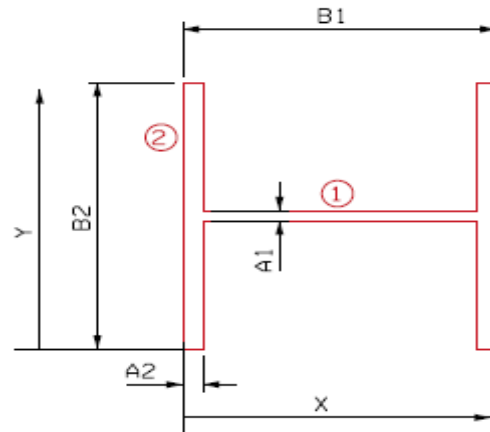
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 100

- $A_1 = t_w = 0.4700$ in
- $A_2 = t_f = 0.7670$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 12.0000$ in



Member U56-L56

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x, gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		10.5590	6.0000	63.3541	0.1944	0.0000	0.0000	0.1944
2	Flange Plates		18.4080	6.0000	110.4480	220.8960	0.0000	0.0000	220.8960
Total			28.97		173.80	221.09		0.00	221.09
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	6.0000	in	$S_{top} = 36.85$	in^3	y-bar =	6.0000	in	$S_{top} = 36.85$	in^3		
$I_x =$	221.09	in^4	$S_{bott.} = 36.85$	in^3	$I_x =$	221.09	in^4	$S_{bott.} = 36.85$	in^3		
$c_{top} =$	6.0000	in	A =	28.9670	in^2	$c_{top} =$	6.0000	in	A =	28.9670	in^2
$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in	$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	12.0000	126.7082	444.1134	0.0000	0.0000	444.1134
2	Left Flange		9.2040	0.3835	3.5297	0.4512	11.6165	1242.0160	1242.4673
	Right Flange		9.2040	23.6165	217.3663	0.4512	11.6165	1242.0160	1242.4673
Total			28.97		347.60	445.02		2484.03	2929.05
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.0000	in	S _{right} =	244.09	in ³	x-bar =	12.0000	in	S _{right} =	244.09	in ³
I _y =	2929.05	in ⁴	S _{left} =	244.09	in ³	I _y =	2929.05	in ⁴	S _{left} =	244.09	in ³
C _{right} =	12.0000	in	A =	28.9670	in ²	C _{right} =	12.0000	in	A =	28.9670	in ²
C _{left} =	12.0000	in	r _y =	10.0557	in	C _{left} =	12.0000	in	r _y =	10.0557	in



Made By DWC
Checked By KMW

Date 2/2/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in



Member U57-L57

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
Total			37.78		264.47	408.29		0.00	408.29
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.2500	14.0000	-3.5000	7.0000	-24.5000	-57.1667	0.0000	0.0000	-57.1667
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-3.50		-24.50	-57.17		0.00	-57.17

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	$S_{top} =$	58.33	in ³	y-bar =	7.0000	in	$S_{top} =$	50.16	in ³
$I_x =$	408.29	in ⁴	$S_{bott.} =$	58.33	in ³	$I_x =$	351.12	in ⁴	$S_{bott.} =$	50.16	in ³
$c_{top} =$	7.0000	in	A =	37.7816	in ²	$c_{top} =$	7.0000	in	A =	34.2816	in ²
$c_{bottom} =$	7.0000	in	$r_x =$	3.2873	in	$c_{bottom} =$	7.0000	in	$r_x =$	3.2004	in



Made By DWC
Checked By KMW

Date 2/2/2012
Date 2/8/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.1250	155.2681	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	0.4460	5.5696	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	23.8040	297.2644	0.8280	11.6790	1703.3512	1704.1792
Total			37.78		458.10	540.26		3406.70	3946.96
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	14.0000	0.2500	-3.5000	0.1250	-0.4375	-0.0182	13.2251	-612.1657	-612.1840
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-3.50		-0.44	-0.02		-612.17	-612.18

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.1250	in	S _{right} =	325.52	in ³	x-bar =	13.3501	in	S _{right} =	305.95	in ³
I _y =	3946.96	in ⁴	S _{left} =	325.52	in ³	I _y =	3334.78	in ⁴	S _{left} =	249.79	in ³
C _{right} =	12.1250	in	A =	37.7816	in ²	C _{right} =	10.8999	in	A =	34.2816	in ²
C _{left} =	12.1250	in	r _y =	10.2210	in	C _{left} =	13.3501	in	r _y =	9.8629	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.5000$ in

Perforated Plate:

$A_3 = t = 0.6250$ in
 $B_3 = l = 5.7500$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.0000$ in

Left Web Plate:

$A_4 = h = 20.0000$ in
 $B_4 = t = 0.8750$ in

Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 0.8750$ in

Cover Plate:

$A_6 = t = 0.5000$ in
 $B_6 = l = 23.0000$ in



Member U58-L58

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.5000	16.2500	56.8750	0.0729	5.8824	121.1113	121.1842
	Vertical Leg	4.0000	18.0000	72.0000	5.3333	7.6324	233.0172	238.3505
2	Horizontal Leg	3.5000	3.7500	13.1250	0.0729	6.6176	153.2719	153.3448
	Vertical Leg	4.0000	2.0000	8.0000	5.3333	8.3676	280.0636	285.3969
3	Perforated Plate	7.1875	4.3125	30.9961	0.2340	6.0551	263.5198	263.7538
4	Plate	17.5000	10.0000	175.0000	583.3333	0.3676	2.3641	585.6975
5	Plate	17.5000	10.0000	175.0000	583.3333	0.3676	2.3641	585.6975
6	Cover Plate	11.5000	15.7500	181.1250	0.2396	5.3824	333.1638	333.4034
Total		68.69		712.12	1177.95		1388.88	2566.83
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	10.3676 in	S _{top} =	266.48 in ³	y-bar =	10.3676 in	S _{top} =	266.48 in ³
I _x =	2566.83 in ⁴	S _{bott.} =	247.58 in ³	I _x =	2566.83 in ⁴	S _{bott.} =	247.58 in ³
C _{top} =	9.6324 in	A =	68.6875 in ²	C _{top} =	9.6324 in	A =	68.6875 in ²
C _{bottom} =	10.3676 in	r _x =	6.1131 in	C _{bottom} =	10.3676 in	r _x =	6.1131 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.7500	3.1250	5.4688	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	1.1250	2.2500	0.0417	11.2500	253.1250	253.1667	
1 (Right)	Horizontal Leg	1.7500	21.6250	37.8438	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	23.6250	47.2500	0.0417	11.2500	253.1250	253.1667	
2 (Left)	Horizontal Leg	1.7500	3.1250	5.4688	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	1.1250	2.2500	0.0417	11.2500	253.1250	253.1667	
2 (Right)	Horizontal Leg	1.7500	21.6250	37.8438	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	23.6250	47.2500	0.0417	11.2500	253.1250	253.1667	
3 (Left)	Perforated Plate	3.5938	3.7500	13.4766	9.9015	8.6250	267.3413	277.2428	
3 (Right)	Perforated Plate	3.5938	21.0000	75.4688	9.9015	8.6250	267.3413	277.2428	
4	Plate	17.5000	0.4375	7.6563	1.1165	11.9375	2493.8184	2494.9349	
5	Plate	17.5000	24.3125	425.4688	1.1165	11.9375	2493.8184	2494.9349	
6	Cover Plate	11.5000	12.3750	142.3125	506.9583	0.0000	0.0000	506.9583	
Total		68.69		850.01	536.31		7133.76	7670.06	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3750 in	S _{right} =	619.80 in ³	x-bar =	12.3750 in	S _{right} =	619.80 in ³
I _y =	7670.06 in ⁴	S _{left} =	619.80 in ³	I _y =	7670.06 in ⁴	S _{left} =	619.80 in ³
C _{right} =	12.3750 in	A =	68.6875 in ²	C _{right} =	12.3750 in	A =	68.6875 in ²
C _{left} =	12.3750 in	r _y =	10.5672 in	C _{left} =	12.3750 in	r _y =	10.5672 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_t = 0.6250$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_t = 0.6250$ in

Perforated Plate:

$A_3 = t = 0.6250$ in
 $B_3 = l = 5.7500$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.0000$ in

Left Web Plate:

$A_4 = h = 22.0000$ in
 $B_4 = t = 0.9375$ in

Right Web Plate:

$A_5 = h = 22.0000$ in
 $B_5 = t = 0.9375$ in

Cover Plate:

$A_6 = t = 0.5000$ in
 $B_6 = l = 23.0000$ in



Member U59-L59

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	4.2188	18.3125	77.2559	0.1373	6.9354	202.9184	203.0557
	Vertical Leg	5.0000	20.0000	100.0000	6.6667	8.6229	371.7683	378.4350
2	Horizontal Leg	4.2188	3.6875	15.5566	0.1373	7.6896	249.4573	249.5946
	Vertical Leg	5.0000	2.0000	10.0000	6.6667	9.3771	439.6541	446.3207
3	Perforated Plate	7.1875	4.3125	30.9961	0.2340	7.0646	358.7223	358.9562
4	Plate	20.6250	11.0000	226.8750	831.8750	0.3771	2.9336	834.8086
5	Plate	20.6250	11.0000	226.8750	831.8750	0.3771	2.9336	834.8086
6	Cover Plate	11.5000	17.7500	204.1250	0.2396	6.3729	467.0530	467.2926
Total		78.38		891.68	1677.83		2095.44	3773.27
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	11.3771 in	S _{top} =	355.20 in ³	y-bar =	11.3771 in	S _{top} =	355.20 in ³
I _x =	3773.27 in ⁴	S _{bott.} =	331.65 in ³	I _x =	3773.27 in ⁴	S _{bott.} =	331.65 in ³
C _{top} =	10.6229 in	A =	78.3750 in ²	C _{top} =	10.6229 in	A =	78.3750 in ²
C _{bottom} =	11.3771 in	r _x =	6.9386 in	C _{bottom} =	11.3771 in	r _x =	6.9386 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.1094	3.2500	6.8555	2.0023	9.1875	178.0527	180.0549	
	Vertical Leg	2.5000	1.2500	3.1250	0.0814	11.1875	312.9004	312.9818	
1 (Right)	Horizontal Leg	2.1094	21.6250	45.6152	2.0023	9.1875	178.0527	180.0549	
	Vertical Leg	2.5000	23.6250	59.0625	0.0814	11.1875	312.9004	312.9818	
2 (Left)	Horizontal Leg	2.1094	3.2500	6.8555	2.0023	9.1875	178.0527	180.0549	
	Vertical Leg	2.5000	1.2500	3.1250	0.0814	11.1875	312.9004	312.9818	
2 (Right)	Horizontal Leg	2.1094	21.6250	45.6152	2.0023	9.1875	178.0527	180.0549	
	Vertical Leg	2.5000	23.6250	59.0625	0.0814	11.1875	312.9004	312.9818	
3 (Left)	Perforated Plate	3.5938	3.8125	13.7012	9.9015	8.6250	267.3413	277.2428	
3 (Right)	Perforated Plate	3.5938	21.0625	75.6934	9.9015	8.6250	267.3413	277.2428	
4	Plate	20.6250	0.4688	9.6680	1.5106	11.9688	2954.5514	2956.0620	
5	Plate	20.6250	24.4063	503.3789	1.5106	11.9688	2954.5514	2956.0620	
6	Cover Plate	11.5000	12.4375	143.0313	506.9583	0.0000	0.0000	506.9583	
Total		78.38		974.79	538.12		8407.60	8945.71	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.4375 in	S _{right} =	719.25 in ³	x-bar =	12.4375 in	S _{right} =	719.25 in ³
I _y =	8945.71 in ⁴	S _{left} =	719.25 in ³	I _y =	8945.71 in ⁴	S _{left} =	719.25 in ³
C _{right} =	12.4375 in	A =	78.3750 in ²	C _{right} =	12.4375 in	A =	78.3750 in ²
C _{left} =	12.4375 in	r _y =	10.6836 in	C _{left} =	12.4375 in	r _y =	10.6836 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.5000$ in

Perforated Plate:

$A_3 = t = 0.6250$ in
 $B_3 = l = 5.7500$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.0000$ in

Left Web Plate:

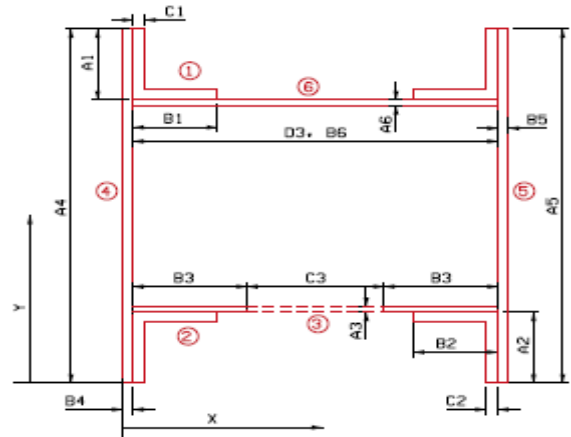
$A_4 = h = 24.0000$ in
 $B_4 = t = 0.9375$ in

Right Web Plate:

$A_5 = h = 24.0000$ in
 $B_5 = t = 0.9375$ in

Cover Plate:

$A_6 = t = 0.5000$ in
 $B_6 = l = 23.0000$ in



Member U60-L60

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.5000	20.2500	70.8750	0.0729	7.8195	214.0087	214.0816
	Vertical Leg	4.0000	22.0000	88.0000	5.3333	9.5695	366.3051	371.6384
2	Horizontal Leg	3.5000	3.7500	13.1250	0.0729	8.6805	263.7258	263.7987
	Vertical Leg	4.0000	2.0000	8.0000	5.3333	10.4305	435.1772	440.5105
3	Perforated Plate	7.1875	4.3125	30.9961	0.2340	8.1180	473.6643	473.8983
4	Plate	22.5000	12.0000	270.0000	1080.0000	0.4305	4.1690	1084.1690
5	Plate	22.5000	12.0000	270.0000	1080.0000	0.4305	4.1690	1084.1690
6	Cover Plate	11.5000	19.7500	227.1250	0.2396	7.3195	616.1217	616.3613
Total		78.69		978.12	2171.29		2377.34	4548.63
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	12.4305 in	S _{top} =	393.16 in ³	y-bar =	12.4305 in	S _{top} =	393.16 in ³
I _x =	4548.63 in ⁴	S _{bott.} =	365.93 in ³	I _x =	4548.63 in ⁴	S _{bott.} =	365.93 in ³
C _{top} =	11.5695 in	A =	78.6875 in ²	C _{top} =	11.5695 in	A =	78.6875 in ²
C _{bottom} =	12.4305 in	r _x =	7.6030 in	C _{bottom} =	12.4305 in	r _x =	7.6030 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.7500	3.1875	5.5781	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	1.1875	2.3750	0.0417	11.2500	253.1250	253.1667	
1 (Right)	Horizontal Leg	1.7500	21.6875	37.9531	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	23.6875	47.3750	0.0417	11.2500	253.1250	253.1667	
2 (Left)	Horizontal Leg	1.7500	3.1875	5.5781	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	1.1875	2.3750	0.0417	11.2500	253.1250	253.1667	
2 (Right)	Horizontal Leg	1.7500	21.6875	37.9531	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	23.6875	47.3750	0.0417	11.2500	253.1250	253.1667	
3 (Left)	Perforated Plate	3.5938	3.8125	13.7012	9.9015	8.6250	267.3413	277.2428	
3 (Right)	Perforated Plate	3.5938	21.0625	75.6934	9.9015	8.6250	267.3413	277.2428	
4	Plate	22.5000	0.4688	10.5469	1.6479	11.9688	3223.1470	3224.7949	
5	Plate	22.5000	24.4063	549.1406	1.6479	11.9688	3223.1470	3224.7949	
6	Cover Plate	11.5000	12.4375	143.0313	506.9583	0.0000	0.0000	506.9583	
Total		78.69		978.68	537.37		8592.41	9129.78	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.4375 in	S _{right} =	734.05 in ³	x-bar =	12.4375 in	S _{right} =	734.05 in ³
I _y =	9129.78 in ⁴	S _{left} =	734.05 in ³	I _y =	9129.78 in ⁴	S _{left} =	734.05 in ³
C _{right} =	12.4375 in	A =	78.6875 in ²	C _{right} =	12.4375 in	A =	78.6875 in ²
C _{left} =	12.4375 in	r _y =	10.7715 in	C _{left} =	12.4375 in	r _y =	10.7715 in



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.5000$ in

Perforated Plate:

$A_3 = t = 0.6250$ in
 $B_3 = l = 5.7500$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.0000$ in

Left Web Plate:

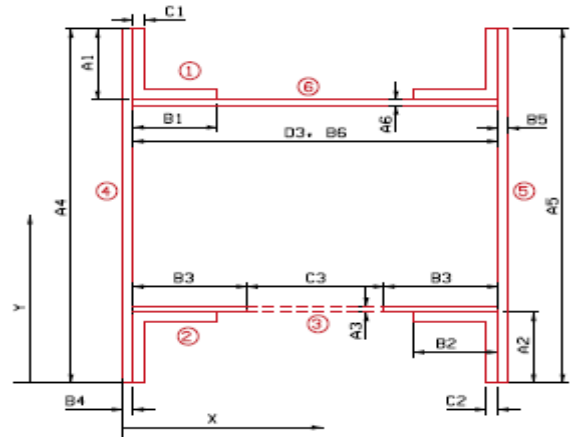
$A_4 = h = 24.0000$ in
 $B_4 = t = 1.0000$ in

Right Web Plate:

$A_5 = h = 24.0000$ in
 $B_5 = t = 1.0000$ in

Cover Plate:

$A_6 = t = 0.5000$ in
 $B_6 = l = 23.0000$ in



Member U61-L61

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.5000	20.2500	70.8750	0.0729	7.8354	214.8749	214.9478
	Vertical Leg	4.0000	22.0000	88.0000	5.3333	9.5854	367.5163	372.8497
2	Horizontal Leg	3.5000	3.7500	13.1250	0.0729	8.6646	262.7661	262.8390
	Vertical Leg	4.0000	2.0000	8.0000	5.3333	10.4146	433.8591	439.1924
3	Perforated Plate	7.1875	4.3125	30.9961	0.2340	8.1021	471.8214	472.0553
4	Plate	24.0000	12.0000	288.0000	1152.0000	0.4146	4.1263	1156.1263
5	Plate	24.0000	12.0000	288.0000	1152.0000	0.4146	4.1263	1156.1263
6	Cover Plate	11.5000	19.7500	227.1250	0.2396	7.3354	618.7859	619.0255
Total		81.69		1014.12	2315.29		2377.88	4693.16
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	12.4146	in	S _{top} =	405.09	in ³	y-bar =	12.4146	in	S _{top} =	405.09	in ³
I _x =	4693.16	in ⁴	S _{bott.} =	378.03	in ³	I _x =	4693.16	in ⁴	S _{bott.} =	378.03	in ³
C _{top} =	11.5854	in	A =	81.6875	in ²	C _{top} =	11.5854	in	A =	81.6875	in ²
C _{bottom} =	12.4146	in	r _x =	7.5798	in	C _{bottom} =	12.4146	in	r _x =	7.5798	in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.7500	3.2500	5.6875	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	1.2500	2.5000	0.0417	11.2500	253.1250	253.1667	
1 (Right)	Horizontal Leg	1.7500	21.7500	38.0625	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	23.7500	47.5000	0.0417	11.2500	253.1250	253.1667	
2 (Left)	Horizontal Leg	1.7500	3.2500	5.6875	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	1.2500	2.5000	0.0417	11.2500	253.1250	253.1667	
2 (Right)	Horizontal Leg	1.7500	21.7500	38.0625	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	23.7500	47.5000	0.0417	11.2500	253.1250	253.1667	
3 (Left)	Perforated Plate	3.5938	3.8750	13.9258	9.9015	8.6250	267.3413	277.2428	
3 (Right)	Perforated Plate	3.5938	21.1250	75.9180	9.9015	8.6250	267.3413	277.2428	
4	Plate	24.0000	0.5000	12.0000	2.0000	12.0000	3456.0000	3458.0000	
5	Plate	24.0000	24.5000	588.0000	2.0000	12.0000	3456.0000	3458.0000	
6	Cover Plate	11.5000	12.5000	143.7500	506.9583	0.0000	0.0000	506.9583	
Total		81.69		1021.09	538.07		9058.12	9596.19	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.5000	in	S _{right} =	767.70	in ³	x-bar =	12.5000	in	S _{right} =	767.70	in ³
I _y =	9596.19	in ⁴	S _{left} =	767.70	in ³	I _y =	9596.19	in ⁴	S _{left} =	767.70	in ³
C _{right} =	12.5000	in	A =	81.6875	in ²	C _{right} =	12.5000	in	A =	81.6875	in ²
C _{left} =	12.5000	in	r _y =	10.8386	in	C _{left} =	12.5000	in	r _y =	10.8386	in



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.6250$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.6250$ in

Perforated Plate:

$A_3 = t = 0.6250$ in
 $B_3 = l = 5.7500$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.0000$ in

Left Web Plate:

$A_4 = h = 26.0000$ in
 $B_4 = t = 1.5000$ in

Right Web Plate:

$A_5 = h = 26.0000$ in
 $B_5 = t = 1.5000$ in

Cover Plate:

$A_6 = t = 0.5000$ in
 $B_6 = l = 23.0000$ in



Member U62-L62

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	4.2188	22.3125	94.1309	0.1373	8.9808	340.2645	340.4019
	Vertical Leg	5.0000	24.0000	120.0000	6.6667	10.6683	569.0662	575.7329
2	Horizontal Leg	4.2188	3.6875	15.5566	0.1373	9.6442	392.3861	392.5234
	Vertical Leg	5.0000	2.0000	10.0000	6.6667	11.3317	642.0338	648.7005
3	Perforated Plate	7.1875	4.3125	30.9961	0.2340	9.0192	584.6704	584.9043
4	Plate	39.0000	13.0000	507.0000	2197.0000	0.3317	4.2902	2201.2902
5	Plate	39.0000	13.0000	507.0000	2197.0000	0.3317	4.2902	2201.2902
6	Cover Plate	11.5000	21.7500	250.1250	0.2396	8.4183	814.9851	815.2247
Total		115.13		1534.81	4408.08		3351.99	7760.07
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	13.3317 in	S _{top} =	612.56 in ³	y-bar =	13.3317 in	S _{top} =	612.56 in ³
I _x =	7760.07 in ⁴	S _{bott.} =	582.08 in ³	I _x =	7760.07 in ⁴	S _{bott.} =	582.08 in ³
C _{top} =	12.6683 in	A =	115.1250 in ²	C _{top} =	12.6683 in	A =	115.1250 in ²
C _{bottom} =	13.3317 in	r _x =	8.2101 in	C _{bottom} =	13.3317 in	r _x =	8.2101 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.1094	3.8125	8.0420	2.0023	9.1875	178.0527	180.0549	
	Vertical Leg	2.5000	1.8125	4.5313	0.0814	11.1875	312.9004	312.9818	
1 (Right)	Horizontal Leg	2.1094	22.1875	46.8018	2.0023	9.1875	178.0527	180.0549	
	Vertical Leg	2.5000	24.1875	60.4688	0.0814	11.1875	312.9004	312.9818	
2 (Left)	Horizontal Leg	2.1094	3.8125	8.0420	2.0023	9.1875	178.0527	180.0549	
	Vertical Leg	2.5000	1.8125	4.5313	0.0814	11.1875	312.9004	312.9818	
2 (Right)	Horizontal Leg	2.1094	22.1875	46.8018	2.0023	9.1875	178.0527	180.0549	
	Vertical Leg	2.5000	24.1875	60.4688	0.0814	11.1875	312.9004	312.9818	
3 (Left)	Perforated Plate	3.5938	4.3750	15.7227	9.9015	8.6250	267.3413	277.2428	
3 (Right)	Perforated Plate	3.5938	21.6250	77.7148	9.9015	8.6250	267.3413	277.2428	
4	Plate	39.0000	0.7500	29.2500	7.3125	12.2500	5852.4375	5859.7500	
5	Plate	39.0000	25.2500	984.7500	7.3125	12.2500	5852.4375	5859.7500	
6	Cover Plate	11.5000	13.0000	149.5000	506.9583	0.0000	0.0000	506.9583	
Total		115.13		1496.63	549.72		14203.37	14753.09	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	13.0000 in	S _{right} =	1134.85 in ³	x-bar =	13.0000 in	S _{right} =	1134.85 in ³
I _y =	14753.09 in ⁴	S _{left} =	1134.85 in ³	I _y =	14753.09 in ⁴	S _{left} =	1134.85 in ³
C _{right} =	13.0000 in	A =	115.1250 in ²	C _{right} =	13.0000 in	A =	115.1250 in ²
C _{left} =	13.0000 in	r _y =	11.3203 in	C _{left} =	13.0000 in	r _y =	11.3203 in



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_t = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_t = 0.5000$ in

Perforated Plate:

$A_3 = t = 0.6250$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

$A_4 = h = 24.0000$ in
 $B_4 = t = 0.4375$ in

Right Web Plate:

$A_5 = h = 24.0000$ in
 $B_5 = t = 0.4375$ in

Cover Plate:

$A_6 = t = 0.5000$ in
 $B_6 = l = 23.5000$ in



Member U63-L63

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.5000	20.2500	70.8750	0.0729	7.6454	204.5805	204.6534
	Vertical Leg	4.0000	22.0000	88.0000	5.3333	9.3954	353.0913	358.4246
2	Horizontal Leg	3.5000	3.7500	13.1250	0.0729	8.8546	274.4161	274.4891
	Vertical Leg	4.0000	2.0000	8.0000	5.3333	10.6046	449.8334	455.1667
3	Perforated Plate	7.5000	4.3125	32.3438	0.2441	8.2921	515.6966	515.9408
4	Plate	10.5000	12.0000	126.0000	504.0000	0.6046	3.8387	507.8387
5	Plate	10.5000	12.0000	126.0000	504.0000	0.6046	3.8387	507.8387
6	Cover Plate	11.7500	19.7500	232.0625	0.2448	7.1454	599.9103	600.1551
Total		55.25		696.41	1019.30		2405.21	3424.51
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00	0.00	0.00	0.00



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties					
y-bar =	12.6046	in	$S_{top} = 300.52$	in^3	y-bar =	12.6046	in	$S_{top} = 300.52$	in^3
$I_x =$	3424.51	in^4	$S_{bott.} = 271.69$	in^3	$I_x =$	3424.51	in^4	$S_{bott.} = 271.69$	in^3
$C_{top} =$	11.3954	in	$A = 55.2500$	in^2	$C_{top} =$	11.3954	in	$A = 55.2500$	in^2
$C_{bottom} =$	12.6046	in	$r_x = 7.8729$	in	$C_{bottom} =$	12.6046	in	$r_x = 7.8729$	in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I_o	d	Ad^2	$I_{y,gross}$	
Element	Description	(in^2)	(in)	(in^3)	(in^4)	(in)	(in^4)	(in^4)	
1 (Left)	Horizontal Leg	1.7500	2.6875	4.7031	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	0.6875	1.3750	0.0417	11.5000	264.5000	264.5417	
1 (Right)	Horizontal Leg	1.7500	21.6875	37.9531	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	23.6875	47.3750	0.0417	11.5000	264.5000	264.5417	
2 (Left)	Horizontal Leg	1.7500	2.6875	4.7031	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	0.6875	1.3750	0.0417	11.5000	264.5000	264.5417	
2 (Right)	Horizontal Leg	1.7500	21.6875	37.9531	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	23.6875	47.3750	0.0417	11.5000	264.5000	264.5417	
3 (Left)	Perforated Plate	3.7500	3.4375	12.8906	11.2500	8.7500	287.1094	298.3594	
3 (Right)	Perforated Plate	3.7500	20.9375	78.5156	11.2500	8.7500	287.1094	298.3594	
4	Plate	10.5000	0.2188	2.2969	0.1675	11.9688	1504.1353	1504.3027	
5	Plate	10.5000	24.1563	253.6406	0.1675	11.9688	1504.1353	1504.3027	
6	Cover Plate	11.7500	12.1875	143.2031	540.7448	0.0000	0.0000	540.7448	
Total		55.25		673.36	570.89		5272.24	5843.13	
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y,loss}$
Loss #	b (in)	h (in)	(in^2)	(in)	(in^3)	(in^4)	(in)	(in^4)	(in^4)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties					
x-bar =	12.1875	in	$S_{right} = 479.44$	in^3	x-bar =	12.1875	in	$S_{right} = 479.44$	in^3
$I_y =$	5843.13	n^4	$S_{left} = 479.44$	in^3	$I_y =$	5843.13	n^4	$S_{left} = 479.44$	in^3
$C_{right} =$	12.1875	in	$A = 55.2500$	in^2	$C_{right} =$	12.1875	in	$A = 55.2500$	in^2
$C_{left} =$	12.1875	in	$r_y = 10.2839$	in	$C_{left} =$	12.1875	in	$r_y = 10.2839$	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.5000$ in

Perforated Plate:

$A_3 = t = 0.6250$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

$A_4 = h = 22.0000$ in
 $B_4 = t = 0.3750$ in

Right Web Plate:

$A_5 = h = 22.0000$ in
 $B_5 = t = 0.3750$ in

Cover Plate:

$A_6 = t = 0.5000$ in
 $B_6 = l = 23.5000$ in



Member U64-L64

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.5000	18.2500	63.8750	0.0729	6.6755	155.9677	156.0406
	Vertical Leg	4.0000	20.0000	80.0000	5.3333	8.4255	283.9557	289.2890
2	Horizontal Leg	3.5000	3.7500	13.1250	0.0729	7.8245	214.2802	214.3531
	Vertical Leg	4.0000	2.0000	8.0000	5.3333	9.5745	366.6848	372.0181
3	Perforated Plate	7.5000	4.3125	32.3438	0.2441	7.2620	395.5256	395.7698
4	Plate	8.2500	11.0000	90.7500	332.7500	0.5745	2.7230	335.4730
5	Plate	8.2500	11.0000	90.7500	332.7500	0.5745	2.7230	335.4730
6	Cover Plate	11.7500	17.7500	208.5625	0.2448	6.1755	448.1063	448.3511
Total		50.75		587.41	676.80		1869.97	2546.77
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	11.5745 in	S _{top} =	244.28 in ³	y-bar =	11.5745 in	S _{top} =	244.28 in ³
I _x =	2546.77 in ⁴	S _{bott.} =	220.03 in ³	I _x =	2546.77 in ⁴	S _{bott.} =	220.03 in ³
C _{top} =	10.4255 in	A =	50.7500 in ²	C _{top} =	10.4255 in	A =	50.7500 in ²
C _{bottom} =	11.5745 in	r _x =	7.0840 in	C _{bottom} =	11.5745 in	r _x =	7.0840 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.7500	2.6250	4.5938	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	0.6250	1.2500	0.0417	11.5000	264.5000	264.5417	
1 (Right)	Horizontal Leg	1.7500	21.6250	37.8438	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	23.6250	47.2500	0.0417	11.5000	264.5000	264.5417	
2 (Left)	Horizontal Leg	1.7500	2.6250	4.5938	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	0.6250	1.2500	0.0417	11.5000	264.5000	264.5417	
2 (Right)	Horizontal Leg	1.7500	21.6250	37.8438	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	23.6250	47.2500	0.0417	11.5000	264.5000	264.5417	
3 (Left)	Perforated Plate	3.7500	3.3750	12.6563	11.2500	8.7500	287.1094	298.3594	
3 (Right)	Perforated Plate	3.7500	20.8750	78.2813	11.2500	8.7500	287.1094	298.3594	
4	Plate	8.2500	0.1875	1.5469	0.0967	11.9375	1175.6572	1175.7539	
5	Plate	8.2500	24.0625	198.5156	0.0967	11.9375	1175.6572	1175.7539	
6	Cover Plate	11.7500	12.1250	142.4688	540.7448	0.0000	0.0000	540.7448	
Total		50.75		615.34	570.75		4615.28	5186.03	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	427.71 in ³	x-bar =	12.1250 in	S _{right} =	427.71 in ³
I _y =	5186.03 in ⁴	S _{left} =	427.71 in ³	I _y =	5186.03 in ⁴	S _{left} =	427.71 in ³
C _{right} =	12.1250 in	A =	50.7500 in ²	C _{right} =	12.1250 in	A =	50.7500 in ²
C _{left} =	12.1250 in	r _y =	10.1088 in	C _{left} =	12.1250 in	r _y =	10.1088 in



Made By KMW
Checked By DWC

Date 2/3/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.5000$ in
- $B_3 = b = 16.0000$ in



Member U65-L65

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	8.0000	102.4450	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	8.0000	199.8080	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		16.0000	8.0000	128.0000	341.3333	0.0000	0.0000	341.3333
Total			53.78		430.25	749.62		0.00	749.62
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	14.9773	0.3125	-4.6804	7.1288	-33.3655	-0.0381	0.9943	-4.6275	-4.6655
2	0.1250	14.0000	-1.7500	7.0000	-12.2500	-28.5833	1.1231	-2.2073	-30.7906
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-6.43		-45.62	-28.62		-6.83	-35.46

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	8.0000	in	$S_{top} =$	93.70	in ³	y-bar =	8.1231	in	$S_{top} =$	90.67	in ³
$I_x =$	749.62	in ⁴	$S_{bott.} =$	93.70	in ³	$I_x =$	714.17	in ⁴	$S_{bott.} =$	87.92	in ³
$c_{top} =$	8.0000	in	A =	53.7816	in ²	$c_{top} =$	7.8769	in	A =	47.3512	in ²
$c_{bottom} =$	8.0000	in	$r_x =$	3.7334	in	$c_{bottom} =$	8.1231	in	$r_x =$	3.8836	in



Made By KMW
Checked By DWC

Date 2/3/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.6250	161.6710	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	0.9460	11.8136	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	24.3040	303.5084	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		8.0000	0.2500	2.0000	0.1667	12.3750	1225.1250	1225.2917
	Right Plate		8.0000	25.0000	200.0000	0.1667	12.3750	1225.1250	1225.2917
Total			53.78		678.99	540.59		5856.95	6397.55
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.3125	14.9773	-4.6804	8.8807	-41.5652	-87.4928	3.6502	-62.3602	-149.8530
2	14.0000	0.1250	-1.7500	25.1875	-44.0781	-0.0023	12.6567	-280.3350	-280.3373
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-6.43		-85.64	-87.50		-342.70	-430.19

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.6250	in	S _{right} = 506.74 in ³	x-bar =	12.5308	in	S _{right} = 469.16 in ³
I _y =	6397.55	in ⁴	S _{left} = 506.74 in ³	I _y =	5967.36	in ⁴	S _{left} = 476.21 in ³
C _{right} =	12.6250	in	A = 53.7816 in ²	C _{right} =	12.7192	in	A = 47.3512 in ²
C _{left} =	12.6250	in	r _y = 10.9066 in	C _{left} =	12.5308	in	r _y = 11.2260 in



Made By SFH
Checked By NRF

Date 1/25/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 150

- $A_1 = t_w = 0.6330$ in
- $A_2 = t_f = 1.0480$ in
- $B_1 = d = 24.5620$ in
- $B_2 = b_f = 14.0630$ in



Member U66-L66

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		14.2210	7.0315	99.9948	0.4748	0.0000	0.0000	0.4748
2	Flange Plates		29.4760	7.0315	207.2608	485.7848	0.0000	0.0000	485.7848
Total			43.70		307.26	486.26		0.00	486.26
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0315	in	S _{top} =	69.15	in ³	y-bar =	7.0315	in	S _{top} =	69.15	in ³
I _x =	486.26	in ⁴	S _{bott.} =	69.15	in ³	I _x =	486.26	in ⁴	S _{bott.} =	69.15	in ³
c _{top} =	7.0315	in	A =	43.6970	in ²	c _{top} =	7.0315	in	A =	43.6970	in ²
c _{bottom} =	7.0315	in	r _x =	3.3359	in	c _{bottom} =	7.0315	in	r _x =	3.3359	in



Made By SFH
Checked By NRF

Date 1/25/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.2210	12.2810	174.6478	598.1357	0.0000	0.0000	598.1357
2	Left Flange		14.7380	0.5240	7.7227	1.3489	11.7570	2037.1936	2038.5425
	Right Flange		14.7380	24.0380	354.2726	1.3489	11.7570	2037.1936	2038.5425
Total			43.70		536.64	600.83		4074.39	4675.22
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties				
x-bar =	12.2810	in	S _{right} =	380.69 in ³	x-bar =	12.2810	in	S _{right} =	380.69 in ³
I _y =	4675.22	in ⁴	S _{left} =	380.69 in ³	I _y =	4675.22	in ⁴	S _{left} =	380.69 in ³
C _{right} =	12.2810	in	A =	43.6970 in ²	C _{right} =	12.2810	in	A =	43.6970 in ²
C _{left} =	12.2810	in	r _y =	10.3437 in	C _{left} =	12.2810	in	r _y =	10.3437 in



Made By SFH
Checked By NRF

Date 1/25/2012
Date 1/25/2012

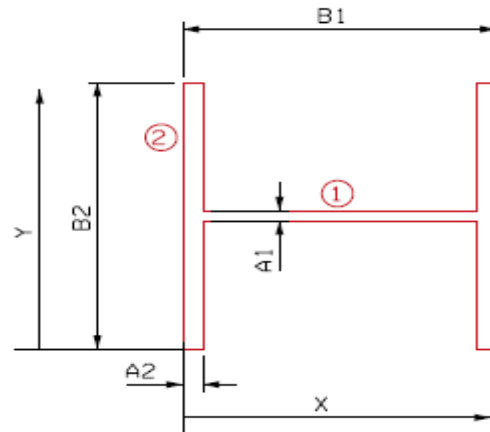
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 100

- $A_1 = t_w = 0.4700$ in
- $A_2 = t_f = 0.7670$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 12.0000$ in



Member U67-L67

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		10.5590	6.0000	63.3541	0.1944	0.0000	0.0000	0.1944
2	Flange Plates		18.4080	6.0000	110.4480	220.8960	0.0000	0.0000	220.8960
Total			28.97		173.80	221.09		0.00	221.09
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	6.0000	in	$S_{top} = 36.85$	in^3	y-bar =	6.0000	in	$S_{top} = 36.85$	in^3		
$I_x =$	221.09	in^4	$S_{bott.} = 36.85$	in^3	$I_x =$	221.09	in^4	$S_{bott.} = 36.85$	in^3		
$c_{top} =$	6.0000	in	A =	28.9670	in^2	$c_{top} =$	6.0000	in	A =	28.9670	in^2
$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in	$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in



Made By SFH
 Checked By NRF

Date 1/25/2012
 Date 1/25/2012

Job No. P402110046
 Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	12.0000	126.7082	444.1134	0.0000	0.0000	444.1134
2	Left Flange		9.2040	0.3835	3.5297	0.4512	11.6165	1242.0160	1242.4673
	Right Flange		9.2040	23.6165	217.3663	0.4512	11.6165	1242.0160	1242.4673
Total			28.97		347.60	445.02		2484.03	2929.05
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.0000	in	S _{right} =	244.09	in ³	x-bar =	12.0000	in	S _{right} =	244.09	in ³
I _y =	2929.05	in ⁴	S _{left} =	244.09	in ³	I _y =	2929.05	in ⁴	S _{left} =	244.09	in ³
C _{right} =	12.0000	in	A =	28.9670	in ²	C _{right} =	12.0000	in	A =	28.9670	in ²
C _{left} =	12.0000	in	r _y =	10.0557	in	C _{left} =	12.0000	in	r _y =	10.0557	in



Made By SFH
Checked By NRF

Date 1/25/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 100

- $A_1 = t_w = 0.4700$ in
- $A_2 = t_f = 0.7670$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 12.0000$ in



Member U68-L68

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		10.5590	6.0000	63.3541	0.1944	0.0000	0.0000	0.1944
2	Flange Plates		18.4080	6.0000	110.4480	220.8960	0.0000	0.0000	220.8960
Total			28.97		173.80	221.09		0.00	221.09
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	6.0000	in	$S_{top} = 36.85$	in^3	y-bar =	6.0000	in	$S_{top} = 36.85$	in^3		
$I_x =$	221.09	in^4	$S_{bott.} = 36.85$	in^3	$I_x =$	221.09	in^4	$S_{bott.} = 36.85$	in^3		
$c_{top} =$	6.0000	in	A =	28.9670	in^2	$c_{top} =$	6.0000	in	A =	28.9670	in^2
$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in	$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in



Made By SFH
Checked By NRF

Date 1/25/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	12.0000	126.7082	444.1134	0.0000	0.0000	444.1134
2	Left Flange		9.2040	0.3835	3.5297	0.4512	11.6165	1242.0160	1242.4673
	Right Flange		9.2040	23.6165	217.3663	0.4512	11.6165	1242.0160	1242.4673
Total			28.97		347.60	445.02		2484.03	2929.05
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.0000	in	S _{right} =	244.09	in ³	x-bar =	12.0000	in	S _{right} =	244.09	in ³
I _y =	2929.05	in ⁴	S _{left} =	244.09	in ³	I _y =	2929.05	in ⁴	S _{left} =	244.09	in ³
C _{right} =	12.0000	in	A =	28.9670	in ²	C _{right} =	12.0000	in	A =	28.9670	in ²
C _{left} =	12.0000	in	r _y =	10.0557	in	C _{left} =	12.0000	in	r _y =	10.0557	in



Made By SFH
Checked By NRF

Date 1/25/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 100

- $A_1 = t_w = 0.4700$ in
- $A_2 = t_f = 0.7670$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 12.0000$ in



*Section properties are assumed

Member U69-L69

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x, gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		10.5590	6.0000	63.3541	0.1944	0.0000	0.0000	0.1944
2	Flange Plates		18.4080	6.0000	110.4480	220.8960	0.0000	0.0000	220.8960
Total			28.97		173.80	221.09		0.00	221.09
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0000	in	$S_{top} =$	36.85	in ³	y-bar =	6.0000	in	$S_{top} =$	36.85	in ³
$I_x =$	221.09	in ⁴	$S_{bott.} =$	36.85	in ³	$I_x =$	221.09	in ⁴	$S_{bott.} =$	36.85	in ³
$c_{top} =$	6.0000	in	A =	28.9670	in ²	$c_{top} =$	6.0000	in	A =	28.9670	in ²
$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in	$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in



Made By SFH
Checked By NRF

Date 1/25/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	12.0000	126.7082	444.1134	0.0000	0.0000	444.1134
2	Left Flange		9.2040	0.3835	3.5297	0.4512	11.6165	1242.0160	1242.4673
	Right Flange		9.2040	23.6165	217.3663	0.4512	11.6165	1242.0160	1242.4673
Total			28.97		347.60	445.02		2484.03	2929.05
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.0000	in	S _{right} =	244.09	in ³	x-bar =	12.0000	in	S _{right} =	244.09	in ³
I _y =	2929.05	in ⁴	S _{left} =	244.09	in ³	I _y =	2929.05	in ⁴	S _{left} =	244.09	in ³
C _{right} =	12.0000	in	A =	28.9670	in ²	C _{right} =	12.0000	in	A =	28.9670	in ²
C _{left} =	12.0000	in	r _y =	10.0557	in	C _{left} =	12.0000	in	r _y =	10.0557	in



Made By SFH
Checked By NRF

Date 1/25/2012
Date 1/25/2012

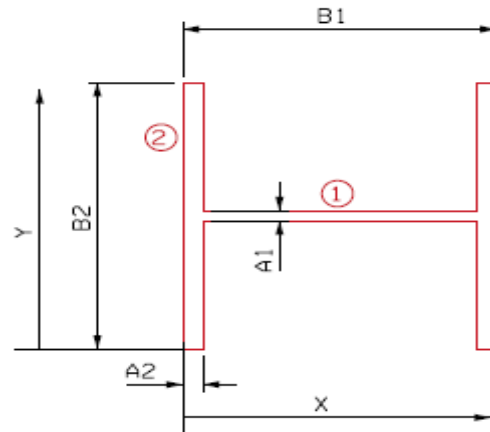
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 150

- $A_1 = t_w = 0.6330$ in
- $A_2 = t_f = 1.0480$ in
- $B_1 = d = 24.5620$ in
- $B_2 = b_f = 14.0630$ in



*Made Similar to U66-L66

Member U70-L70

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		14.2210	7.0315	99.9948	0.4748	0.0000	0.0000	0.4748
2	Flange Plates		29.4760	7.0315	207.2608	485.7848	0.0000	0.0000	485.7848
Total			43.70		307.26	486.26		0.00	486.26
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0315	in	S _{top} =	69.15	in ³	y-bar =	7.0315	in	S _{top} =	69.15	in ³
I _x =	486.26	in ⁴	S _{bott.} =	69.15	in ³	I _x =	486.26	in ⁴	S _{bott.} =	69.15	in ³
c _{top} =	7.0315	in	A =	43.6970	in ²	c _{top} =	7.0315	in	A =	43.6970	in ²
c _{bottom} =	7.0315	in	r _x =	3.3359	in	c _{bottom} =	7.0315	in	r _x =	3.3359	in



Made By SFH
Checked By NRF

Date 1/25/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.2210	12.2810	174.6478	598.1357	0.0000	0.0000	598.1357
2	Left Flange		14.7380	0.5240	7.7227	1.3489	11.7570	2037.1936	2038.5425
	Right Flange		14.7380	24.0380	354.2726	1.3489	11.7570	2037.1936	2038.5425
Total			43.70		536.64	600.83		4074.39	4675.22
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties				
x-bar =	12.2810	in	S _{right} =	380.69 in ³	x-bar =	12.2810	in	S _{right} =	380.69 in ³
I _y =	4675.22	in ⁴	S _{left} =	380.69 in ³	I _y =	4675.22	in ⁴	S _{left} =	380.69 in ³
C _{right} =	12.2810	in	A =	43.6970 in ²	C _{right} =	12.2810	in	A =	43.6970 in ²
C _{left} =	12.2810	in	r _y =	10.3437 in	C _{left} =	12.2810	in	r _y =	10.3437 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

$A_4 = h = 20.0000$ in
 $B_4 = t = 0.6875$ in

Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 0.6875$ in

Cover Plate:

$A_6 = t = 0.3750$ in
 $B_6 = l = 23.5000$ in



Member U71-L71

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	16.1875	44.0098	0.0319	5.8764	93.8835	93.9153
	Vertical Leg	3.0000	18.0000	54.0000	4.0000	7.6889	177.3567	181.3567
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	6.4986	114.8184	114.8502
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	8.3111	207.2241	211.2241
3	Perforated Plate	6.0000	4.2500	25.5000	0.1250	6.0611	220.4230	220.5480
4	Plate	13.7500	10.0000	137.5000	458.3333	0.3111	1.3309	459.6643
5	Plate	13.7500	10.0000	137.5000	458.3333	0.3111	1.3309	459.6643
6	Cover Plate	8.8125	15.8125	139.3477	0.1033	5.5014	266.7120	266.8153
Total		53.75		554.22	924.96		1083.08	2008.04
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	10.3111 in	S _{top} =	207.25 in ³	y-bar =	10.3111 in	S _{top} =	207.25 in ³
I _x =	2008.04 in ⁴	S _{bott.} =	194.74 in ³	I _x =	2008.04 in ⁴	S _{bott.} =	194.74 in ³
C _{top} =	9.6889 in	A =	53.7500 in ²	C _{top} =	9.6889 in	A =	53.7500 in ²
C _{bottom} =	10.3111 in	r _x =	6.1122 in	C _{bottom} =	10.3111 in	r _x =	6.1122 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	2.8750	3.9082	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.8750	1.3125	0.0176	11.5625	200.5371	200.5547	
1 (Right)	Horizontal Leg	1.3594	22.0000	29.9063	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	24.0000	36.0000	0.0176	11.5625	200.5371	200.5547	
2 (Left)	Horizontal Leg	1.3594	2.8750	3.9082	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.8750	1.3125	0.0176	11.5625	200.5371	200.5547	
2 (Right)	Horizontal Leg	1.3594	22.0000	29.9063	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	24.0000	36.0000	0.0176	11.5625	200.5371	200.5547	
3 (Left)	Perforated Plate	3.0000	3.6875	11.0625	9.0000	8.7500	229.6875	238.6875	
3 (Right)	Perforated Plate	3.0000	21.1875	63.5625	9.0000	8.7500	229.6875	238.6875	
4	Plate	13.7500	0.3438	4.7266	0.5416	12.0938	2011.0583	2011.5999	
5	Plate	13.7500	24.5313	337.3047	0.5416	12.0938	2011.0583	2011.5999	
6	Cover Plate	8.8125	12.4375	109.6055	405.5586	0.0000	0.0000	405.5586	
Total		53.75		668.52	430.67		5780.85	6211.52	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.4375 in	S _{right} =	499.42 in ³	x-bar =	12.4375 in	S _{right} =	499.42 in ³
I _y =	6211.52 in ⁴	S _{left} =	499.42 in ³	I _y =	6211.52 in ⁴	S _{left} =	499.42 in ³
C _{right} =	12.4375 in	A =	53.7500 in ²	C _{right} =	12.4375 in	A =	53.7500 in ²
C _{left} =	12.4375 in	r _y =	10.7500 in	C _{left} =	12.4375 in	r _y =	10.7500 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.5000$ in

Perforated Plate:

$A_3 = t = 0.6250$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

$A_4 = h = 20.0000$ in
 $B_4 = t = 0.5000$ in

Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 0.5000$ in

Cover Plate:

$A_6 = t = 0.5000$ in
 $B_6 = l = 23.5000$ in



Member U72-L72

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.5000	16.2500	56.8750	0.0729	5.7909	117.3708	117.4437
	Vertical Leg	4.0000	18.0000	72.0000	5.3333	7.5409	227.4606	232.7939
2	Horizontal Leg	3.5000	3.7500	13.1250	0.0729	6.7091	157.5421	157.6151
	Vertical Leg	4.0000	2.0000	8.0000	5.3333	8.4591	286.2256	291.5589
3	Perforated Plate	7.5000	4.3125	32.3438	0.2441	6.1466	283.3553	283.5995
4	Plate	10.0000	10.0000	100.0000	333.3333	0.4591	2.1077	335.4411
5	Plate	10.0000	10.0000	100.0000	333.3333	0.4591	2.1077	335.4411
6	Cover Plate	11.7500	15.7500	185.0625	0.2448	5.2909	328.9249	329.1697
Total		54.25		567.41	677.97		1405.09	2083.06
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00	0.00	0.00	0.00



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	10.4591 in	S _{top} =	218.33 in ³	y-bar =	10.4591 in	S _{top} =	218.33 in ³
I _x =	2083.06 in ⁴	S _{bott.} =	199.16 in ³	I _x =	2083.06 in ⁴	S _{bott.} =	199.16 in ³
C _{top} =	9.5409 in	A =	54.2500 in ²	C _{top} =	9.5409 in	A =	54.2500 in ²
C _{bottom} =	10.4591 in	r _x =	6.1966 in	C _{bottom} =	10.4591 in	r _x =	6.1966 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.7500	2.7500	4.8125	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	0.7500	1.5000	0.0417	11.5000	264.5000	264.5417	
1 (Right)	Horizontal Leg	1.7500	21.7500	38.0625	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	23.7500	47.5000	0.0417	11.5000	264.5000	264.5417	
2 (Left)	Horizontal Leg	1.7500	2.7500	4.8125	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	0.7500	1.5000	0.0417	11.5000	264.5000	264.5417	
2 (Right)	Horizontal Leg	1.7500	21.7500	38.0625	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	23.7500	47.5000	0.0417	11.5000	264.5000	264.5417	
3 (Left)	Perforated Plate	3.7500	3.5000	13.1250	11.2500	8.7500	287.1094	298.3594	
3 (Right)	Perforated Plate	3.7500	21.0000	78.7500	11.2500	8.7500	287.1094	298.3594	
4	Plate	10.0000	0.2500	2.5000	0.2083	12.0000	1440.0000	1440.2083	
5	Plate	10.0000	24.2500	242.5000	0.2083	12.0000	1440.0000	1440.2083	
6	Cover Plate	11.7500	12.2500	143.9375	540.7448	0.0000	0.0000	540.7448	
Total		54.25		664.56	570.97		5143.97	5714.94	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2500 in	S _{right} =	466.53 in ³	x-bar =	12.2500 in	S _{right} =	466.53 in ³
I _y =	5714.94 in ⁴	S _{left} =	466.53 in ³	I _y =	5714.94 in ⁴	S _{left} =	466.53 in ³
C _{right} =	12.2500 in	A =	54.2500 in ²	C _{right} =	12.2500 in	A =	54.2500 in ²
C _{left} =	12.2500 in	r _y =	10.2638 in	C _{left} =	12.2500 in	r _y =	10.2638 in



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_t = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_t = 0.5000$ in

Perforated Plate:

$A_3 = t = 0.6250$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

$A_4 = h = 22.0000$ in
 $B_4 = t = 0.5625$ in

Right Web Plate:

$A_5 = h = 22.0000$ in
 $B_5 = t = 0.5625$ in

Cover Plate:

$A_6 = t = 0.5000$ in
 $B_6 = l = 23.5000$ in



Member U73-L73

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.5000	18.2500	63.8750	0.0729	6.7558	159.7442	159.8171
	Vertical Leg	4.0000	20.0000	80.0000	5.3333	8.5058	289.3963	294.7297
2	Horizontal Leg	3.5000	3.7500	13.1250	0.0729	7.7442	209.9028	209.9757
	Vertical Leg	4.0000	2.0000	8.0000	5.3333	9.4942	360.5573	365.8907
3	Perforated Plate	7.5000	4.3125	32.3438	0.2441	7.1817	386.8233	387.0674
4	Plate	12.3750	11.0000	136.1250	499.1250	0.4942	3.0221	502.1471
5	Plate	12.3750	11.0000	136.1250	499.1250	0.4942	3.0221	502.1471
6	Cover Plate	11.7500	17.7500	208.5625	0.2448	6.2558	459.8405	460.0853
Total		59.00		678.16	1009.55		1872.31	2881.86
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	11.4942 in	S _{top} =	274.31 in ³	y-bar =	11.4942 in	S _{top} =	274.31 in ³
I _x =	2881.86 in ⁴	S _{bott.} =	250.72 in ³	I _x =	2881.86 in ⁴	S _{bott.} =	250.72 in ³
C _{top} =	10.5058 in	A =	59.0000 in ²	C _{top} =	10.5058 in	A =	59.0000 in ²
C _{bottom} =	11.4942 in	r _x =	6.9889 in	C _{bottom} =	11.4942 in	r _x =	6.9889 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.7500	2.8125	4.9219	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	0.8125	1.6250	0.0417	11.5000	264.5000	264.5417	
1 (Right)	Horizontal Leg	1.7500	21.8125	38.1719	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	23.8125	47.6250	0.0417	11.5000	264.5000	264.5417	
2 (Left)	Horizontal Leg	1.7500	2.8125	4.9219	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	0.8125	1.6250	0.0417	11.5000	264.5000	264.5417	
2 (Right)	Horizontal Leg	1.7500	21.8125	38.1719	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	23.8125	47.6250	0.0417	11.5000	264.5000	264.5417	
3 (Left)	Perforated Plate	3.7500	3.5625	13.3594	11.2500	8.7500	287.1094	298.3594	
3 (Right)	Perforated Plate	3.7500	21.0625	78.9844	11.2500	8.7500	287.1094	298.3594	
4	Plate	12.3750	0.2813	3.4805	0.3263	12.0313	1791.2933	1791.6196	
5	Plate	12.3750	24.3438	301.2539	0.3263	12.0313	1791.2933	1791.6196	
6	Cover Plate	11.7500	12.3125	144.6719	540.7448	0.0000	0.0000	540.7448	
Total		59.00		726.44	571.21		5846.56	6417.77	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3125 in	S _{right} =	521.24 in ³	x-bar =	12.3125 in	S _{right} =	521.24 in ³
I _y =	6417.77 in ⁴	S _{left} =	521.24 in ³	I _y =	6417.77 in ⁴	S _{left} =	521.24 in ³
C _{right} =	12.3125 in	A =	59.0000 in ²	C _{right} =	12.3125 in	A =	59.0000 in ²
C _{left} =	12.3125 in	r _y =	10.4296 in	C _{left} =	12.3125 in	r _y =	10.4296 in



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.6250$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.6250$ in

Perforated Plate:

$A_3 = t = 0.6875$ in
 $B_3 = l = 5.2500$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 22.0000$ in

Left Web Plate:

$A_4 = h = 26.0000$ in
 $B_4 = t = 1.6250$ in

Right Web Plate:

$A_5 = h = 26.0000$ in
 $B_5 = t = 1.6250$ in

Cover Plate:

$A_6 = t = 0.5625$ in
 $B_6 = l = 22.0000$ in



Member U74-L74

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	4.2188	22.3125	94.1309	0.1373	8.9419	337.3228	337.4601
	Vertical Leg	5.0000	24.0000	120.0000	6.6667	10.6294	564.9232	571.5899
2	Horizontal Leg	4.2188	3.6875	15.5566	0.1373	9.6831	395.5583	395.6957
	Vertical Leg	5.0000	2.0000	10.0000	6.6667	11.3706	646.4501	653.1167
3	Perforated Plate	7.2188	4.3438	31.3564	0.2843	9.0268	588.2097	588.4941
4	Plate	42.2500	13.0000	549.2500	2380.0833	0.3706	5.8021	2385.8854
5	Plate	42.2500	13.0000	549.2500	2380.0833	0.3706	5.8021	2385.8854
6	Cover Plate	12.3750	21.7188	268.7695	0.3263	8.3482	862.4385	862.7648
Total		122.53		1638.31	4774.39		3406.51	8180.89
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	13.3706 in	S _{top} =	647.76 in ³	y-bar =	13.3706 in	S _{top} =	647.76 in ³
I _x =	8180.89 in ⁴	S _{bott.} =	611.86 in ³	I _x =	8180.89 in ⁴	S _{bott.} =	611.86 in ³
C _{top} =	12.6294 in	A =	122.5313 in ²	C _{top} =	12.6294 in	A =	122.5313 in ²
C _{bottom} =	13.3706 in	r _x =	8.1710 in	C _{bottom} =	13.3706 in	r _x =	8.1710 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.1094	3.9375	8.3057	2.0023	8.6875	159.2001	161.2024	
	Vertical Leg	2.5000	1.9375	4.8438	0.0814	10.6875	285.5566	285.6380	
1 (Right)	Horizontal Leg	2.1094	21.3125	44.9561	2.0023	8.6875	159.2001	161.2024	
	Vertical Leg	2.5000	23.3125	58.2813	0.0814	10.6875	285.5566	285.6380	
2 (Left)	Horizontal Leg	2.1094	3.9375	8.3057	2.0023	8.6875	159.2001	161.2024	
	Vertical Leg	2.5000	1.9375	4.8438	0.0814	10.6875	285.5566	285.6380	
2 (Right)	Horizontal Leg	2.1094	21.3125	44.9561	2.0023	8.6875	159.2001	161.2024	
	Vertical Leg	2.5000	23.3125	58.2813	0.0814	10.6875	285.5566	285.6380	
3 (Left)	Perforated Plate	3.6094	4.2500	15.3398	8.2903	8.3750	253.1638	261.4541	
3 (Right)	Perforated Plate	3.6094	21.0000	75.7969	8.2903	8.3750	253.1638	261.4541	
4	Plate	42.2500	0.8125	34.3281	9.2972	11.8125	5895.3604	5904.6576	
5	Plate	42.2500	24.4375	1032.4844	9.2972	11.8125	5895.3604	5904.6576	
6	Cover Plate	12.3750	12.6250	156.2344	499.1250	0.0000	0.0000	499.1250	
Total		122.53		1546.96	542.63		14076.08	14618.71	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.6250 in	S _{right} =	1157.92 in ³	x-bar =	12.6250 in	S _{right} =	1157.92 in ³
I _y =	14618.71 in ⁴	S _{left} =	1157.92 in ³	I _y =	14618.71 in ⁴	S _{left} =	1157.92 in ³
C _{right} =	12.6250 in	A =	122.5313 in ²	C _{right} =	12.6250 in	A =	122.5313 in ²
C _{left} =	12.6250 in	r _y =	10.9227 in	C _{left} =	12.6250 in	r _y =	10.9227 in



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.5000$ in

Perforated Plate:

$A_3 = t = 0.6250$ in
 $B_3 = l = 5.7500$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.0000$ in

Left Web Plate:

$A_4 = h = 26.0000$ in
 $B_4 = t = 0.8750$ in

Right Web Plate:

$A_5 = h = 26.0000$ in
 $B_5 = t = 0.8750$ in

Cover Plate:

$A_6 = t = 0.5000$ in
 $B_6 = l = 23.0000$ in



Member U75-L75

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.5000	22.2500	77.8750	0.0729	8.7678	269.0606	269.1335
	Vertical Leg	4.0000	24.0000	96.0000	5.3333	10.5178	442.4971	447.8305
2	Horizontal Leg	3.5000	3.7500	13.1250	0.0729	9.7322	331.5045	331.5774
	Vertical Leg	4.0000	2.0000	8.0000	5.3333	11.4822	527.3629	532.6963
3	Perforated Plate	7.1875	4.3125	30.9961	0.2340	9.1697	604.3484	604.5824
4	Plate	22.7500	13.0000	295.7500	1281.5833	0.4822	5.2896	1286.8729
5	Plate	22.7500	13.0000	295.7500	1281.5833	0.4822	5.2896	1286.8729
6	Cover Plate	11.5000	21.7500	250.1250	0.2396	8.2678	786.1014	786.3410
Total		79.19		1067.62	2574.45		2971.45	5545.91
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	13.4822 in	S _{top} =	443.04 in ³	y-bar =	13.4822 in	S _{top} =	443.04 in ³
I _x =	5545.91 in ⁴	S _{bott.} =	411.35 in ³	I _x =	5545.91 in ⁴	S _{bott.} =	411.35 in ³
C _{top} =	12.5178 in	A =	79.1875 in ²	C _{top} =	12.5178 in	A =	79.1875 in ²
C _{bottom} =	13.4822 in	r _x =	8.3687 in	C _{bottom} =	13.4822 in	r _x =	8.3687 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.7500	3.1250	5.4688	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	1.1250	2.2500	0.0417	11.2500	253.1250	253.1667	
1 (Right)	Horizontal Leg	1.7500	21.6250	37.8438	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	23.6250	47.2500	0.0417	11.2500	253.1250	253.1667	
2 (Left)	Horizontal Leg	1.7500	3.1250	5.4688	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	1.1250	2.2500	0.0417	11.2500	253.1250	253.1667	
2 (Right)	Horizontal Leg	1.7500	21.6250	37.8438	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	23.6250	47.2500	0.0417	11.2500	253.1250	253.1667	
3 (Left)	Perforated Plate	3.5938	3.7500	13.4766	9.9015	8.6250	267.3413	277.2428	
3 (Right)	Perforated Plate	3.5938	21.0000	75.4688	9.9015	8.6250	267.3413	277.2428	
4	Plate	22.7500	0.4375	9.9531	1.4515	11.9375	3241.9639	3243.4154	
5	Plate	22.7500	24.3125	553.1094	1.4515	11.9375	3241.9639	3243.4154	
6	Cover Plate	11.5000	12.3750	142.3125	506.9583	0.0000	0.0000	506.9583	
Total		79.19		979.95	536.98		8630.05	9167.02	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3750 in	S _{right} =	740.77 in ³	x-bar =	12.3750 in	S _{right} =	740.77 in ³
I _y =	9167.02 in ⁴	S _{left} =	740.77 in ³	I _y =	9167.02 in ⁴	S _{left} =	740.77 in ³
C _{right} =	12.3750 in	A =	79.1875 in ²	C _{right} =	12.3750 in	A =	79.1875 in ²
C _{left} =	12.3750 in	r _y =	10.7593 in	C _{left} =	12.3750 in	r _y =	10.7593 in



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.5000$ in

Perforated Plate:

$A_3 = t = 0.6250$ in
 $B_3 = l = 5.7500$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.0000$ in

Left Web Plate:

$A_4 = h = 24.0000$ in
 $B_4 = t = 0.8750$ in

Right Web Plate:

$A_5 = h = 24.0000$ in
 $B_5 = t = 0.8750$ in

Cover Plate:

$A_6 = t = 0.5000$ in
 $B_6 = l = 23.0000$ in



Member U76-L76

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.5000	20.2500	70.8750	0.0729	7.8025	213.0758	213.1488
	Vertical Leg	4.0000	22.0000	88.0000	5.3333	9.5525	365.0001	370.3334
2	Horizontal Leg	3.5000	3.7500	13.1250	0.0729	8.6975	264.7635	264.8364
	Vertical Leg	4.0000	2.0000	8.0000	5.3333	10.4475	436.6021	441.9354
3	Perforated Plate	7.1875	4.3125	30.9961	0.2340	8.1350	475.6574	475.8914
4	Plate	21.0000	12.0000	252.0000	1008.0000	0.4475	4.2056	1012.2056
5	Plate	21.0000	12.0000	252.0000	1008.0000	0.4475	4.2056	1012.2056
6	Cover Plate	11.5000	19.7500	227.1250	0.2396	7.3025	613.2527	613.4923
Total		75.69		942.12	2027.29		2376.76	4404.05
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00	0.00	0.00	0.00



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	12.4475	in	S _{top} =	381.22	in ³	y-bar =	12.4475	in	S _{top} =	381.22	in ³
I _x =	4404.05	in ⁴	S _{bott.} =	353.81	in ³	I _x =	4404.05	in ⁴	S _{bott.} =	353.81	in ³
C _{top} =	11.5525	in	A =	75.6875	in ²	C _{top} =	11.5525	in	A =	75.6875	in ²
C _{bottom} =	12.4475	in	r _x =	7.6281	in	C _{bottom} =	12.4475	in	r _x =	7.6281	in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.7500	3.1250	5.4688	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	1.1250	2.2500	0.0417	11.2500	253.1250	253.1667	
1 (Right)	Horizontal Leg	1.7500	21.6250	37.8438	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	23.6250	47.2500	0.0417	11.2500	253.1250	253.1667	
2 (Left)	Horizontal Leg	1.7500	3.1250	5.4688	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	1.1250	2.2500	0.0417	11.2500	253.1250	253.1667	
2 (Right)	Horizontal Leg	1.7500	21.6250	37.8438	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	23.6250	47.2500	0.0417	11.2500	253.1250	253.1667	
3 (Left)	Perforated Plate	3.5938	3.7500	13.4766	9.9015	8.6250	267.3413	277.2428	
3 (Right)	Perforated Plate	3.5938	21.0000	75.4688	9.9015	8.6250	267.3413	277.2428	
4	Plate	21.0000	0.4375	9.1875	1.3398	11.9375	2992.5820	2993.9219	
5	Plate	21.0000	24.3125	510.5625	1.3398	11.9375	2992.5820	2993.9219	
6	Cover Plate	11.5000	12.3750	142.3125	506.9583	0.0000	0.0000	506.9583	
Total		75.69		936.63	536.75		8131.28	8668.04	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.3750	in	S _{right} =	700.45	in ³	x-bar =	12.3750	in	S _{right} =	700.45	in ³
I _y =	8668.04	in ⁴	S _{left} =	700.45	in ³	I _y =	8668.04	in ⁴	S _{left} =	700.45	in ³
C _{right} =	12.3750	in	A =	75.6875	in ²	C _{right} =	12.3750	in	A =	75.6875	in ²
C _{left} =	12.3750	in	r _y =	10.7016	in	C _{left} =	12.3750	in	r _y =	10.7016	in



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.5000$ in

Perforated Plate:

$A_3 = t = 0.6875$ in
 $B_3 = l = 5.7500$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.0000$ in

Left Web Plate:

$A_4 = h = 22.0000$ in
 $B_4 = t = 1.0625$ in

Right Web Plate:

$A_5 = h = 22.0000$ in
 $B_5 = t = 1.0625$ in

Cover Plate:

$A_6 = t = 0.5625$ in
 $B_6 = l = 23.0000$ in



Member U77-L77

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.5000	18.2500	63.8750	0.0729	6.8347	163.4979	163.5708
	Vertical Leg	4.0000	20.0000	80.0000	5.3333	8.5847	294.7911	300.1244
2	Horizontal Leg	3.5000	3.7500	13.1250	0.0729	7.6653	205.6467	205.7196
	Vertical Leg	4.0000	2.0000	8.0000	5.3333	9.4153	354.5885	359.9218
3	Perforated Plate	7.9063	4.3438	34.3428	0.3114	7.0715	395.3619	395.6733
4	Plate	23.3750	11.0000	257.1250	942.7917	0.4153	4.0308	946.8225
5	Plate	23.3750	11.0000	257.1250	942.7917	0.4153	4.0308	946.8225
6	Cover Plate	12.9375	17.7188	229.2363	0.3411	6.3035	514.0585	514.3996
Total		82.59		942.83	1897.05		1936.01	3833.05
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	11.4153 in	S _{top} =	362.13 in ³	y-bar =	11.4153 in	S _{top} =	362.13 in ³
I _x =	3833.05 in ⁴	S _{bott.} =	335.78 in ³	I _x =	3833.05 in ⁴	S _{bott.} =	335.78 in ³
C _{top} =	10.5847 in	A =	82.5938 in ²	C _{top} =	10.5847 in	A =	82.5938 in ²
C _{bottom} =	11.4153 in	r _x =	6.8124 in	C _{bottom} =	11.4153 in	r _x =	6.8124 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.7500	3.3125	5.7969	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	1.3125	2.6250	0.0417	11.2500	253.1250	253.1667	
1 (Right)	Horizontal Leg	1.7500	21.8125	38.1719	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	23.8125	47.6250	0.0417	11.2500	253.1250	253.1667	
2 (Left)	Horizontal Leg	1.7500	3.3125	5.7969	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	1.3125	2.6250	0.0417	11.2500	253.1250	253.1667	
2 (Right)	Horizontal Leg	1.7500	21.8125	38.1719	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	23.8125	47.6250	0.0417	11.2500	253.1250	253.1667	
3 (Left)	Perforated Plate	3.9531	3.9375	15.5654	10.8917	8.6250	294.0754	304.9671	
3 (Right)	Perforated Plate	3.9531	21.1875	83.7568	10.8917	8.6250	294.0754	304.9671	
4	Plate	23.3750	0.5313	12.4180	2.1990	12.0313	3383.5541	3385.7531	
5	Plate	23.3750	24.5938	574.8789	2.1990	12.0313	3383.5541	3385.7531	
6	Cover Plate	12.9375	12.5625	162.5273	570.3281	0.0000	0.0000	570.3281	
Total		82.59		1037.58	603.82		8966.70	9570.52	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.5625 in	S _{right} =	761.83 in ³	x-bar =	12.5625 in	S _{right} =	761.83 in ³
I _y =	9570.52 in ⁴	S _{left} =	761.83 in ³	I _y =	9570.52 in ⁴	S _{left} =	761.83 in ³
C _{right} =	12.5625 in	A =	82.5938 in ²	C _{right} =	12.5625 in	A =	82.5938 in ²
C _{left} =	12.5625 in	r _y =	10.7645 in	C _{left} =	12.5625 in	r _y =	10.7645 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_t = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_t = 0.5000$ in

Perforated Plate:

$A_3 = t = 0.5625$ in
 $B_3 = l = 5.7500$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.0000$ in

Left Web Plate:

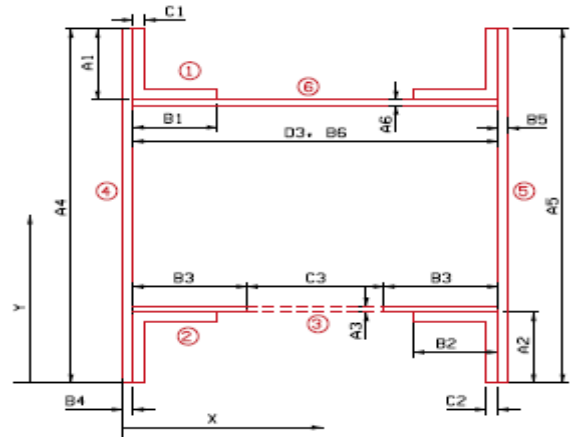
$A_4 = h = 20.0000$ in
 $B_4 = t = 1.0000$ in

Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 1.0000$ in

Cover Plate:

$A_6 = t = 0.4375$ in
 $B_6 = l = 23.0000$ in



Member U78-L78

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.5000	16.2500	56.8750	0.0729	5.9539	124.0711	124.1440
	Vertical Leg	4.0000	18.0000	72.0000	5.3333	7.7039	237.4001	242.7334
2	Horizontal Leg	3.5000	3.7500	13.1250	0.0729	6.5461	149.9802	150.0531
	Vertical Leg	4.0000	2.0000	8.0000	5.3333	8.2961	275.3013	280.6347
3	Perforated Plate	6.4688	4.2813	27.6943	0.1706	6.0149	234.0294	234.2000
4	Plate	20.0000	10.0000	200.0000	666.6667	0.2961	1.7535	668.4202
5	Plate	20.0000	10.0000	200.0000	666.6667	0.2961	1.7535	668.4202
6	Cover Plate	10.0625	15.7813	158.7988	0.1605	5.4851	302.7487	302.9092
Total		71.53		736.49	1344.48		1327.04	2671.51
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	10.2961 in	S _{top} =	275.30 in ³	y-bar =	10.2961 in	S _{top} =	275.30 in ³
I _x =	2671.51 in ⁴	S _{bott.} =	259.47 in ³	I _x =	2671.51 in ⁴	S _{bott.} =	259.47 in ³
C _{top} =	9.7039 in	A =	71.5313 in ²	C _{top} =	9.7039 in	A =	71.5313 in ²
C _{bottom} =	10.2961 in	r _x =	6.1113 in	C _{bottom} =	10.2961 in	r _x =	6.1113 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.7500	3.2500	5.6875	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	1.2500	2.5000	0.0417	11.2500	253.1250	253.1667	
1 (Right)	Horizontal Leg	1.7500	21.7500	38.0625	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	23.7500	47.5000	0.0417	11.2500	253.1250	253.1667	
2 (Left)	Horizontal Leg	1.7500	3.2500	5.6875	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	1.2500	2.5000	0.0417	11.2500	253.1250	253.1667	
2 (Right)	Horizontal Leg	1.7500	21.7500	38.0625	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	23.7500	47.5000	0.0417	11.2500	253.1250	253.1667	
3 (Left)	Perforated Plate	3.2344	3.8750	12.5332	8.9114	8.6250	240.6072	249.5186	
3 (Right)	Perforated Plate	3.2344	21.1250	68.3262	8.9114	8.6250	240.6072	249.5186	
4	Plate	20.0000	0.5000	10.0000	1.6667	12.0000	2880.0000	2881.6667	
5	Plate	20.0000	24.5000	490.0000	1.6667	12.0000	2880.0000	2881.6667	
6	Cover Plate	10.0625	12.5000	125.7813	443.5885	0.0000	0.0000	443.5885	
Total		71.53		894.14	472.06		7852.65	8324.71	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.5000 in	S _{right} =	665.98 in ³	x-bar =	12.5000 in	S _{right} =	665.98 in ³
I _y =	8324.71 in ⁴	S _{left} =	665.98 in ³	I _y =	8324.71 in ⁴	S _{left} =	665.98 in ³
C _{right} =	12.5000 in	A =	71.5313 in ²	C _{right} =	12.5000 in	A =	71.5313 in ²
C _{left} =	12.5000 in	r _y =	10.7879 in	C _{left} =	12.5000 in	r _y =	10.7879 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

$A_4 = h = 20.0000$ in
 $B_4 = t = 0.7500$ in

Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 0.7500$ in

Cover Plate:

$A_6 = t = 0.3750$ in
 $B_6 = l = 23.5000$ in



Member U79-L79

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	16.1875	44.0098	0.0319	5.8902	94.3258	94.3577
	Vertical Leg	3.0000	18.0000	54.0000	4.0000	7.7027	177.9951	181.9951
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	6.4848	114.3303	114.3622
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	8.2973	206.5351	210.5351
3	Perforated Plate	6.0000	4.2500	25.5000	0.1250	6.0473	219.4184	219.5434
4	Plate	15.0000	10.0000	150.0000	500.0000	0.2973	1.3257	501.3257
5	Plate	15.0000	10.0000	150.0000	500.0000	0.2973	1.3257	501.3257
6	Cover Plate	8.8125	15.8125	139.3477	0.1033	5.5152	268.0544	268.1577
Total		56.25		579.22	1008.29		1083.31	2091.60
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	10.2973 in	S _{top} =	215.57 in ³	y-bar =	10.2973 in	S _{top} =	215.57 in ³
I _x =	2091.60 in ⁴	S _{bott.} =	203.12 in ³	I _x =	2091.60 in ⁴	S _{bott.} =	203.12 in ³
C _{top} =	9.7027 in	A =	56.2500 in ²	C _{top} =	9.7027 in	A =	56.2500 in ²
C _{bottom} =	10.2973 in	r _x =	6.0979 in	C _{bottom} =	10.2973 in	r _x =	6.0979 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	2.9375	3.9932	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.9375	1.4063	0.0176	11.5625	200.5371	200.5547	
1 (Right)	Horizontal Leg	1.3594	22.0625	29.9912	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	24.0625	36.0938	0.0176	11.5625	200.5371	200.5547	
2 (Left)	Horizontal Leg	1.3594	2.9375	3.9932	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.9375	1.4063	0.0176	11.5625	200.5371	200.5547	
2 (Right)	Horizontal Leg	1.3594	22.0625	29.9912	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	24.0625	36.0938	0.0176	11.5625	200.5371	200.5547	
3 (Left)	Perforated Plate	3.0000	3.7500	11.2500	9.0000	8.7500	229.6875	238.6875	
3 (Right)	Perforated Plate	3.0000	21.2500	63.7500	9.0000	8.7500	229.6875	238.6875	
4	Plate	15.0000	0.3750	5.6250	0.7031	12.1250	2205.2344	2205.9375	
5	Plate	15.0000	24.6250	369.3750	0.7031	12.1250	2205.2344	2205.9375	
6	Cover Plate	8.8125	12.5000	110.1563	405.5586	0.0000	0.0000	405.5586	
Total		56.25		703.13	430.99		6169.20	6600.19	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.5000 in	S _{right} =	528.02 in ³	x-bar =	12.5000 in	S _{right} =	528.02 in ³
I _y =	6600.19 in ⁴	S _{left} =	528.02 in ³	I _y =	6600.19 in ⁴	S _{left} =	528.02 in ³
C _{right} =	12.5000 in	A =	56.2500 in ²	C _{right} =	12.5000 in	A =	56.2500 in ²
C _{left} =	12.5000 in	r _y =	10.8322 in	C _{left} =	12.5000 in	r _y =	10.8322 in



Made By KMW
Checked By DWC

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.3750$ in
- $B_3 = b = 16.0000$ in



Member U80-L80

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	8.0000	102.4450	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	8.0000	199.8080	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		12.0000	8.0000	96.0000	256.0000	0.0000	0.0000	256.0000
Total			49.78		398.25	664.29		0.00	664.29
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1250	16.0000	-2.0000	8.0000	-16.0000	-42.6667	0.0000	0.0000	-42.6667
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.00		-16.00	-42.67		0.00	-42.67

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	8.0000	in	S _{top} =	83.04	in ³	y-bar =	8.0000	in	S _{top} =	77.70	in ³
I _x =	664.29	in ⁴	S _{bott.} =	83.04	in ³	I _x =	621.62	in ⁴	S _{bott.} =	77.70	in ³
c _{top} =	8.0000	in	A =	49.7816	in ²	c _{top} =	8.0000	in	A =	47.7816	in ²
c _{bottom} =	8.0000	in	r _x =	3.6529	in	c _{bottom} =	8.0000	in	r _x =	3.6069	in



Made By KMW
Checked By DWC

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.5000	160.0703	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	0.8210	10.2526	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	24.1790	301.9474	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		6.0000	0.1875	1.1250	0.0703	12.3125	909.5859	909.6563
	Right Plate		6.0000	24.8125	148.8750	0.0703	12.3125	909.5859	909.6563
Total			49.78		622.27	540.40		5225.87	5766.28
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	16.0000	0.1250	-2.0000	0.0625	-0.1250	-0.0026	12.9581	-335.8246	-335.8272
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.00		-0.13	0.00		-335.82	-335.83

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.5000	in	S _{right} = 461.30 in ³	x-bar =	13.0206	in	S _{right} = 453.32 in ³
I _y =	5766.28	in ⁴	S _{left} = 461.30 in ³	I _y =	5430.45	in ⁴	S _{left} = 417.07 in ³
C _{right} =	12.5000	in	A = 49.7816 in ²	C _{right} =	11.9794	in	A = 47.7816 in ²
C _{left} =	12.5000	in	r _y = 10.7625 in	C _{left} =	13.0206	in	r _y = 10.6607 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 100

- $A_1 = t_w = 0.4700$ in
- $A_2 = t_f = 0.7670$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 12.0000$ in



Member U81-L81

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x, gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		10.5590	6.0000	63.3541	0.1944	0.0000	0.0000	0.1944
2	Flange Plates		18.4080	6.0000	110.4480	220.8960	0.0000	0.0000	220.8960
Total			28.97		173.80	221.09		0.00	221.09
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	6.0000	in	$S_{top} = 36.85$	in^3	y-bar =	6.0000	in	$S_{top} = 36.85$	in^3		
$I_x =$	221.09	in^4	$S_{bott.} = 36.85$	in^3	$I_x =$	221.09	in^4	$S_{bott.} = 36.85$	in^3		
$c_{top} =$	6.0000	in	A =	28.9670	in^2	$c_{top} =$	6.0000	in	A =	28.9670	in^2
$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in	$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	12.0000	126.7082	444.1134	0.0000	0.0000	444.1134
2	Left Flange		9.2040	0.3835	3.5297	0.4512	11.6165	1242.0160	1242.4673
	Right Flange		9.2040	23.6165	217.3663	0.4512	11.6165	1242.0160	1242.4673
Total			28.97		347.60	445.02		2484.03	2929.05
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.0000	in	S _{right} =	244.09	in ³	x-bar =	12.0000	in	S _{right} =	244.09	in ³
I _y =	2929.05	in ⁴	S _{left} =	244.09	in ³	I _y =	2929.05	in ⁴	S _{left} =	244.09	in ³
C _{right} =	12.0000	in	A =	28.9670	in ²	C _{right} =	12.0000	in	A =	28.9670	in ²
C _{left} =	12.0000	in	r _y =	10.0557	in	C _{left} =	12.0000	in	r _y =	10.0557	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

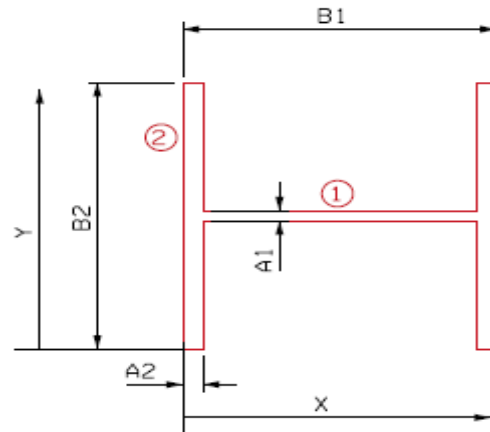
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 100

- $A_1 = t_w = 0.4700$ in
- $A_2 = t_f = 0.7670$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 12.0000$ in



Member U82-L82

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x, gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		10.5590	6.0000	63.3541	0.1944	0.0000	0.0000	0.1944
2	Flange Plates		18.4080	6.0000	110.4480	220.8960	0.0000	0.0000	220.8960
Total			28.97		173.80	221.09		0.00	221.09
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	6.0000	in	$S_{top} = 36.85$	in^3	y-bar =	6.0000	in	$S_{top} = 36.85$	in^3		
$I_x =$	221.09	in^4	$S_{bott.} = 36.85$	in^3	$I_x =$	221.09	in^4	$S_{bott.} = 36.85$	in^3		
$c_{top} =$	6.0000	in	A =	28.9670	in^2	$c_{top} =$	6.0000	in	A =	28.9670	in^2
$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in	$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	12.0000	126.7082	444.1134	0.0000	0.0000	444.1134
2	Left Flange		9.2040	0.3835	3.5297	0.4512	11.6165	1242.0160	1242.4673
	Right Flange		9.2040	23.6165	217.3663	0.4512	11.6165	1242.0160	1242.4673
Total			28.97		347.60	445.02		2484.03	2929.05
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.0000	in	S _{right} =	244.09	in ³	x-bar =	12.0000	in	S _{right} =	244.09	in ³
I _y =	2929.05	in ⁴	S _{left} =	244.09	in ³	I _y =	2929.05	in ⁴	S _{left} =	244.09	in ³
C _{right} =	12.0000	in	A =	28.9670	in ²	C _{right} =	12.0000	in	A =	28.9670	in ²
C _{left} =	12.0000	in	r _y =	10.0557	in	C _{left} =	12.0000	in	r _y =	10.0557	in



Made By KMW
Checked By DWC

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.3750$ in
- $B_3 = b = 14.0000$ in



Member U83-L83

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		10.5000	7.0000	73.5000	171.5000	0.0000	0.0000	171.5000
Total			48.28		337.97	579.79		0.00	579.79
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.3750	2.0000	-0.7500	1.0000	-0.7500	-0.2500	5.9772	-26.7949	-27.0449
2	0.3125	12.0000	-3.7500	8.0000	-30.0000	-45.0000	1.0228	-3.9232	-48.9232
3	0.2500	2.0000	-0.5000	8.2850	-4.1425	-0.1667	1.3078	-0.8552	-1.0219
4	0.2500	2.0000	-0.5000	8.2850	-4.1425	-0.1667	1.3078	-0.8552	-1.0219
5	22.4660	0.0625	-1.4041	7.2538	-10.1852	-0.0005	0.2766	-0.1074	-0.1079
6	4.0000	0.0625	-0.2500	7.1913	-1.7978	-0.0001	0.2141	-0.0115	-0.0115
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-7.15		-51.02	-45.58		-32.55	-78.13

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	7.0000	in	S _{top} = 82.83 in ³	y-bar =	6.9772	in	S _{top} = 71.67 in ³
I _x =	579.79	in ⁴	S _{bottom} = 82.83 in ³	I _x =	501.66	in ⁴	S _{bottom} = 71.90 in ³
c _{top} =	7.0000	in	A = 48.2816 in ²	c _{top} =	7.0000	in	A = 41.1275 in ²
c _{bottom} =	7.0000	in	r _x = 3.4653 in	c _{bottom} =	6.9772	in	r _x = 3.4925 in



Made By KMW
Checked By DWC

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.5000	160.0703	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	0.8210	10.2526	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	24.1790	301.9474	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		5.2500	0.1875	0.9844	0.0615	12.3125	795.8877	795.9492
	Right Plate		5.2500	24.8125	130.2656	0.0615	12.3125	795.8877	795.9492
Total			48.28		603.52	540.38		4998.48	5538.86
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	2.0000	0.3750	-0.7500	0.1875	-0.1406	-0.0088	13.6883	-140.5264	-140.5352
2	12.0000	0.3125	-3.7500	0.1563	-0.5859	-0.0305	13.7195	-705.8439	-705.8744
3	2.0000	0.2500	-0.5000	1.1420	-0.5710	-0.0026	12.7338	-81.0744	-81.0770
4	2.0000	0.2500	-0.5000	23.8580	-11.9290	-0.0026	9.9822	-49.8225	-49.8251
5	0.0625	22.4660	-1.4041	12.5000	-17.5516	-59.0576	1.3758	-2.6576	-61.7153
6	0.0625	4.0000	-0.2500	8.2670	-2.0668	-0.3333	5.6088	-7.8646	-8.1979
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-7.15		-32.84	-59.44		-987.79	-1047.22

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.5000	in	S _{right} =	443.11	in ³	x-bar =	13.8758	in	S _{right} =	403.77	in ³
I _y =	5538.86	n ⁴	S _{left} =	443.11	in ³	I _y =	4491.64	n ⁴	S _{left} =	323.70	in ³
C _{right} =	12.5000	in	A =	48.2816	in ²	C _{right} =	11.1242	in	A =	41.1275	in ²
C _{left} =	12.5000	in	r _y =	10.7107	in	C _{left} =	13.8758	in	r _y =	10.4505	in



Made By KMW
Checked By DWC

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 160

- $A_1 = t_w = 0.6650$ in
- $A_2 = t_f = 1.1240$ in
- $B_1 = d = 24.7140$ in
- $B_2 = b_f = 14.0950$ in

Cover Plate

- $A_3 = t = 0.4375$ in
- $B_3 = b = 16.0000$ in



Member U84-L84

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	8.0000	119.5191	0.5506	0.0000	0.0000	0.5506
2	Flange Plates		31.6856	8.0000	253.4845	524.5783	0.0000	0.0000	524.5783
3	Cover Plate		14.0000	8.0000	112.0000	298.6667	0.0000	0.0000	298.6667
Total			60.63		485.00	823.80		0.00	823.80
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	8.0000	0.1250	-1.0000	8.2700	-8.2700	-0.0013	0.2780	-0.0773	-0.0786
2	6.0000	0.1250	-0.7500	8.2700	-6.2025	-0.0010	0.2780	-0.0580	-0.0590
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.75		-14.47	0.00		-0.14	-0.14

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	8.0000	in	$S_{top} = 102.97$	in ³	y-bar =	7.9920	in	$S_{top} = 102.85$	in ³		
$I_x =$	823.80	in ⁴	$S_{bott.} = 102.97$	in ³	$I_x =$	823.66	in ⁴	$S_{bott.} = 103.06$	in ³		
$c_{top} =$	8.0000	in	A =	60.6255	in ²	$c_{top} =$	8.0080	in	A =	58.8755	in ²
$c_{bottom} =$	8.0000	in	$r_x =$	3.6862	in	$c_{bottom} =$	7.9920	in	$r_x =$	3.7403	in



Made By KMW
Checked By DWC

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	12.7945	191.1484	628.3732	0.0000	0.0000	628.3732
2	Left Flange		15.8428	0.9995	15.8349	1.6679	11.7950	2204.0796	2205.7476
	Right Flange		15.8428	24.5895	389.5660	1.6679	11.7950	2204.0796	2205.7476
3	Left Plate		7.0000	0.2188	1.5313	0.1117	12.5758	1107.0464	1107.1581
	Right Plate		7.0000	25.3703	177.5918	0.1117	12.5758	1107.0464	1107.1581
Total			60.63		775.67	631.93		6622.25	7254.18
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1250	8.0000	-1.0000	5.5615	-5.5615	-5.3333	7.2510	-52.5766	-57.9100
2	0.1250	6.0000	-0.7500	21.0275	-15.7706	-2.2500	8.2150	-50.6150	-52.8650
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.75		-21.33	-7.58		-103.19	-110.77

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.7945	in	S _{right} = 566.98 in ³	x-bar =	12.8125	in	S _{right} = 559.10 in ³
I _y =	7254.18	in ⁴	S _{left} = 566.98 in ³	I _y =	7143.41	in ⁴	S _{left} = 557.54 in ³
C _{right} =	12.7945	in	A = 60.6255 in ²	C _{right} =	12.7765	in	A = 58.8755 in ²
C _{left} =	12.7945	in	r _y = 10.9387 in	C _{left} =	12.8125	in	r _y = 11.0150 in



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.5000$ in

Perforated Plate:

$A_3 = t = 0.6875$ in
 $B_3 = l = 5.5000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 22.5000$ in

Left Web Plate:

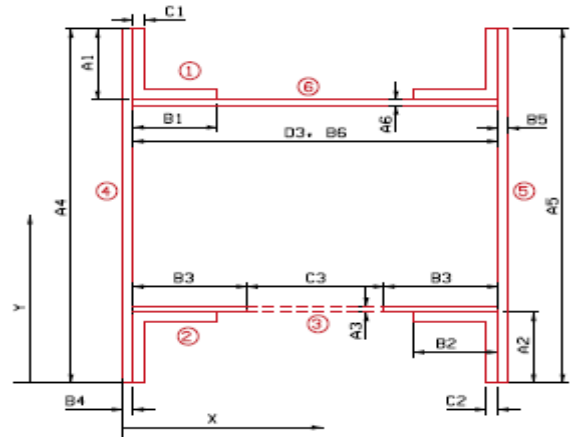
$A_4 = h = 20.0000$ in
 $B_4 = t = 1.1250$ in

Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 1.1250$ in

Cover Plate:

$A_6 = t = 0.5625$ in
 $B_6 = l = 22.5000$ in



Member U85-L85

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.5000	16.2500	56.8750	0.0729	5.8810	121.0506	121.1235
	Vertical Leg	4.0000	18.0000	72.0000	5.3333	7.6310	232.9273	238.2606
2	Horizontal Leg	3.5000	3.7500	13.1250	0.0729	6.6190	153.3401	153.4130
	Vertical Leg	4.0000	2.0000	8.0000	5.3333	8.3690	280.1622	285.4955
3	Perforated Plate	7.5625	4.3438	32.8496	0.2979	6.0253	274.5483	274.8462
4	Plate	22.5000	10.0000	225.0000	750.0000	0.3690	3.0640	753.0640
5	Plate	22.5000	10.0000	225.0000	750.0000	0.3690	3.0640	753.0640
6	Cover Plate	12.6563	15.7188	198.9404	0.3337	5.3497	362.2166	362.5503
Total		80.22		831.79	1511.44		1430.37	2941.82
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	10.3690 in	S _{top} =	305.45 in ³	y-bar =	10.3690 in	S _{top} =	305.45 in ³
I _x =	2941.82 in ⁴	S _{bott.} =	283.71 in ³	I _x =	2941.82 in ⁴	S _{bott.} =	283.71 in ³
C _{top} =	9.6310 in	A =	80.2188 in ²	C _{top} =	9.6310 in	A =	80.2188 in ²
C _{bottom} =	10.3690 in	r _x =	6.0558 in	C _{bottom} =	10.3690 in	r _x =	6.0558 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.7500	3.3750	5.9063	1.7865	9.0000	141.7500	143.5365	
	Vertical Leg	2.0000	1.3750	2.7500	0.0417	11.0000	242.0000	242.0417	
1 (Right)	Horizontal Leg	1.7500	21.3750	37.4063	1.7865	9.0000	141.7500	143.5365	
	Vertical Leg	2.0000	23.3750	46.7500	0.0417	11.0000	242.0000	242.0417	
2 (Left)	Horizontal Leg	1.7500	3.3750	5.9063	1.7865	9.0000	141.7500	143.5365	
	Vertical Leg	2.0000	1.3750	2.7500	0.0417	11.0000	242.0000	242.0417	
2 (Right)	Horizontal Leg	1.7500	21.3750	37.4063	1.7865	9.0000	141.7500	143.5365	
	Vertical Leg	2.0000	23.3750	46.7500	0.0417	11.0000	242.0000	242.0417	
3 (Left)	Perforated Plate	3.7813	3.8750	14.6523	9.5319	8.5000	273.1953	282.7272	
3 (Right)	Perforated Plate	3.7813	20.8750	78.9336	9.5319	8.5000	273.1953	282.7272	
4	Plate	22.5000	0.5625	12.6563	2.3730	11.8125	3139.5410	3141.9141	
5	Plate	22.5000	24.1875	544.2188	2.3730	11.8125	3139.5410	3141.9141	
6	Cover Plate	12.6563	12.3750	156.6211	533.9355	0.0000	0.0000	533.9355	
Total		80.22		992.71	565.06		8360.47	8925.53	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3750 in	S _{right} =	721.25 in ³	x-bar =	12.3750 in	S _{right} =	721.25 in ³
I _y =	8925.53 in ⁴	S _{left} =	721.25 in ³	I _y =	8925.53 in ⁴	S _{left} =	721.25 in ³
C _{right} =	12.3750 in	A =	80.2188 in ²	C _{right} =	12.3750 in	A =	80.2188 in ²
C _{left} =	12.3750 in	r _y =	10.5482 in	C _{left} =	12.3750 in	r _y =	10.5482 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.5000$ in

Perforated Plate:

$A_3 = t = 0.6250$ in
 $B_3 = l = 5.5000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 22.5000$ in

Left Web Plate:

$A_4 = h = 20.0000$ in
 $B_4 = t = 1.1875$ in

Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 1.1875$ in

Cover Plate:

$A_6 = t = 0.5000$ in
 $B_6 = l = 22.5000$ in



Member U86-L86

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.5000	16.2500	56.8750	0.0729	5.9327	123.1874	123.2603
	Vertical Leg	4.0000	18.0000	72.0000	5.3333	7.6827	236.0928	241.4261
2	Horizontal Leg	3.5000	3.7500	13.1250	0.0729	6.5673	150.9551	151.0280
	Vertical Leg	4.0000	2.0000	8.0000	5.3333	8.3173	276.7129	282.0462
3	Perforated Plate	6.8750	4.3125	29.6484	0.2238	6.0048	247.8999	248.1237
4	Plate	23.7500	10.0000	237.5000	791.6667	0.3173	2.3918	794.0585
5	Plate	23.7500	10.0000	237.5000	791.6667	0.3173	2.3918	794.0585
6	Cover Plate	11.2500	15.7500	177.1875	0.2344	5.4327	332.0296	332.2640
Total		80.63		831.84	1594.60		1371.66	2966.27
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00	0.00	0.00	0.00



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	10.3173 in	S _{top} =	306.35 in ³	y-bar =	10.3173 in	S _{top} =	306.35 in ³
I _x =	2966.27 in ⁴	S _{bott.} =	287.50 in ³	I _x =	2966.27 in ⁴	S _{bott.} =	287.50 in ³
C _{top} =	9.6827 in	A =	80.6250 in ²	C _{top} =	9.6827 in	A =	80.6250 in ²
C _{bottom} =	10.3173 in	r _x =	6.0655 in	C _{bottom} =	10.3173 in	r _x =	6.0655 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.7500	3.4375	6.0156	1.7865	9.0000	141.7500	143.5365	
	Vertical Leg	2.0000	1.4375	2.8750	0.0417	11.0000	242.0000	242.0417	
1 (Right)	Horizontal Leg	1.7500	21.4375	37.5156	1.7865	9.0000	141.7500	143.5365	
	Vertical Leg	2.0000	23.4375	46.8750	0.0417	11.0000	242.0000	242.0417	
2 (Left)	Horizontal Leg	1.7500	3.4375	6.0156	1.7865	9.0000	141.7500	143.5365	
	Vertical Leg	2.0000	1.4375	2.8750	0.0417	11.0000	242.0000	242.0417	
2 (Right)	Horizontal Leg	1.7500	21.4375	37.5156	1.7865	9.0000	141.7500	143.5365	
	Vertical Leg	2.0000	23.4375	46.8750	0.0417	11.0000	242.0000	242.0417	
3 (Left)	Perforated Plate	3.4375	3.9375	13.5352	8.6654	8.5000	248.3594	257.0247	
3 (Right)	Perforated Plate	3.4375	20.9375	71.9727	8.6654	8.5000	248.3594	257.0247	
4	Plate	23.7500	0.5938	14.1016	2.7909	11.8438	3331.5173	3334.3083	
5	Plate	23.7500	24.2813	576.6797	2.7909	11.8438	3331.5173	3334.3083	
6	Cover Plate	11.2500	12.4375	139.9219	474.6094	0.0000	0.0000	474.6094	
Total		80.63		1002.77	504.83		8694.75	9199.59	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.4375 in	S _{right} =	739.67 in ³	x-bar =	12.4375 in	S _{right} =	739.67 in ³
I _y =	9199.59 in ⁴	S _{left} =	739.67 in ³	I _y =	9199.59 in ⁴	S _{left} =	739.67 in ³
C _{right} =	12.4375 in	A =	80.6250 in ²	C _{right} =	12.4375 in	A =	80.6250 in ²
C _{left} =	12.4375 in	r _y =	10.6819 in	C _{left} =	12.4375 in	r _y =	10.6819 in

North Truss

Member U87-L87 (2)



Made By KMW
Checked By DWC

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.5000$ in

Perforated Plate:

$A_3 = t = 0.6875$ in
 $B_3 = l = 5.7500$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.0000$ in

Left Web Plate:

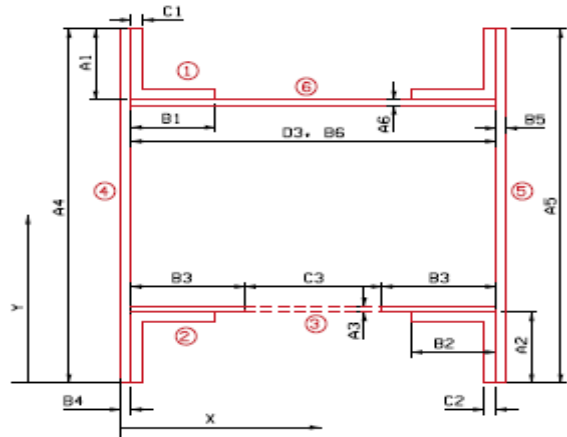
$A_4 = h = 22.0000$ in
 $B_4 = t = 0.9375$ in

Right Web Plate:

$A_5 = h = 22.0000$ in
 $B_5 = t = 0.9375$ in

Cover Plate:

$A_6 = t = 0.5625$ in
 $B_6 = l = 23.0000$ in



Member U87-L87

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.5000	18.2500	63.8750	0.0729	6.8051	162.0836	162.1565
	Vertical Leg	4.0000	20.0000	80.0000	5.3333	8.5551	292.7600	298.0933
2	Horizontal Leg	3.5000	3.7500	13.1250	0.0729	7.6949	207.2394	207.3123
	Vertical Leg	4.0000	2.0000	8.0000	5.3333	9.4449	356.8234	362.1567
3	Perforated Plate	7.9063	4.3438	34.3428	0.3114	7.1011	398.6815	398.9929
4	Plate	20.6250	11.0000	226.8750	831.8750	0.4449	4.0822	835.9572
5	Plate	20.6250	11.0000	226.8750	831.8750	0.4449	4.0822	835.9572
6	Cover Plate	12.9375	17.7188	229.2363	0.3411	6.2739	509.2379	509.5790
Total		77.09		882.33	1675.22		1934.99	3610.21
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0625	6.0000	-0.3750	19.0000	-7.1250	-1.1250	7.4991	-21.0890
2	0.2500	6.0000	-1.5000	11.0000	-16.5000	-4.5000	0.5009	-0.3763
3	0.1250	6.0000	-0.7500	3.0000	-2.2500	-2.2500	8.5009	-54.1984
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				-2.63	-25.88	-7.88		-75.66
								-83.54



Made By KMW
Checked By DWC

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	11.4449 in	S _{top} =	342.03 in ³	y-bar =	11.5009 in	S _{top} =	335.90 in ³
I _x =	3610.21 in ⁴	S _{bott.} =	315.44 in ³	I _x =	3526.67 in ⁴	S _{bott.} =	306.64 in ³
C _{top} =	10.5551 in	A =	77.0938 in ²	C _{top} =	10.4991 in	A =	74.4688 in ²
C _{bottom} =	11.4449 in	r _x =	6.8432 in	C _{bottom} =	11.5009 in	r _x =	6.8817 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.7500	3.1875	5.5781	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	1.1875	2.3750	0.0417	11.2500	253.1250	253.1667	
1 (Right)	Horizontal Leg	1.7500	21.6875	37.9531	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	23.6875	47.3750	0.0417	11.2500	253.1250	253.1667	
2 (Left)	Horizontal Leg	1.7500	3.1875	5.5781	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	1.1875	2.3750	0.0417	11.2500	253.1250	253.1667	
2 (Right)	Horizontal Leg	1.7500	21.6875	37.9531	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	23.6875	47.3750	0.0417	11.2500	253.1250	253.1667	
3 (Left)	Perforated Plate	3.9531	3.8125	15.0713	10.8917	8.6250	294.0754	304.9671	
3 (Right)	Perforated Plate	3.9531	21.0625	83.2627	10.8917	8.6250	294.0754	304.9671	
4	Plate	20.6250	0.4688	9.6680	1.5106	11.9688	2954.5514	2956.0620	
5	Plate	20.6250	24.4063	503.3789	1.5106	11.9688	2954.5514	2956.0620	
6	Cover Plate	12.9375	12.4375	160.9102	570.3281	0.0000	0.0000	570.3281	
Total		77.09		958.85	602.45		8108.69	8711.14	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	6.0000	0.0625	-0.3750	0.0313	-0.0117	-0.0001	12.8414	-61.8377	-61.8379
2	6.0000	0.2500	-1.5000	0.1250	-0.1875	-0.0078	12.7476	-243.7525	-243.7603
3	6.0000	0.1250	-0.7500	0.0625	-0.0469	-0.0010	12.8101	-123.0743	-123.0752
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.63		-0.25	-0.01		-428.66	-428.67

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.4375 in	S _{right} =	700.39 in ³	x-bar =	12.8726 in	S _{right} =	690.07 in ³
I _y =	8711.14 in ⁴	S _{left} =	700.39 in ³	I _y =	8282.46 in ⁴	S _{left} =	643.42 in ³
C _{right} =	12.4375 in	A =	77.0938 in ²	C _{right} =	12.0024 in	A =	74.4688 in ²
C _{left} =	12.4375 in	r _y =	10.6299 in	C _{left} =	12.8726 in	r _y =	10.5461 in



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.5000$ in

Perforated Plate:

$A_3 = t = 0.6250$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

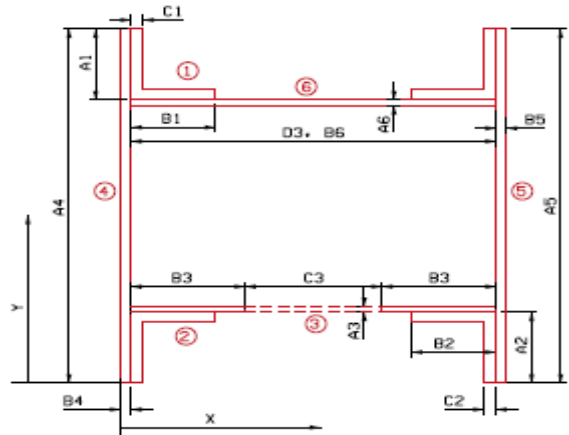
$A_4 = h = 24.0000$ in
 $B_4 = t = 0.6875$ in

Right Web Plate:

$A_5 = h = 24.0000$ in
 $B_5 = t = 0.6875$ in

Cover Plate:

$A_6 = t = 0.5000$ in
 $B_6 = l = 23.5000$ in



Member U88-L88

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.5000	20.2500	70.8750	0.0729	7.7533	210.3953	210.4682
	Vertical Leg	4.0000	22.0000	88.0000	5.3333	9.5033	361.2473	366.5806
2	Horizontal Leg	3.5000	3.7500	13.1250	0.0729	8.7467	267.7696	267.8425
	Vertical Leg	4.0000	2.0000	8.0000	5.3333	10.4967	440.7268	446.0601
3	Perforated Plate	7.5000	4.3125	32.3438	0.2441	8.1842	502.3643	502.6084
4	Plate	16.5000	12.0000	198.0000	792.0000	0.4967	4.0715	796.0715
5	Plate	16.5000	12.0000	198.0000	792.0000	0.4967	4.0715	796.0715
6	Cover Plate	11.7500	19.7500	232.0625	0.2448	7.2533	618.1637	618.4085
Total		67.25		840.41	1595.30		2408.81	4004.11
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	12.4967 in	S _{top} =	348.09 in ³	y-bar =	12.4967 in	S _{top} =	348.09 in ³
I _x =	4004.11 in ⁴	S _{bott.} =	320.41 in ³	I _x =	4004.11 in ⁴	S _{bott.} =	320.41 in ³
C _{top} =	11.5033 in	A =	67.2500 in ²	C _{top} =	11.5033 in	A =	67.2500 in ²
C _{bottom} =	12.4967 in	r _x =	7.7163 in	C _{bottom} =	12.4967 in	r _x =	7.7163 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.7500	2.9375	5.1406	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	0.9375	1.8750	0.0417	11.5000	264.5000	264.5417	
1 (Right)	Horizontal Leg	1.7500	21.9375	38.3906	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	23.9375	47.8750	0.0417	11.5000	264.5000	264.5417	
2 (Left)	Horizontal Leg	1.7500	2.9375	5.1406	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	0.9375	1.8750	0.0417	11.5000	264.5000	264.5417	
2 (Right)	Horizontal Leg	1.7500	21.9375	38.3906	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	23.9375	47.8750	0.0417	11.5000	264.5000	264.5417	
3 (Left)	Perforated Plate	3.7500	3.6875	13.8281	11.2500	8.7500	287.1094	298.3594	
3 (Right)	Perforated Plate	3.7500	21.1875	79.4531	11.2500	8.7500	287.1094	298.3594	
4	Plate	16.5000	0.3438	5.6719	0.6499	12.0938	2413.2700	2413.9199	
5	Plate	16.5000	24.5313	404.7656	0.6499	12.0938	2413.2700	2413.9199	
6	Cover Plate	11.7500	12.4375	146.1406	540.7448	0.0000	0.0000	540.7448	
Total		67.25		836.42	571.86		7090.51	7662.37	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.4375 in	S _{right} =	616.07 in ³	x-bar =	12.4375 in	S _{right} =	616.07 in ³
I _y =	7662.37 in ⁴	S _{left} =	616.07 in ³	I _y =	7662.37 in ⁴	S _{left} =	616.07 in ³
C _{right} =	12.4375 in	A =	67.2500 in ²	C _{right} =	12.4375 in	A =	67.2500 in ²
C _{left} =	12.4375 in	r _y =	10.6742 in	C _{left} =	12.4375 in	r _y =	10.6742 in



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 5.7500$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.0000$ in

Left Web Plate:

$A_4 = h = 26.0000$ in
 $B_4 = t = 0.8125$ in

Right Web Plate:

$A_5 = h = 26.0000$ in
 $B_5 = t = 0.8125$ in

Cover Plate:

$A_6 = t = 0.3750$ in
 $B_6 = l = 23.0000$ in



Member U89-L89

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	22.1875	60.3223	0.0319	8.8100	211.0176	211.0494
	Vertical Leg	3.0000	24.0000	72.0000	4.0000	10.6225	338.5109	342.5109
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	9.5650	248.7376	248.7695
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	11.3775	388.3442	392.3442
3	Perforated Plate	5.7500	4.2500	24.4375	0.1198	9.1275	479.0424	479.1622
4	Plate	21.1250	13.0000	274.6250	1190.0417	0.3775	3.0108	1193.0525
5	Plate	21.1250	13.0000	274.6250	1190.0417	0.3775	3.0108	1193.0525
6	Cover Plate	8.6250	21.8125	188.1328	0.1011	8.4350	613.6584	613.7595
Total		68.06		910.51	2388.37		2285.33	4673.70
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	13.3775 in	S _{top} =	370.27 in ³	y-bar =	13.3775 in	S _{top} =	370.27 in ³
I _x =	4673.70 in ⁴	S _{bott.} =	349.37 in ³	I _x =	4673.70 in ⁴	S _{bott.} =	349.37 in ³
C _{top} =	12.6225 in	A =	68.0625 in ²	C _{top} =	12.6225 in	A =	68.0625 in ²
C _{bottom} =	13.3775 in	r _x =	8.2866 in	C _{bottom} =	13.3775 in	r _x =	8.2866 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	3.0000	4.0781	1.4886	9.3125	117.8886	119.3772	
	Vertical Leg	1.5000	1.0000	1.5000	0.0176	11.3125	191.9590	191.9766	
1 (Right)	Horizontal Leg	1.3594	21.6250	29.3965	1.4886	9.3125	117.8886	119.3772	
	Vertical Leg	1.5000	23.6250	35.4375	0.0176	11.3125	191.9590	191.9766	
2 (Left)	Horizontal Leg	1.3594	3.0000	4.0781	1.4886	9.3125	117.8886	119.3772	
	Vertical Leg	1.5000	1.0000	1.5000	0.0176	11.3125	191.9590	191.9766	
2 (Right)	Horizontal Leg	1.3594	21.6250	29.3965	1.4886	9.3125	117.8886	119.3772	
	Vertical Leg	1.5000	23.6250	35.4375	0.0176	11.3125	191.9590	191.9766	
3 (Left)	Perforated Plate	2.8750	3.6875	10.6016	7.9212	8.6250	213.8730	221.7943	
3 (Right)	Perforated Plate	2.8750	20.9375	60.1953	7.9212	8.6250	213.8730	221.7943	
4	Plate	21.1250	0.4063	8.5820	1.1622	11.9063	2994.6544	2995.8166	
5	Plate	21.1250	24.2188	511.6211	1.1622	11.9063	2994.6544	2995.8166	
6	Cover Plate	8.6250	12.3125	106.1953	380.2188	0.0000	0.0000	380.2188	
Total		68.06		838.02	404.41		7656.45	8060.86	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3125 in	S _{right} =	654.69 in ³	x-bar =	12.3125 in	S _{right} =	654.69 in ³
I _y =	8060.86 in ⁴	S _{left} =	654.69 in ³	I _y =	8060.86 in ⁴	S _{left} =	654.69 in ³
C _{right} =	12.3125 in	A =	68.0625 in ²	C _{right} =	12.3125 in	A =	68.0625 in ²
C _{left} =	12.3125 in	r _y =	10.8827 in	C _{left} =	12.3125 in	r _y =	10.8827 in



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_t = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_t = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 5.7500$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.0000$ in

Left Web Plate:

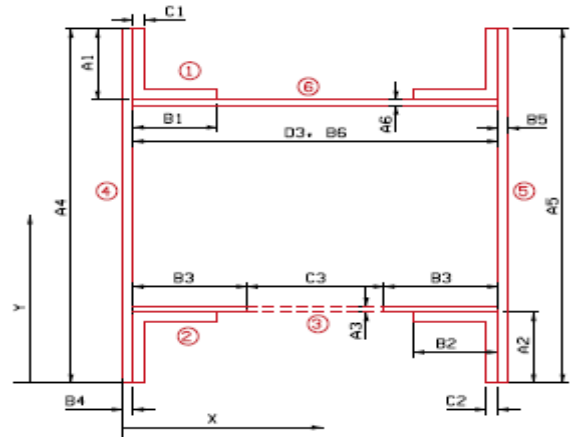
$A_4 = h = 26.0000$ in
 $B_4 = t = 1.0000$ in

Right Web Plate:

$A_5 = h = 26.0000$ in
 $B_5 = t = 1.0000$ in

Cover Plate:

$A_6 = t = 0.3750$ in
 $B_6 = l = 23.0000$ in



Member U90-L90

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	22.1875	60.3223	0.0319	8.8573	213.2897	213.3216
	Vertical Leg	3.0000	24.0000	72.0000	4.0000	10.6698	341.5326	345.5326
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	9.5177	246.2834	246.3153
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	11.3302	385.1217	389.1217
3	Perforated Plate	5.7500	4.2500	24.4375	0.1198	9.0802	474.0899	474.2097
4	Plate	26.0000	13.0000	338.0000	1464.6667	0.3302	2.8352	1467.5019
5	Plate	26.0000	13.0000	338.0000	1464.6667	0.3302	2.8352	1467.5019
6	Cover Plate	8.6250	21.8125	188.1328	0.1011	8.4823	620.5606	620.6617
Total		77.81		1037.26	2937.62		2286.55	5224.17
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	13.3302 in	S _{top} =	412.33 in ³	y-bar =	13.3302 in	S _{top} =	412.33 in ³
I _x =	5224.17 in ⁴	S _{bott.} =	391.90 in ³	I _x =	5224.17 in ⁴	S _{bott.} =	391.90 in ³
C _{top} =	12.6698 in	A =	77.8125 in ²	C _{top} =	12.6698 in	A =	77.8125 in ²
C _{bottom} =	13.3302 in	r _x =	8.1938 in	C _{bottom} =	13.3302 in	r _x =	8.1938 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	3.1875	4.3330	1.4886	9.3125	117.8886	119.3772	
	Vertical Leg	1.5000	1.1875	1.7813	0.0176	11.3125	191.9590	191.9766	
1 (Right)	Horizontal Leg	1.3594	21.8125	29.6514	1.4886	9.3125	117.8886	119.3772	
	Vertical Leg	1.5000	23.8125	35.7188	0.0176	11.3125	191.9590	191.9766	
2 (Left)	Horizontal Leg	1.3594	3.1875	4.3330	1.4886	9.3125	117.8886	119.3772	
	Vertical Leg	1.5000	1.1875	1.7813	0.0176	11.3125	191.9590	191.9766	
2 (Right)	Horizontal Leg	1.3594	21.8125	29.6514	1.4886	9.3125	117.8886	119.3772	
	Vertical Leg	1.5000	23.8125	35.7188	0.0176	11.3125	191.9590	191.9766	
3 (Left)	Perforated Plate	2.8750	3.8750	11.1406	7.9212	8.6250	213.8730	221.7943	
3 (Right)	Perforated Plate	2.8750	21.1250	60.7344	7.9212	8.6250	213.8730	221.7943	
4	Plate	26.0000	0.5000	13.0000	2.1667	12.0000	3744.0000	3746.1667	
5	Plate	26.0000	24.5000	637.0000	2.1667	12.0000	3744.0000	3746.1667	
6	Cover Plate	8.6250	12.5000	107.8125	380.2188	0.0000	0.0000	380.2188	
Total		77.81		972.66	406.42		9155.14	9561.56	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.5000 in	S _{right} =	764.92 in ³	x-bar =	12.5000 in	S _{right} =	764.92 in ³
I _y =	9561.56 in ⁴	S _{left} =	764.92 in ³	I _y =	9561.56 in ⁴	S _{left} =	764.92 in ³
C _{right} =	12.5000 in	A =	77.8125 in ²	C _{right} =	12.5000 in	A =	77.8125 in ²
C _{left} =	12.5000 in	r _y =	11.0851 in	C _{left} =	12.5000 in	r _y =	11.0851 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_t = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_t = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

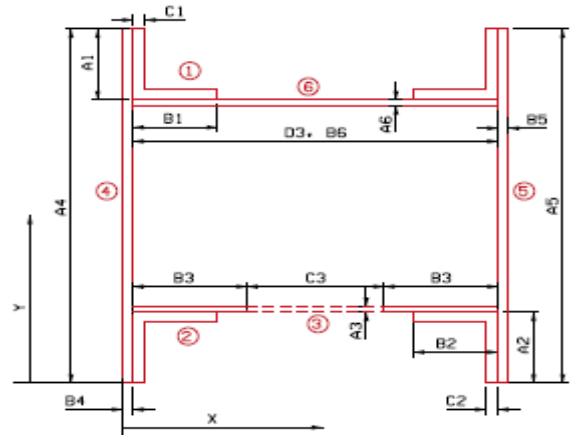
$A_4 = h = 20.0000$ in
 $B_4 = t = 0.3750$ in

Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 0.3750$ in

Cover Plate:

$A_6 = t = 0.3750$ in
 $B_6 = l = 23.5000$ in



Member U91-L91

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	16.1875	44.0098	0.0319	5.7821	90.8952	90.9270
	Vertical Leg	3.0000	18.0000	54.0000	4.0000	7.5946	173.0340	177.0340
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	6.5929	118.1740	118.2059
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	8.4054	211.9521	215.9521
3	Perforated Plate	6.0000	4.2500	25.5000	0.1250	6.1554	227.3335	227.4585
4	Plate	7.5000	10.0000	75.0000	250.0000	0.4054	1.2326	251.2326
5	Plate	7.5000	10.0000	75.0000	250.0000	0.4054	1.2326	251.2326
6	Cover Plate	8.8125	15.8125	139.3477	0.1033	5.4071	257.6489	257.7522
Total		41.25		429.22	508.29		1081.50	1589.79
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	10.4054	in	S _{top} =	165.70	in ³	y-bar =	10.4054	in	S _{top} =	165.70	in ³
I _x =	1589.79	in ⁴	S _{bott.} =	152.79	in ³	I _x =	1589.79	in ⁴	S _{bott.} =	152.79	in ³
C _{top} =	9.5946	in	A =	41.2500	in ²	C _{top} =	9.5946	in	A =	41.2500	in ²
C _{bottom} =	10.4054	in	r _x =	6.2081	in	C _{bottom} =	10.4054	in	r _x =	6.2081	in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	2.5625	3.4834	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.5625	0.8438	0.0176	11.5625	200.5371	200.5547	
1 (Right)	Horizontal Leg	1.3594	21.6875	29.4814	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.6875	35.5313	0.0176	11.5625	200.5371	200.5547	
2 (Left)	Horizontal Leg	1.3594	2.5625	3.4834	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.5625	0.8438	0.0176	11.5625	200.5371	200.5547	
2 (Right)	Horizontal Leg	1.3594	21.6875	29.4814	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.6875	35.5313	0.0176	11.5625	200.5371	200.5547	
3 (Left)	Perforated Plate	3.0000	3.3750	10.1250	9.0000	8.7500	229.6875	238.6875	
3 (Right)	Perforated Plate	3.0000	20.8750	62.6250	9.0000	8.7500	229.6875	238.6875	
4	Plate	7.5000	0.1875	1.4063	0.0879	11.9375	1068.7793	1068.8672	
5	Plate	7.5000	24.0625	180.4688	0.0879	11.9375	1068.7793	1068.8672	
6	Cover Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
Total		41.25		500.16	429.76		3896.29	4326.05	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
x-bar =	12.1250	in	S _{right} =	356.79	in ³	x-bar =	12.1250	in	S _{right} =	356.79	in ³
I _y =	4326.05	in ⁴	S _{left} =	356.79	in ³	I _y =	4326.05	in ⁴	S _{left} =	356.79	in ³
C _{right} =	12.1250	in	A =	41.2500	in ²	C _{right} =	12.1250	in	A =	41.2500	in ²
C _{left} =	12.1250	in	r _y =	10.2408	in	C _{left} =	12.1250	in	r _y =	10.2408	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

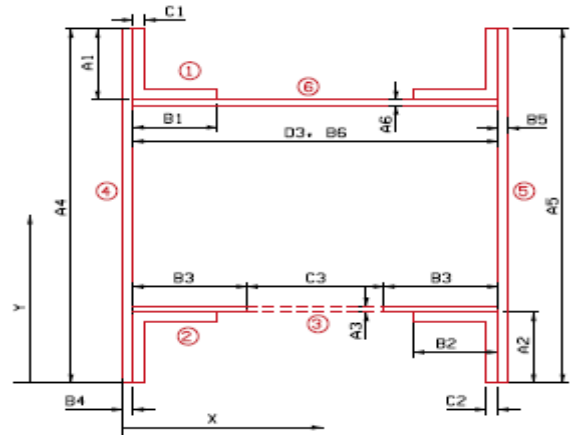
$A_4 = h = 20.0000$ in
 $B_4 = t = 0.4375$ in

Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 0.4375$ in

Cover Plate:

$A_6 = t = 0.3750$ in
 $B_6 = l = 23.5000$ in



Member U92-L92

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	16.1875	44.0098	0.0319	5.8053	91.6250	91.6568
	Vertical Leg	3.0000	18.0000	54.0000	4.0000	7.6178	174.0912	178.0912
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	6.5697	117.3450	117.3769
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	8.3822	210.7854	214.7854
3	Perforated Plate	6.0000	4.2500	25.5000	0.1250	6.1322	225.6256	225.7506
4	Plate	8.7500	10.0000	87.5000	291.6667	0.3822	1.2784	292.9451
5	Plate	8.7500	10.0000	87.5000	291.6667	0.3822	1.2784	292.9451
6	Cover Plate	8.8125	15.8125	139.3477	0.1033	5.4303	259.8613	259.9646
Total		43.75		454.22	591.63		1081.89	1673.52
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	10.3822 in	S _{top} =	174.00 in ³	y-bar =	10.3822 in	S _{top} =	174.00 in ³
I _x =	1673.52 in ⁴	S _{bott.} =	161.19 in ³	I _x =	1673.52 in ⁴	S _{bott.} =	161.19 in ³
C _{top} =	9.6178 in	A =	43.7500 in ²	C _{top} =	9.6178 in	A =	43.7500 in ²
C _{bottom} =	10.3822 in	r _x =	6.1848 in	C _{bottom} =	10.3822 in	r _x =	6.1848 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	2.6250	3.5684	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.6250	0.9375	0.0176	11.5625	200.5371	200.5547	
1 (Right)	Horizontal Leg	1.3594	21.7500	29.5664	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.7500	35.6250	0.0176	11.5625	200.5371	200.5547	
2 (Left)	Horizontal Leg	1.3594	2.6250	3.5684	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.6250	0.9375	0.0176	11.5625	200.5371	200.5547	
2 (Right)	Horizontal Leg	1.3594	21.7500	29.5664	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.7500	35.6250	0.0176	11.5625	200.5371	200.5547	
3 (Left)	Perforated Plate	3.0000	3.4375	10.3125	9.0000	8.7500	229.6875	238.6875	
3 (Right)	Perforated Plate	3.0000	20.9375	62.8125	9.0000	8.7500	229.6875	238.6875	
4	Plate	8.7500	0.2188	1.9141	0.1396	11.9688	1253.4460	1253.5856	
5	Plate	8.7500	24.1563	211.3672	0.1396	11.9688	1253.4460	1253.5856	
6	Cover Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
Total		43.75		533.20	429.86		4265.63	4695.49	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	385.27 in ³	x-bar =	12.1875 in	S _{right} =	385.27 in ³
I _y =	4695.49 in ⁴	S _{left} =	385.27 in ³	I _y =	4695.49 in ⁴	S _{left} =	385.27 in ³
C _{right} =	12.1875 in	A =	43.7500 in ²	C _{right} =	12.1875 in	A =	43.7500 in ²
C _{left} =	12.1875 in	r _y =	10.3598 in	C _{left} =	12.1875 in	r _y =	10.3598 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_t = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_t = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

$A_4 = h = 20.0000$ in
 $B_4 = t = 0.5625$ in

Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 0.5625$ in

Cover Plate:

$A_6 = t = 0.3750$ in
 $B_6 = l = 23.5000$ in



Member U93-L93

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	16.1875	44.0098	0.0319	5.8445	92.8666	92.8985
	Vertical Leg	3.0000	18.0000	54.0000	4.0000	7.6570	175.8876	179.8876
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	6.5305	115.9487	115.9806
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	8.3430	208.8184	212.8184
3	Perforated Plate	6.0000	4.2500	25.5000	0.1250	6.0930	222.7500	222.8750
4	Plate	11.2500	10.0000	112.5000	375.0000	0.3430	1.3238	376.3238
5	Plate	11.2500	10.0000	112.5000	375.0000	0.3430	1.3238	376.3238
6	Cover Plate	8.8125	15.8125	139.3477	0.1033	5.4695	263.6269	263.7302
Total		48.75		504.22	758.29		1082.55	1840.84
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	10.3430 in	S _{top} =	190.62 in ³	y-bar =	10.3430 in	S _{top} =	190.62 in ³
I _x =	1840.84 in ⁴	S _{bott.} =	177.98 in ³	I _x =	1840.84 in ⁴	S _{bott.} =	177.98 in ³
C _{top} =	9.6570 in	A =	48.7500 in ²	C _{top} =	9.6570 in	A =	48.7500 in ²
C _{bottom} =	10.3430 in	r _x =	6.1450 in	C _{bottom} =	10.3430 in	r _x =	6.1450 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	2.7500	3.7383	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.7500	1.1250	0.0176	11.5625	200.5371	200.5547	
1 (Right)	Horizontal Leg	1.3594	21.8750	29.7363	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.8750	35.8125	0.0176	11.5625	200.5371	200.5547	
2 (Left)	Horizontal Leg	1.3594	2.7500	3.7383	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.7500	1.1250	0.0176	11.5625	200.5371	200.5547	
2 (Right)	Horizontal Leg	1.3594	21.8750	29.7363	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.8750	35.8125	0.0176	11.5625	200.5371	200.5547	
3 (Left)	Perforated Plate	3.0000	3.5625	10.6875	9.0000	8.7500	229.6875	238.6875	
3 (Right)	Perforated Plate	3.0000	21.0625	63.1875	9.0000	8.7500	229.6875	238.6875	
4	Plate	11.2500	0.2813	3.1641	0.2966	12.0313	1628.4485	1628.7451	
5	Plate	11.2500	24.3438	273.8672	0.2966	12.0313	1628.4485	1628.7451	
6	Cover Plate	8.8125	12.3125	108.5039	405.5586	0.0000	0.0000	405.5586	
Total		48.75		600.23	430.18		5015.63	5445.81	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3125 in	S _{right} =	442.30 in ³	x-bar =	12.3125 in	S _{right} =	442.30 in ³
I _y =	5445.81 in ⁴	S _{left} =	442.30 in ³	I _y =	5445.81 in ⁴	S _{left} =	442.30 in ³
C _{right} =	12.3125 in	A =	48.7500 in ²	C _{right} =	12.3125 in	A =	48.7500 in ²
C _{left} =	12.3125 in	r _y =	10.5692 in	C _{left} =	12.3125 in	r _y =	10.5692 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 160

- $A_1 = t_w = 0.6650$ in
- $A_2 = t_f = 1.1240$ in
- $B_1 = d = 24.7140$ in
- $B_2 = b_f = 14.0950$ in

Cover Plate

- $A_3 = t = 0.6250$ in
- $B_3 = b = 14.0000$ in



Member U94-L94

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	7.0475	105.2889	0.5506	0.0000	0.0000	0.5506
2	Flange Plates		31.6856	7.0475	223.3040	524.5783	0.0000	0.0000	524.5783
3	Cover Plate		17.5000	7.0475	123.3313	285.8333	0.0000	0.0000	285.8333
Total			64.13		451.92	810.96		0.00	810.96
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0475	in	S _{top} =	115.07	in ³	y-bar =	7.0475	in	S _{top} =	115.07	in ³
I _x =	810.96	in ⁴	S _{bott.} =	115.07	in ³	I _x =	810.96	in ⁴	S _{bott.} =	115.07	in ³
c _{top} =	7.0475	in	A =	64.1255	in ²	c _{top} =	7.0475	in	A =	64.1255	in ²
c _{bottom} =	7.0475	in	r _x =	3.5562	in	c _{bottom} =	7.0475	in	r _x =	3.5562	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	12.9820	193.9497	628.3732	0.0000	0.0000	628.3732
2	Left Flange		15.8428	1.1870	18.8054	1.6679	11.7950	2204.0796	2205.7476
	Right Flange		15.8428	24.7770	392.5366	1.6679	11.7950	2204.0796	2205.7476
3	Left Plate		8.7500	0.3125	2.7344	0.2848	12.6695	1404.5170	1404.8018
	Right Plate		8.7500	25.6515	224.4506	0.2848	12.6695	1404.5170	1404.8018
Total			64.13		832.48	632.28		7217.19	7849.47
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.9820	in	S _{right} = 604.64 in ³	x-bar =	12.9820	in	S _{right} = 604.64 in ³
I _y =	7849.47	in ⁴	S _{left} = 604.64 in ³	I _y =	7849.47	in ⁴	S _{left} = 604.64 in ³
C _{right} =	12.9820	in	A = 64.1255 in ²	C _{right} =	12.9820	in	A = 64.1255 in ²
C _{left} =	12.9820	in	r _y = 11.0638 in	C _{left} =	12.9820	in	r _y = 11.0638 in



Made By KMW
Checked By DWC

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

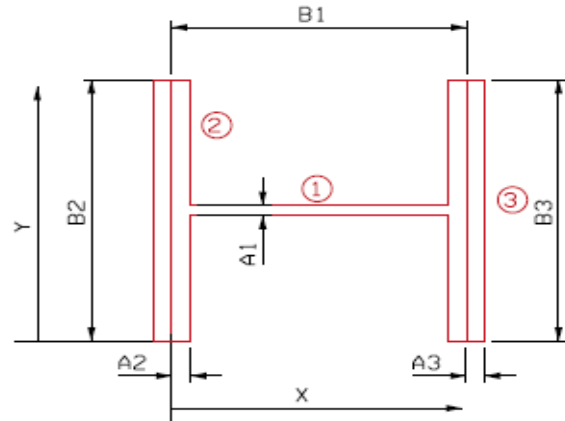
Element Dimensions (without Section Losses):

Rolled Beam CB24x 160

- $A_1 = t_w = 0.6650$ in
- $A_2 = t_f = 1.1240$ in
- $B_1 = d = 24.7140$ in
- $B_2 = b_f = 14.0950$ in

Cover Plate

- $A_3 = t = 0.5625$ in
- $B_3 = b = 14.0000$ in



Member U95-L95

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	7.0475	105.2889	0.5506	0.0000	0.0000	0.5506
2	Flange Plates		31.6856	7.0475	223.3040	524.5783	0.0000	0.0000	524.5783
3	Cover Plate		15.7500	7.0475	110.9981	257.2500	0.0000	0.0000	257.2500
Total			62.38		439.59	782.38		0.00	782.38
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	4.0000	0.2500	-1.0000	13.9700	-13.9700	-0.0052	7.0353	-49.4953	-49.5005
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.00		-13.97	-0.01		-49.50	-49.50

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0475	in	S _{top} =	111.02	in ³	y-bar =	6.9347	in	S _{top} =	103.99	in ³
I _x =	782.38	in ⁴	S _{bott.} =	111.02	in ³	I _x =	732.88	in ⁴	S _{bott.} =	105.68	in ³
c _{top} =	7.0475	in	A =	62.3755	in ²	c _{top} =	7.0475	in	A =	61.3755	in ²
c _{bottom} =	7.0475	in	r _x =	3.5416	in	c _{bottom} =	6.9347	in	r _x =	3.4556	in



Made By KMW
Checked By DWC

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	12.9195	193.0159	628.3732	0.0000	0.0000	628.3732
2	Left Flange		15.8428	1.1245	17.8152	1.6679	11.7950	2204.0796	2205.7476
	Right Flange		15.8428	24.7145	391.5464	1.6679	11.7950	2204.0796	2205.7476
3	Left Plate		7.8750	0.2813	2.2148	0.2076	12.6383	1257.8372	1258.0449
	Right Plate		7.8750	25.5578	201.2673	0.2076	12.6383	1257.8372	1258.0449
Total			62.38		805.86	632.12		6923.83	7555.96
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.2500	4.0000	-1.0000	2.0000	-2.0000	-1.3333	11.0974	-123.1526	-124.4859
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.00		-2.00	-1.33		-123.15	-124.49

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.9195	in	S _{right} = 584.85 in ³	x-bar =	13.0974	in	S _{right} = 583.25 in ³
I _y =	7555.96	in ⁴	S _{left} = 584.85 in ³	I _y =	7431.47	in ⁴	S _{left} = 567.40 in ³
C _{right} =	12.9195	in	A = 62.3755 in ²	C _{right} =	12.7416	in	A = 61.3755 in ²
C _{left} =	12.9195	in	r _y = 11.0062 in	C _{left} =	13.0974	in	r _y = 11.0037 in



Made By NRF
Checked By KMW

Date 1/26/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_l = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_l = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 6.0000$ in

$C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

$A_4 = h = 20.0000$ in
 $B_4 = t = 0.6875$ in

Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 0.6875$ in

Cover Plate:

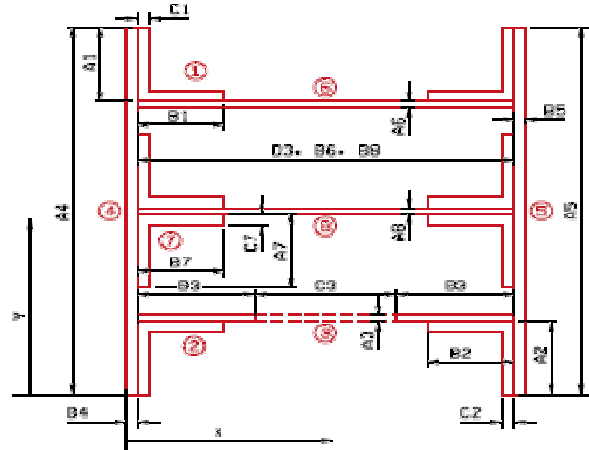
$A_6 = t = 0.3750$ in
 $B_6 = l = 23.5000$ in

Middle Angles:

$A_7 = l_h = 4.0000$ in
 $B_7 = l_w = 4.0000$ in
 $C_7 = t_l = 0.6250$ in

Middle Plate:

$A_8 = t = 0.7500$ in
 $B_8 = l = 23.5000$ in



Member U96-L96

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x, gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	16.1875	44.0098	0.0319	6.0013	97.9176	97.9494
	Vertical Leg	3.0000	18.0000	54.0000	4.0000	7.8138	183.1666	187.1666
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	6.3737	110.4465	110.4783
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	8.1862	201.0414	205.0414
3	Perforated Plate	6.0000	4.2500	25.5000	0.1250	5.9362	211.4305	211.5555
4	Plate	13.7500	10.0000	137.5000	458.3333	0.1862	0.4767	458.8100
5	Plate	13.7500	10.0000	137.5000	458.3333	0.1862	0.4767	458.8100
6	Cover Plate	8.8125	15.8125	139.3477	0.1033	5.6263	278.9624	279.0657
7 (Bottom)	Horizontal Leg	4.2188	9.3125	39.2871	0.1373	0.8737	3.2204	3.3577
	Vertical Leg	5.0000	7.6250	38.1250	6.6667	2.5612	32.7986	39.4653
7 (Top)	Horizontal Leg	4.2188	10.6875	45.0879	0.1373	0.5013	1.0602	1.1975
	Vertical Leg	5.0000	12.3750	61.8750	6.6667	2.1888	23.9543	30.6210
8	Middle Plate	17.6250	10.0000	176.2500	0.8262	0.1862	0.6110	1.4372
Total		89.81		914.85	939.39		1145.56	2084.96



Made By NRF
Checked By KMW

Date 1/26/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1 (Left)	Horizontal Leg	1.3594	2.8750	3.9082	1.4886	9.5625	124.3032	125.7917
	Vertical Leg	1.5000	0.8750	1.3125	0.0176	11.5625	200.5371	200.5547
1 (Right)	Horizontal Leg	1.3594	22.0000	29.9063	1.4886	9.5625	124.3032	125.7917
	Vertical Leg	1.5000	24.0000	36.0000	0.0176	11.5625	200.5371	200.5547
2 (Left)	Horizontal Leg	1.3594	2.8750	3.9082	1.4886	9.5625	124.3032	125.7917
	Vertical Leg	1.5000	0.8750	1.3125	0.0176	11.5625	200.5371	200.5547
2 (Right)	Horizontal Leg	1.3594	22.0000	29.9063	1.4886	9.5625	124.3032	125.7917
	Vertical Leg	1.5000	24.0000	36.0000	0.0176	11.5625	200.5371	200.5547
3 (Left)	Perforated Plate	3.0000	3.6875	11.0625	9.0000	8.7500	229.6875	238.6875
3 (Right)	Perforated Plate	3.0000	21.1875	63.5625	9.0000	8.7500	229.6875	238.6875
4	Plate	13.7500	0.3438	4.7266	0.5416	12.0938	2011.0583	2011.5999
5	Plate	13.7500	24.5313	337.3047	0.5416	12.0938	2011.0583	2011.5999
6	Cover Plate	8.8125	12.4375	109.6055	405.5586	0.0000	0.0000	405.5586
7 (Left)	Horizontal Leg	4.2188	3.0000	12.6563	4.0045	9.4375	375.7489	379.7534
	Vertical Leg	5.0000	1.0000	5.0000	0.1628	11.4375	654.0820	654.2448
7 (Right)	Horizontal Leg	4.2188	21.8750	92.2852	4.0045	9.4375	375.7489	379.7534
	Vertical Leg	5.0000	23.8750	119.3750	0.1628	11.4375	654.0820	654.2448
8	Middle Plate	17.6250	12.4375	219.2109	811.1172	0.0000	0.0000	811.1172
Total		89.81		1117.04	1250.12		7840.51	9090.63

X-Axis As-Built Section Properties				Y-Axis As-Built Section Properties			
y-bar =	10.1862	in	S _{top} = 212.45 in ³	x-bar =	12.4375	in	S _{right} = 730.91 in ³
I _x =	2084.96	in ⁴	S _{bottom} = 204.68 in ³	I _y =	9090.63	in ⁴	S _{left} = 730.91 in ³
c _{top} =	9.8138	in	A = 89.8125 in ²	c _{right} =	12.4375	in	A = 89.8125 in ²
c _{bottom} =	10.1862	in	r _x = 4.8181 in	c _{left} =	12.4375	in	r _y = 10.0607 in



Made By KMW
Checked By NRF

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_1 = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 6.0000$ in

$C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

$A_4 = h = 20.0000$ in
 $B_4 = t = 0.6875$ in

Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 0.6875$ in

Cover Plate:

$A_6 = t = 0.3750$ in
 $B_6 = l = 23.5000$ in

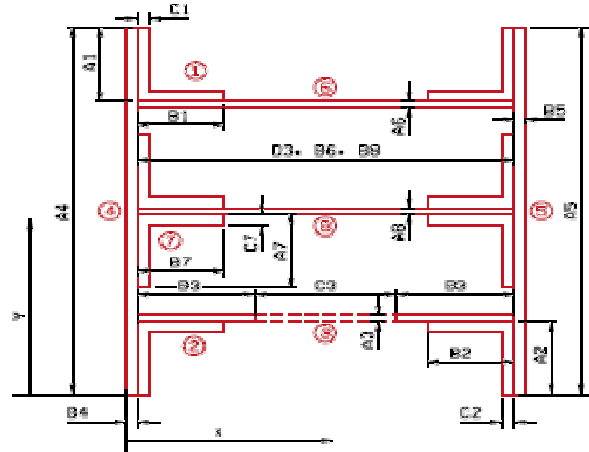
Middle Angles:

$A_7 = l_h = 4.0000$ in
 $B_7 = l_w = 4.0000$ in

Middle Plate:

$A_8 = t = 0.7500$ in
 $B_8 = l = 23.5000$ in

$C_7 = t_1 = 0.6250$ in



Member U96-L96

X-Axis Section Losses			A (in ²)	y (in)	Ay (in ³)	I _o (in ⁴)	d (in)	Ad ² (in ⁴)	I _{x,loss} (in ⁴)
Loss #	b (in)	h (in)							
1	0.1250	20.0000	-2.5000	10.0000	-25.0000	-83.3333	0.1397	-0.0488	-83.3821
2	0.0625	17.0000	-1.0625	8.5000	-9.0313	-25.5885	1.6397	-2.8565	-28.4451
3	0.2500	3.0000	-0.7500	18.5000	-13.8750	-0.5625	8.3603	-52.4214	-52.9839
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
9	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
10	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-4.31		-47.91	-109.48		-55.33	-164.81

North Truss

Member U96-L96 As-Inspected



Made By KMW
 Checked By NRF

Date 2/6/2012
 Date 2/24/2012

Job No. P402110046
 Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Losses			A (in ²)	x (in)	Ax (in ³)	I _o (in ⁴)	d (in)	Ad ² (in ⁴)	I _{y,loss} (in ⁴)
Loss #	b (in)	h (in)							
1	20.0000	0.1250	-2.5000	0.0625	-0.1563	-0.0033	12.4747	-389.0433	-389.0465
2	17.0000	0.0625	-1.0625	24.8438	-26.3965	-0.0003	12.3066	-160.9177	-160.9181
3	3.0000	0.2500	-0.7500	24.7500	-18.5625	-0.0039	12.2128	-111.8650	-111.8689
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
9	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
10	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-4.31		-45.12	-0.01		-661.83	-661.83

X-Axis As-Inspected Section Properties				Y-Axis As-Inspected Section Properties							
y-bar =	10.1397	in	S _{top} =	194.73	in ³	x-bar =	12.5372	in	S _{right} =	683.17	in ³
I _x =	1920.14	in ⁴	S _{bott.} =	189.37	in ³	I _y =	8428.80	in ⁴	S _{left} =	672.30	in ³
C _{top} =	9.8603	in	A =	85.5000	in ²	C _{right} =	12.3378	in	A =	85.5000	in ²
C _{bottom} =	10.1397	in	r _x =	4.7390	in	C _{left} =	12.5372	in	r _y =	9.9289	in



Made By KMW
Checked By DWC

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 150

- $A_1 = t_w = 0.6330$ in
- $A_2 = t_f = 1.0480$ in
- $B_1 = d = 24.5620$ in
- $B_2 = b_f = 14.0630$ in



Member U97-L97

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x, gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		14.2210	7.0315	99.9948	0.4748	0.0000	0.0000	0.4748
2	Flange Plates		29.4760	7.0315	207.2608	485.7848	0.0000	0.0000	485.7848
Total			43.70		307.26	486.26		0.00	486.26
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1875	5.0000	-0.9375	11.5630	-10.8403	-1.9531	4.6309	-20.1045	-22.0576
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.94		-10.84	-1.95		-20.10	-22.06

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	7.0315	in	$S_{top} = 69.15$	in^3	y-bar =	6.9321	in	$S_{top} = 65.10$	in^3		
$I_x =$	486.26	in^4	$S_{bott.} = 69.15$	in^3	$I_x =$	464.20	in^4	$S_{bott.} = 66.96$	in^3		
$c_{top} =$	7.0315	in	A =	43.6970	in^2	$c_{top} =$	7.1309	in	A =	42.7595	in^2
$c_{bottom} =$	7.0315	in	$r_x =$	3.3359	in	$c_{bottom} =$	6.9321	in	$r_x =$	3.2949	in



Made By KMW
Checked By DWC

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.2210	12.2810	174.6478	598.1357	0.0000	0.0000	598.1357
2	Left Flange		14.7380	0.5240	7.7227	1.3489	11.7570	2037.1936	2038.5425
	Right Flange		14.7380	24.0380	354.2726	1.3489	11.7570	2037.1936	2038.5425
Total			43.70		536.64	600.83		4074.39	4675.22
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	5.0000	0.1875	-0.9375	0.0938	-0.0879	-0.0027	12.4545	-145.4189	-145.4216
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.94		-0.09	0.00		-145.42	-145.42

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2810	in	S _{right} = 380.69 in ³	x-bar =	12.5482	in	S _{right} = 377.05 in ³
I _y =	4675.22	in ⁴	S _{left} = 380.69 in ³	I _y =	4529.80	in ⁴	S _{left} = 360.99 in ³
C _{right} =	12.2810	in	A = 43.6970 in ²	C _{right} =	12.0138	in	A = 42.7595 in ²
C _{left} =	12.2810	in	r _y = 10.3437 in	C _{left} =	12.5482	in	r _y = 10.2926 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

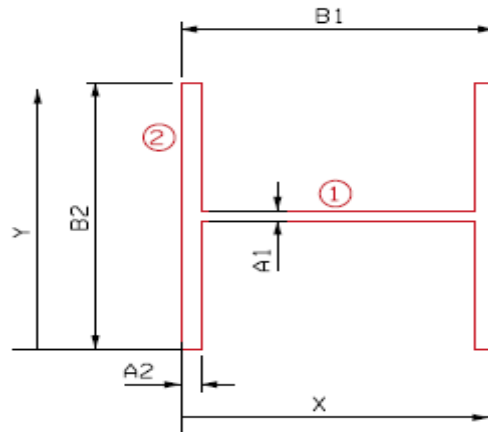
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 120

- $A_1 = t_w = 0.5590$ in
- $A_2 = t_f = 0.9220$ in
- $B_1 = d = 24.3100$ in
- $B_2 = b_f = 12.0890$ in



Member U98-L98

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		12.5585	6.0445	75.9098	0.3270	0.0000	0.0000	0.3270
2	Flange Plates		22.2921	6.0445	134.7447	271.4881	0.0000	0.0000	271.4881
Total			34.85		210.65	271.82		0.00	271.82
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0445	in	S _{top} =	44.97	in ³	y-bar =	6.0445	in	S _{top} =	44.97	in ³
I _x =	271.82	in ⁴	S _{bott.} =	44.97	in ³	I _x =	271.82	in ⁴	S _{bott.} =	44.97	in ³
c _{top} =	6.0445	in	A =	34.8506	in ²	c _{top} =	6.0445	in	A =	34.8506	in ²
c _{bottom} =	6.0445	in	r _x =	2.7927	in	c _{bottom} =	6.0445	in	r _x =	2.7927	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.5585	12.1550	152.6485	528.2115	0.0000	0.0000	528.2115
2	Left Flange		11.1461	0.4610	5.1383	0.7896	11.6940	1524.2194	1525.0090
	Right Flange		11.1461	23.8490	265.8223	0.7896	11.6940	1524.2194	1525.0090
Total			34.85		423.61	529.79		3048.44	3578.23
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.1550	in	S _{right} =	294.38	in ³	x-bar =	12.1550	in	S _{right} =	294.38	in ³
I _y =	3578.23	in ⁴	S _{left} =	294.38	in ³	I _y =	3578.23	in ⁴	S _{left} =	294.38	in ³
C _{right} =	12.1550	in	A =	34.8506	in ²	C _{right} =	12.1550	in	A =	34.8506	in ²
C _{left} =	12.1550	in	r _y =	10.1328	in	C _{left} =	12.1550	in	r _y =	10.1328	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

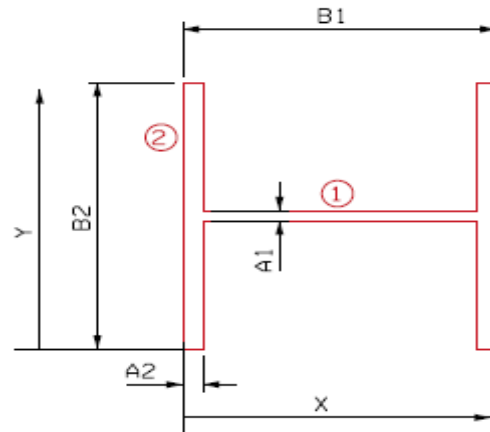
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 94

- $A_1 = t_w = 0.5160$ in
- $A_2 = t_f = 0.8720$ in
- $B_1 = d = 24.2900$ in
- $B_2 = b_f = 9.0610$ in



Member U99-L99

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		11.6337	4.5305	52.7066	0.2581	0.0000	0.0000	0.2581
2	Flange Plates		15.8024	4.5305	71.5927	108.1169	0.0000	0.0000	108.1169
Total			27.44		124.30	108.38		0.00	108.38
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	4.5305	in	$S_{top} = 23.92$ in ³	y-bar =	4.5305	in	$S_{top} = 23.92$ in ³
$I_x =$	108.38	in ⁴	$S_{bott.} = 23.92$ in ³	$I_x =$	108.38	in ⁴	$S_{bott.} = 23.92$ in ³
$c_{top} =$	4.5305	in	$A = 27.4361$ in ²	$c_{top} =$	4.5305	in	$A = 27.4361$ in ²
$c_{bottom} =$	4.5305	in	$r_x = 1.9875$ in	$c_{bottom} =$	4.5305	in	$r_x = 1.9875$ in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		11.6337	12.1450	141.2917	492.8071	0.0000	0.0000	492.8071
2	Left Flange		7.9012	0.4360	3.4449	0.5007	11.7090	1083.2588	1083.7595
	Right Flange		7.9012	23.8540	188.4750	0.5007	11.7090	1083.2588	1083.7595
Total			27.44		333.21	493.81		2166.52	2660.33
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.1450	in	S _{right} =	219.05	in ³	x-bar =	12.1450	in	S _{right} =	219.05	in ³
I _y =	2660.33	in ⁴	S _{left} =	219.05	in ³	I _y =	2660.33	in ⁴	S _{left} =	219.05	in ³
C _{right} =	12.1450	in	A =	27.4361	in ²	C _{right} =	12.1450	in	A =	27.4361	in ²
C _{left} =	12.1450	in	r _y =	9.8470	in	C _{left} =	12.1450	in	r _y =	9.8470	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 80

- $A_1 = t_w = 0.4530$ in
- $A_2 = t_f = 0.7400$ in
- $B_1 = d = 24.1200$ in
- $B_2 = b_f = 9.0410$ in



Member U100-L100

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		10.2559	4.5205	46.3619	0.1754	0.0000	0.0000	0.1754
2	Flange Plates		13.3807	4.5205	60.4874	91.1444	0.0000	0.0000	91.1444
Total			23.64		106.85	91.32		0.00	91.32
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	4.5205	in	$S_{top} =$	20.20	in ³	y-bar =	4.5205	in	$S_{top} =$	20.20	in ³
$I_x =$	91.32	in ⁴	$S_{bott.} =$	20.20	in ³	$I_x =$	91.32	in ⁴	$S_{bott.} =$	20.20	in ³
$c_{top} =$	4.5205	in	A =	23.6366	in ²	$c_{top} =$	4.5205	in	A =	23.6366	in ²
$c_{bottom} =$	4.5205	in	$r_x =$	1.9656	in	$c_{bottom} =$	4.5205	in	$r_x =$	1.9656	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.2559	12.0600	123.6864	438.0727	0.0000	0.0000	438.0727
2	Left Flange		6.6903	0.3700	2.4754	0.3053	11.6900	914.2758	914.5811
	Right Flange		6.6903	23.7500	158.8956	0.3053	11.6900	914.2758	914.5811
Total			23.64		285.06	438.68		1828.55	2267.23
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.0600	in	S _{right} =	188.00	in ³	x-bar =	12.0600	in	S _{right} =	188.00	in ³
I _y =	2267.23	in ⁴	S _{left} =	188.00	in ³	I _y =	2267.23	in ⁴	S _{left} =	188.00	in ³
c _{right} =	12.0600	in	A =	23.6366	in ²	c _{right} =	12.0600	in	A =	23.6366	in ²
c _{left} =	12.0600	in	r _y =	9.7939	in	c _{left} =	12.0600	in	r _y =	9.7939	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 94

- $A_1 = t_w = 0.5160$ in
- $A_2 = t_f = 0.8720$ in
- $B_1 = d = 24.2900$ in
- $B_2 = b_f = 9.0610$ in



Member U101-L101

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		11.6337	4.5305	52.7066	0.2581	0.0000	0.0000	0.2581
2	Flange Plates		15.8024	4.5305	71.5927	108.1169	0.0000	0.0000	108.1169
Total			27.44		124.30	108.38		0.00	108.38
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	4.5305	in	$S_{top} = 23.92$ in ³	y-bar =	4.5305	in	$S_{top} = 23.92$ in ³
$I_x =$	108.38	in ⁴	$S_{bott.} = 23.92$ in ³	$I_x =$	108.38	in ⁴	$S_{bott.} = 23.92$ in ³
$c_{top} =$	4.5305	in	$A = 27.4361$ in ²	$c_{top} =$	4.5305	in	$A = 27.4361$ in ²
$c_{bottom} =$	4.5305	in	$r_x = 1.9875$ in	$c_{bottom} =$	4.5305	in	$r_x = 1.9875$ in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		11.6337	12.1450	141.2917	492.8071	0.0000	0.0000	492.8071
2	Left Flange		7.9012	0.4360	3.4449	0.5007	11.7090	1083.2588	1083.7595
	Right Flange		7.9012	23.8540	188.4750	0.5007	11.7090	1083.2588	1083.7595
Total			27.44		333.21	493.81		2166.52	2660.33
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.1450	in	S _{right} =	219.05	in ³	x-bar =	12.1450	in	S _{right} =	219.05	in ³
I _y =	2660.33	in ⁴	S _{left} =	219.05	in ³	I _y =	2660.33	in ⁴	S _{left} =	219.05	in ³
C _{right} =	12.1450	in	A =	27.4361	in ²	C _{right} =	12.1450	in	A =	27.4361	in ²
C _{left} =	12.1450	in	r _y =	9.8470	in	C _{left} =	12.1450	in	r _y =	9.8470	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

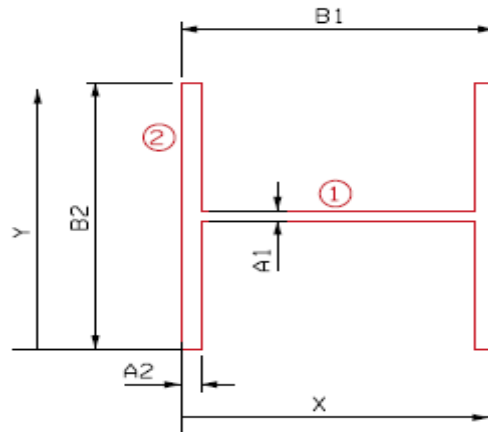
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 120

- $A_1 = t_w = 0.5590$ in
- $A_2 = t_f = 0.9220$ in
- $B_1 = d = 24.3100$ in
- $B_2 = b_f = 12.0890$ in



Member U102-L102

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		12.5585	6.0445	75.9098	0.3270	0.0000	0.0000	0.3270
2	Flange Plates		22.2921	6.0445	134.7447	271.4881	0.0000	0.0000	271.4881
Total			34.85		210.65	271.82		0.00	271.82
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0445	in	$S_{top} =$	44.97	in ³	y-bar =	6.0445	in	$S_{top} =$	44.97	in ³
$I_x =$	271.82	in ⁴	$S_{bott.} =$	44.97	in ³	$I_x =$	271.82	in ⁴	$S_{bott.} =$	44.97	in ³
$c_{top} =$	6.0445	in	A =	34.8506	in ²	$c_{top} =$	6.0445	in	A =	34.8506	in ²
$c_{bottom} =$	6.0445	in	$r_x =$	2.7927	in	$c_{bottom} =$	6.0445	in	$r_x =$	2.7927	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.5585	12.1550	152.6485	528.2115	0.0000	0.0000	528.2115
2	Left Flange		11.1461	0.4610	5.1383	0.7896	11.6940	1524.2194	1525.0090
	Right Flange		11.1461	23.8490	265.8223	0.7896	11.6940	1524.2194	1525.0090
Total			34.85		423.61	529.79		3048.44	3578.23
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.1550	in	S _{right} =	294.38	in ³	x-bar =	12.1550	in	S _{right} =	294.38	in ³
I _y =	3578.23	in ⁴	S _{left} =	294.38	in ³	I _y =	3578.23	in ⁴	S _{left} =	294.38	in ³
C _{right} =	12.1550	in	A =	34.8506	in ²	C _{right} =	12.1550	in	A =	34.8506	in ²
C _{left} =	12.1550	in	r _y =	10.1328	in	C _{left} =	12.1550	in	r _y =	10.1328	in



Made By KMW
Checked By DWC

Date 2/6/2012
Date 2/24/2012

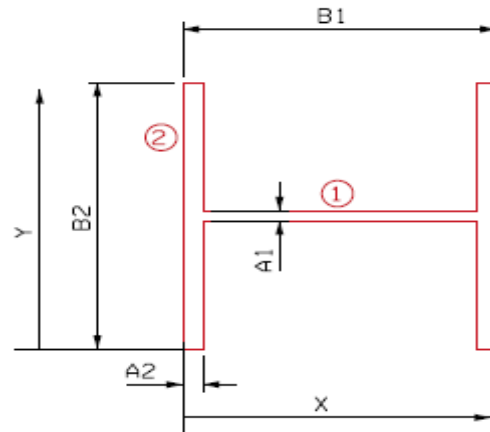
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 150

- $A_1 = t_w = 0.6330$ in
- $A_2 = t_f = 1.0480$ in
- $B_1 = d = 24.5620$ in
- $B_2 = b_f = 14.0630$ in



Member U103-L103

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		14.2210	7.0315	99.9948	0.4748	0.0000	0.0000	0.4748
2	Flange Plates		29.4760	7.0315	207.2608	485.7848	0.0000	0.0000	485.7848
Total			43.70		307.26	486.26		0.00	486.26
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0625	14.0630	-0.8789	7.0315	-6.1802	-14.4855	0.0000	0.0000	-14.4855
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.88		-6.18	-14.49		0.00	-14.49

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	7.0315	in	$S_{top} = 69.15$	in^3	y-bar =	7.0315	in	$S_{top} = 67.09$	in^3		
$I_x =$	486.26	in^4	$S_{bott.} = 69.15$	in^3	$I_x =$	471.77	in^4	$S_{bott.} = 67.09$	in^3		
$c_{top} =$	7.0315	in	A =	43.6970	in^2	$c_{top} =$	7.0315	in	A =	42.8181	in^2
$c_{bottom} =$	7.0315	in	$r_x =$	3.3359	in	$c_{bottom} =$	7.0315	in	$r_x =$	3.3194	in



Made By KMW
Checked By DWC

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.2210	12.2810	174.6478	598.1357	0.0000	0.0000	598.1357
2	Left Flange		14.7380	0.5240	7.7227	1.3489	11.7570	2037.1936	2038.5425
	Right Flange		14.7380	24.0380	354.2726	1.3489	11.7570	2037.1936	2038.5425
Total			43.70		536.64	600.83		4074.39	4675.22
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	14.0630	0.0625	-0.8789	0.0313	-0.0275	-0.0003	12.5012	-137.3604	-137.3607
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.88		-0.03	0.00		-137.36	-137.36

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2810	in	S _{right} = 380.69 in ³	x-bar =	12.5325	in	S _{right} = 377.23 in ³
I _y =	4675.22	in ⁴	S _{left} = 380.69 in ³	I _y =	4537.86	in ⁴	S _{left} = 362.09 in ³
C _{right} =	12.2810	in	A = 43.6970 in ²	C _{right} =	12.0295	in	A = 42.8181 in ²
C _{left} =	12.2810	in	r _y = 10.3437 in	C _{left} =	12.5325	in	r _y = 10.2947 in



Made By KMW
Checked By DWC

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 5.2500$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 22.0000$ in

Left Web Plate:

$A_4 = h = 20.0000$ in
 $B_4 = t = 0.5000$ in

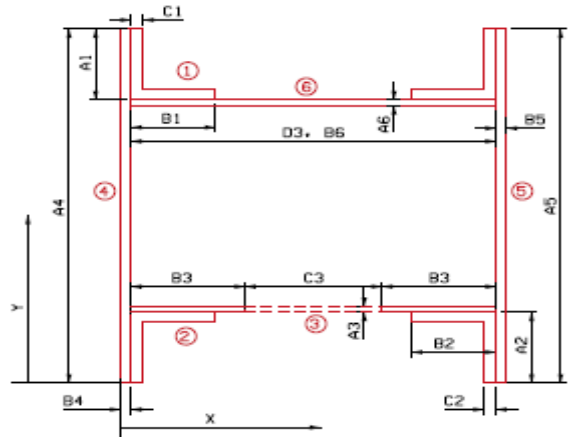
Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 0.5000$ in

Cover Plate:

$A_6 = t = 0.3750$ in
 $B_6 = l = 22.0000$ in

****Silicon Steel**



Member U104-L104

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	16.1875	44.0098	0.0319	5.7922	91.2116	91.2435
	Vertical Leg	3.0000	18.0000	54.0000	4.0000	7.6047	173.4925	177.4925
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	6.5828	117.8137	117.8456
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	8.3953	211.4452	215.4452
3	Perforated Plate	5.2500	4.2500	22.3125	0.1094	6.1453	198.2674	198.3767
4	Plate	10.0000	10.0000	100.0000	333.3333	0.3953	1.5629	334.8963
5	Plate	10.0000	10.0000	100.0000	333.3333	0.3953	1.5629	334.8963
6	Cover Plate	8.2500	15.8125	130.4531	0.0967	5.4172	242.1013	242.1980
Total		44.94		467.14	674.94		1037.46	1712.39
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0625	20.0000	-1.2500	10.0000	-12.5000	0.4067	-0.2067	-41.8734
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.25	-12.50	-41.67		-0.21	-41.87



Made By KMW
Checked By DWC

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	10.3953 in	S _{top} =	178.29 in ³	y-bar =	10.4067 in	S _{top} =	174.13 in ³
I _x =	1712.39 in ⁴	S _{bott.} =	164.73 in ³	I _x =	1670.52 in ⁴	S _{bott.} =	160.52 in ³
C _{top} =	9.6047 in	A =	44.9375 in ²	C _{top} =	9.5933 in	A =	43.6875 in ²
C _{bottom} =	10.3953 in	r _x =	6.1730 in	C _{bottom} =	10.4067 in	r _x =	6.1837 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	2.6875	3.6533	1.4886	8.8125	105.5693	107.0579	
	Vertical Leg	1.5000	0.6875	1.0313	0.0176	10.8125	175.3652	175.3828	
1 (Right)	Horizontal Leg	1.3594	20.3125	27.6123	1.4886	8.8125	105.5693	107.0579	
	Vertical Leg	1.5000	22.3125	33.4688	0.0176	10.8125	175.3652	175.3828	
2 (Left)	Horizontal Leg	1.3594	2.6875	3.6533	1.4886	8.8125	105.5693	107.0579	
	Vertical Leg	1.5000	0.6875	1.0313	0.0176	10.8125	175.3652	175.3828	
2 (Right)	Horizontal Leg	1.3594	20.3125	27.6123	1.4886	8.8125	105.5693	107.0579	
	Vertical Leg	1.5000	22.3125	33.4688	0.0176	10.8125	175.3652	175.3828	
3 (Left)	Perforated Plate	2.6250	3.1250	8.2031	6.0293	8.3750	184.1191	190.1484	
3 (Right)	Perforated Plate	2.6250	19.8750	52.1719	6.0293	8.3750	184.1191	190.1484	
4	Plate	10.0000	0.2500	2.5000	0.2083	11.2500	1265.6250	1265.8333	
5	Plate	10.0000	22.7500	227.5000	0.2083	11.2500	1265.6250	1265.8333	
6	Cover Plate	8.2500	11.5000	94.8750	332.7500	0.0000	0.0000	332.7500	
Total		44.94		516.78	351.25		4023.23	4374.48	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	20.0000	0.0625	-1.2500	0.0313	-0.0391	-0.0004	11.7969	-173.9585	-173.9589
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.25		-0.04	0.00		-173.96	-173.96

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	11.5000 in	S _{right} =	380.39 in ³	x-bar =	11.8281 in	S _{right} =	375.99 in ³
I _y =	4374.48 in ⁴	S _{left} =	380.39 in ³	I _y =	4200.52 in ⁴	S _{left} =	355.13 in ³
C _{right} =	11.5000 in	A =	44.9375 in ²	C _{right} =	11.1719 in	A =	43.6875 in ²
C _{left} =	11.5000 in	r _y =	9.8664 in	C _{left} =	11.8281 in	r _y =	9.8056 in



Made By SFH
Checked By NRF

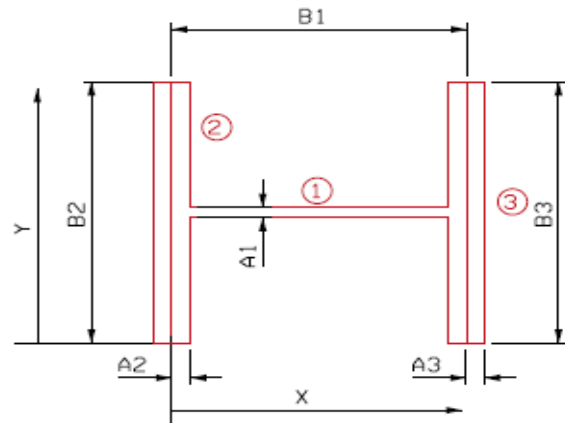
Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130
 $A_1 = t_w = 0.5700$ in
 $A_2 = t_f = 0.8920$ in ****Silicon Steel**
 $B_1 = d = 24.2500$ in
 $B_2 = b_f = 14.0000$ in



Member U105-L105

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate	12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates	24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate	10.5000	7.0000	73.5000	171.5000	0.0000	0.0000	171.5000
Total		48.28		337.97	579.79		0.00	579.79
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	7.0000	in	S _{top} = 82.83 in ³	y-bar =	7.0000	in	S _{top} = 82.83 in ³
I _x =	579.79	in ⁴	S _{bott.} = 82.83 in ³	I _x =	579.79	in ⁴	S _{bott.} = 82.83 in ³
c _{top} =	7.0000	in	A = 48.2816 in ²	c _{top} =	7.0000	in	A = 48.2816 in ²
c _{bottom} =	7.0000	in	r _x = 3.4653 in	c _{bottom} =	7.0000	in	r _x = 3.4653 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	12.8056	12.5000	160.0703	538.6056	0.0000	0.0000	538.6056	
2	Left Flange	12.4880	0.8210	10.2526	0.8280	11.6790	1703.3512	1704.1792	
	Right Flange	12.4880	24.1790	301.9474	0.8280	11.6790	1703.3512	1704.1792	
3	Left Plate	5.2500	0.1875	0.9844	0.0615	12.3125	795.8877	795.9492	
	Right Plate	5.2500	24.8125	130.2656	0.0615	12.3125	795.8877	795.9492	
Total		48.28		603.52	540.38		4998.48	5538.86	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.5000	in	S _{right} = 443.11 in ³	x-bar =	12.5000	in	S _{right} = 443.11 in ³
I _y =	5538.86	in ⁴	S _{left} = 443.11 in ³	I _y =	5538.86	in ⁴	S _{left} = 443.11 in ³
C _{right} =	12.5000	in	A = 48.2816 in ²	C _{right} =	12.5000	in	A = 48.2816 in ²
C _{left} =	12.5000	in	r _y = 10.7107 in	C _{left} =	12.5000	in	r _y = 10.7107 in



Made By KMW
Checked By DWC

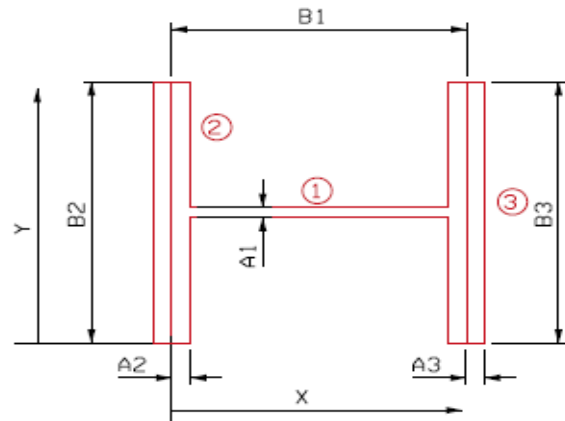
Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130
 $A_1 = t_w = 0.5700$ in
 $A_2 = t_f = 0.8920$ in ****Silicon Steel**
 $B_1 = d = 24.2500$ in
 $B_2 = b_f = 14.0000$ in



Cover Plate

$A_3 = t = 0.3750$ in
 $B_3 = b = 14.0000$ in

Member U106-L106

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		10.5000	7.0000	73.5000	171.5000	0.0000	0.0000	171.5000
Total			48.28		337.97	579.79		0.00	579.79
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1250	8.0000	-1.0000	7.0000	-7.0000	-5.3333	0.0000	0.0000	-5.3333
2	0.1250	8.0000	-1.0000	7.0000	-7.0000	-5.3333	0.0000	0.0000	-5.3333
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.00		-14.00	-10.67		0.00	-10.67

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	S _{top} =	82.83	in ³	y-bar =	7.0000	in	S _{top} =	81.30	in ³
I _x =	579.79	in ⁴	S _{bott.} =	82.83	in ³	I _x =	569.12	in ⁴	S _{bott.} =	81.30	in ³
c _{top} =	7.0000	in	A =	48.2816	in ²	c _{top} =	7.0000	in	A =	46.2816	in ²
c _{bottom} =	7.0000	in	r _x =	3.4653	in	c _{bottom} =	7.0000	in	r _x =	3.5067	in



Made By KMW
Checked By DWC

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.5000	160.0703	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	0.8210	10.2526	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	24.1790	301.9474	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		5.2500	0.1875	0.9844	0.0615	12.3125	795.8877	795.9492
	Right Plate		5.2500	24.8125	130.2656	0.0615	12.3125	795.8877	795.9492
Total			48.28		603.52	540.38		4998.48	5538.86
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	8.0000	0.1250	-1.0000	0.0625	-0.0625	-0.0013	12.4375	-154.6914	-154.6927
2	8.0000	0.1250	-1.0000	24.9375	-24.9375	-0.0013	12.4375	-154.6914	-154.6927
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.00		-25.00	0.00		-309.38	-309.39

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.5000	in	S _{right} =	443.11	in ³	x-bar =	12.5000	in	S _{right} =	418.36	in ³
I _y =	5538.86	n ⁴	S _{left} =	443.11	in ³	I _y =	5229.48	n ⁴	S _{left} =	418.36	in ³
C _{right} =	12.5000	in	A =	48.2816	in ²	C _{right} =	12.5000	in	A =	46.2816	in ²
C _{left} =	12.5000	in	r _y =	10.7107	in	C _{left} =	12.5000	in	r _y =	10.6298	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

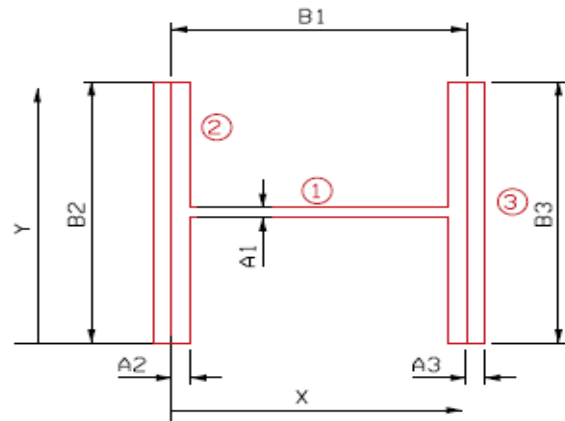
Rolled Beam **CB24x 130**

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

**** Silicon Steel**

Cover Plate

- $A_3 = t = 0.3750$ in
- $B_3 = b = 14.0000$ in



Member U107-L107

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		10.5000	7.0000	73.5000	171.5000	0.0000	0.0000	171.5000
Total			48.28		337.97	579.79		0.00	579.79
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	S _{top} =	82.83	in ³	y-bar =	7.0000	in	S _{top} =	82.83	in ³
I _x =	579.79	in ⁴	S _{bott.} =	82.83	in ³	I _x =	579.79	in ⁴	S _{bott.} =	82.83	in ³
c _{top} =	7.0000	in	A =	48.2816	in ²	c _{top} =	7.0000	in	A =	48.2816	in ²
c _{bottom} =	7.0000	in	r _x =	3.4653	in	c _{bottom} =	7.0000	in	r _x =	3.4653	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.5000	160.0703	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	0.8210	10.2526	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	24.1790	301.9474	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		5.2500	0.1875	0.9844	0.0615	12.3125	795.8877	795.9492
	Right Plate		5.2500	24.8125	130.2656	0.0615	12.3125	795.8877	795.9492
Total			48.28		603.52	540.38		4998.48	5538.86
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.5000	in	S _{right} =	443.11	in ³	x-bar =	12.5000	in	S _{right} =	443.11	in ³
I _y =	5538.86	n ⁴	S _{left} =	443.11	in ³	I _y =	5538.86	n ⁴	S _{left} =	443.11	in ³
C _{right} =	12.5000	in	A =	48.2816	in ²	C _{right} =	12.5000	in	A =	48.2816	in ²
C _{left} =	12.5000	in	r _y =	10.7107	in	C _{left} =	12.5000	in	r _y =	10.7107	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

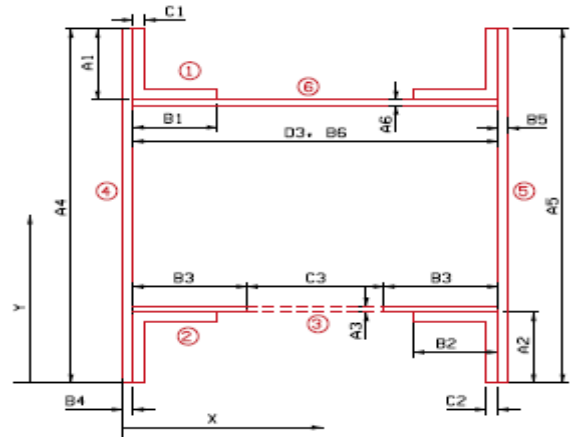
$A_4 = h = 20.0000$ in
 $B_4 = t = 0.3750$ in

Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 0.3750$ in

Cover Plate:

$A_6 = t = 0.3750$ in
 $B_6 = l = 23.5000$ in



Member U108-L108

****Silicon Steel**

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	16.1875	44.0098	0.0319	5.7821	90.8952	90.9270
	Vertical Leg	3.0000	18.0000	54.0000	4.0000	7.5946	173.0340	177.0340
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	6.5929	118.1740	118.2059
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	8.4054	211.9521	215.9521
3	Perforated Plate	6.0000	4.2500	25.5000	0.1250	6.1554	227.3335	227.4585
4	Plate	7.5000	10.0000	75.0000	250.0000	0.4054	1.2326	251.2326
5	Plate	7.5000	10.0000	75.0000	250.0000	0.4054	1.2326	251.2326
6	Cover Plate	8.8125	15.8125	139.3477	0.1033	5.4071	257.6489	257.7522
Total		41.25		429.22	508.29		1081.50	1589.79
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	10.4054	in	S _{top} =	165.70	in ³	y-bar =	10.4054	in	S _{top} =	165.70	in ³
I _x =	1589.79	in ⁴	S _{bott.} =	152.79	in ³	I _x =	1589.79	in ⁴	S _{bott.} =	152.79	in ³
C _{top} =	9.5946	in	A =	41.2500	in ²	C _{top} =	9.5946	in	A =	41.2500	in ²
C _{bottom} =	10.4054	in	r _x =	6.2081	in	C _{bottom} =	10.4054	in	r _x =	6.2081	in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	2.5625	3.4834	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.5625	0.8438	0.0176	11.5625	200.5371	200.5547	
1 (Right)	Horizontal Leg	1.3594	21.6875	29.4814	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.6875	35.5313	0.0176	11.5625	200.5371	200.5547	
2 (Left)	Horizontal Leg	1.3594	2.5625	3.4834	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.5625	0.8438	0.0176	11.5625	200.5371	200.5547	
2 (Right)	Horizontal Leg	1.3594	21.6875	29.4814	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.6875	35.5313	0.0176	11.5625	200.5371	200.5547	
3 (Left)	Perforated Plate	3.0000	3.3750	10.1250	9.0000	8.7500	229.6875	238.6875	
3 (Right)	Perforated Plate	3.0000	20.8750	62.6250	9.0000	8.7500	229.6875	238.6875	
4	Plate	7.5000	0.1875	1.4063	0.0879	11.9375	1068.7793	1068.8672	
5	Plate	7.5000	24.0625	180.4688	0.0879	11.9375	1068.7793	1068.8672	
6	Cover Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
Total		41.25		500.16	429.76		3896.29	4326.05	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
x-bar =	12.1250	in	S _{right} =	356.79	in ³	x-bar =	12.1250	in	S _{right} =	356.79	in ³
I _y =	4326.05	in ⁴	S _{left} =	356.79	in ³	I _y =	4326.05	in ⁴	S _{left} =	356.79	in ³
C _{right} =	12.1250	in	A =	41.2500	in ²	C _{right} =	12.1250	in	A =	41.2500	in ²
C _{left} =	12.1250	in	r _y =	10.2408	in	C _{left} =	12.1250	in	r _y =	10.2408	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_t = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_t = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 23.5000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 58.5000$ in

Left Web Plate:

$A_4 = h = 20.0000$ in
 $B_4 = t = 0.3750$ in

Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 0.3750$ in

Cover Plate:

$A_6 = t = 0.3750$ in
 $B_6 = l = 23.5000$ in



****Silicon Steel**

Member U109-L109

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	16.1875	44.0098	0.0319	7.6156	157.6814	157.7132
	Vertical Leg	3.0000	18.0000	54.0000	4.0000	9.4281	266.6686	270.6686
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	4.7594	61.5842	61.6160
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	6.5719	129.5686	133.5686
3	Perforated Plate	23.5000	4.2500	99.8750	0.4896	4.3219	438.9472	439.4368
4	Plate	7.5000	10.0000	75.0000	250.0000	1.4281	15.2966	265.2966
5	Plate	7.5000	10.0000	75.0000	250.0000	1.4281	15.2966	265.2966
6	Cover Plate	8.8125	15.8125	139.3477	0.1033	7.2406	462.0099	462.1131
Total		58.75		503.60	508.66		1547.05	2055.71
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	8.5719 in	S _{top} =	179.88 in ³	y-bar =	8.5719 in	S _{top} =	179.88 in ³
I _x =	2055.71 in ⁴	S _{bott.} =	239.82 in ³	I _x =	2055.71 in ⁴	S _{bott.} =	239.82 in ³
C _{top} =	11.4281 in	A =	58.7500 in ²	C _{top} =	11.4281 in	A =	58.7500 in ²
C _{bottom} =	8.5719 in	r _x =	5.9153 in	C _{bottom} =	8.5719 in	r _x =	5.9153 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	2.5625	3.4834	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.5625	0.8438	0.0176	11.5625	200.5371	200.5547	
1 (Right)	Horizontal Leg	1.3594	21.6875	29.4814	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.6875	35.5313	0.0176	11.5625	200.5371	200.5547	
2 (Left)	Horizontal Leg	1.3594	2.5625	3.4834	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.5625	0.8438	0.0176	11.5625	200.5371	200.5547	
2 (Right)	Horizontal Leg	1.3594	21.6875	29.4814	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.6875	35.5313	0.0176	11.5625	200.5371	200.5547	
3 (Left)	Perforated Plate	11.7500	12.1250	142.4688	540.7448	0.0000	0.0000	540.7448	
3 (Right)	Perforated Plate	11.7500	12.1250	142.4688	540.7448	0.0000	0.0000	540.7448	
4	Plate	7.5000	0.1875	1.4063	0.0879	11.9375	1068.7793	1068.8672	
5	Plate	7.5000	24.0625	180.4688	0.0879	11.9375	1068.7793	1068.8672	
6	Cover Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
Total		58.75		712.34	1493.25		3436.92	4930.17	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	406.61 in ³	x-bar =	12.1250 in	S _{right} =	406.61 in ³
I _y =	4930.17 in ⁴	S _{left} =	406.61 in ³	I _y =	4930.17 in ⁴	S _{left} =	406.61 in ³
C _{right} =	12.1250 in	A =	58.7500 in ²	C _{right} =	12.1250 in	A =	58.7500 in ²
C _{left} =	12.1250 in	r _y =	9.1607 in	C _{left} =	12.1250 in	r _y =	9.1607 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

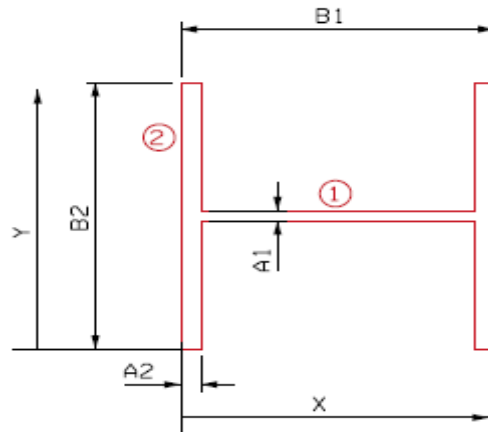
Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 100

- $A_1 = t_w = 0.4700$ in
- $A_2 = t_f = 0.7670$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 12.0000$ in

****Silicon Steel**



Member U119-L119

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x, gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		10.5590	6.0000	63.3541	0.1944	0.0000	0.0000	0.1944
2	Flange Plates		18.4080	6.0000	110.4480	220.8960	0.0000	0.0000	220.8960
Total			28.97		173.80	221.09		0.00	221.09
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	6.0000	in	$S_{top} = 36.85$	in^3	y-bar =	6.0000	in	$S_{top} = 36.85$	in^3		
$I_x =$	221.09	in^4	$S_{bott.} = 36.85$	in^3	$I_x =$	221.09	in^4	$S_{bott.} = 36.85$	in^3		
$c_{top} =$	6.0000	in	A =	28.9670	in^2	$c_{top} =$	6.0000	in	A =	28.9670	in^2
$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in	$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	12.0000	126.7082	444.1134	0.0000	0.0000	444.1134
2	Left Flange		9.2040	0.3835	3.5297	0.4512	11.6165	1242.0160	1242.4673
	Right Flange		9.2040	23.6165	217.3663	0.4512	11.6165	1242.0160	1242.4673
Total			28.97		347.60	445.02		2484.03	2929.05
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.0000	in	S _{right} =	244.09	in ³	x-bar =	12.0000	in	S _{right} =	244.09	in ³
I _y =	2929.05	in ⁴	S _{left} =	244.09	in ³	I _y =	2929.05	in ⁴	S _{left} =	244.09	in ³
C _{right} =	12.0000	in	A =	28.9670	in ²	C _{right} =	12.0000	in	A =	28.9670	in ²
C _{left} =	12.0000	in	r _y =	10.0557	in	C _{left} =	12.0000	in	r _y =	10.0557	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_t = 0.5000$ in

Bottom Angles:

$A_2 = l_h =$ in
 $B_2 = l_w =$ in
 $C_2 = t_t =$ in

Perforated Plate:

$A_3 = t = 0.6250$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

$A_4 = h = 26.0000$ in
 $B_4 = t = 0.5625$ in

Right Web Plate:

$A_5 = h = 26.0000$ in
 $B_5 = t = 0.5625$ in

Cover Plate:

$A_6 = t = 0.5000$ in
 $B_6 = l = 23.5000$ in



Member U110-L110

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.5000	22.2500	77.8750	0.0729	7.7494	210.1885	210.2614
	Vertical Leg	4.0000	24.0000	96.0000	5.3333	9.4994	360.9576	366.2909
2	Horizontal Leg	0.0000	0.0000	0.0000	0.0000	14.5006	0.0000	0.0000
	Vertical Leg	0.0000	0.0000	0.0000	0.0000	14.5006	0.0000	0.0000
3	Perforated Plate	7.5000	0.3125	2.3438	0.2441	14.1881	1509.7574	1510.0016
4	Plate	14.6250	13.0000	190.1250	823.8750	1.5006	32.9307	856.8057
5	Plate	14.6250	13.0000	190.1250	823.8750	1.5006	32.9307	856.8057
6	Cover Plate	11.7500	21.7500	255.5625	0.2448	7.2494	617.5143	617.7591
Total		56.00		812.03	1653.65		2764.28	4417.92
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.5006 in	S _{top} =	384.19 in ³	y-bar =	14.5006 in	S _{top} =	384.19 in ³
I _x =	4417.92 in ⁴	S _{bott.} =	304.67 in ³	I _x =	4417.92 in ⁴	S _{bott.} =	304.67 in ³
C _{top} =	11.4994 in	A =	56.0000 in ²	C _{top} =	11.4994 in	A =	56.0000 in ²
C _{bottom} =	14.5006 in	r _x =	8.8821 in	C _{bottom} =	14.5006 in	r _x =	8.8821 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.7500	2.8125	4.9219	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	0.8125	1.6250	0.0417	11.5000	264.5000	264.5417	
1 (Right)	Horizontal Leg	1.7500	21.8125	38.1719	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	23.8125	47.6250	0.0417	11.5000	264.5000	264.5417	
2 (Left)	Horizontal Leg	0.0000	0.5625	0.0000	0.0000	11.7500	0.0000	0.0000	
	Vertical Leg	0.0000	0.5625	0.0000	0.0000	11.7500	0.0000	0.0000	
2 (Right)	Horizontal Leg	0.0000	24.0625	0.0000	0.0000	11.7500	0.0000	0.0000	
	Vertical Leg	0.0000	24.0625	0.0000	0.0000	11.7500	0.0000	0.0000	
3 (Left)	Perforated Plate	3.7500	3.5625	13.3594	11.2500	8.7500	287.1094	298.3594	
3 (Right)	Perforated Plate	3.7500	21.0625	78.9844	11.2500	8.7500	287.1094	298.3594	
4	Plate	14.6250	0.2813	4.1133	0.3856	12.0313	2116.9830	2117.3687	
5	Plate	14.6250	24.3438	356.0273	0.3856	12.0313	2116.9830	2117.3687	
6	Cover Plate	11.7500	12.3125	144.6719	540.7448	0.0000	0.0000	540.7448	
Total		56.00		689.50	567.67		5653.06	6220.73	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3125 in	S _{right} =	505.24 in ³	x-bar =	12.3125 in	S _{right} =	505.24 in ³
I _y =	6220.73 in ⁴	S _{left} =	505.24 in ³	I _y =	6220.73 in ⁴	S _{left} =	505.24 in ³
C _{right} =	12.3125 in	A =	56.0000 in ²	C _{right} =	12.3125 in	A =	56.0000 in ²
C _{left} =	12.3125 in	r _y =	10.5397 in	C _{left} =	12.3125 in	r _y =	10.5397 in



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_t = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_t = 0.5000$ in

Perforated Plate:

$A_3 = t = 0.6250$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

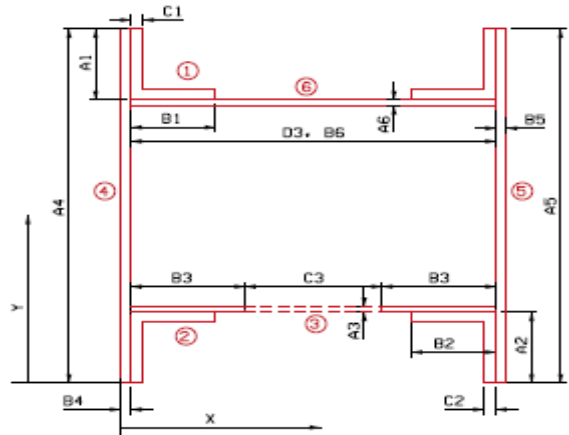
$A_4 = h = 24.0000$ in
 $B_4 = t = 0.6250$ in

Right Web Plate:

$A_5 = h = 24.0000$ in
 $B_5 = t = 0.6250$ in

Cover Plate:

$A_6 = t = 0.5000$ in
 $B_6 = l = 23.5000$ in



Member U111-L111

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.5000	20.2500	70.8750	0.0729	7.7301	209.1383	209.2112
	Vertical Leg	4.0000	22.0000	88.0000	5.3333	9.4801	359.4860	364.8194
2	Horizontal Leg	3.5000	3.7500	13.1250	0.0729	8.7699	269.1916	269.2645
	Vertical Leg	4.0000	2.0000	8.0000	5.3333	10.5199	442.6767	448.0100
3	Perforated Plate	7.5000	4.3125	32.3438	0.2441	8.2074	505.2157	505.4599
4	Plate	15.0000	12.0000	180.0000	720.0000	0.5199	4.0551	724.0551
5	Plate	15.0000	12.0000	180.0000	720.0000	0.5199	4.0551	724.0551
6	Cover Plate	11.7500	19.7500	232.0625	0.2448	7.2301	614.2165	614.4613
Total		64.25		804.41	1451.30		2408.03	3859.34
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	12.5199 in	S _{top} =	336.18 in ³	y-bar =	12.5199 in	S _{top} =	336.18 in ³
I _x =	3859.34 in ⁴	S _{bott.} =	308.26 in ³	I _x =	3859.34 in ⁴	S _{bott.} =	308.26 in ³
C _{top} =	11.4801 in	A =	64.2500 in ²	C _{top} =	11.4801 in	A =	64.2500 in ²
C _{bottom} =	12.5199 in	r _x =	7.7503 in	C _{bottom} =	12.5199 in	r _x =	7.7503 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.7500	2.8750	5.0313	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	0.8750	1.7500	0.0417	11.5000	264.5000	264.5417	
1 (Right)	Horizontal Leg	1.7500	21.8750	38.2813	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	23.8750	47.7500	0.0417	11.5000	264.5000	264.5417	
2 (Left)	Horizontal Leg	1.7500	2.8750	5.0313	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	0.8750	1.7500	0.0417	11.5000	264.5000	264.5417	
2 (Right)	Horizontal Leg	1.7500	21.8750	38.2813	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	23.8750	47.7500	0.0417	11.5000	264.5000	264.5417	
3 (Left)	Perforated Plate	3.7500	3.6250	13.5938	11.2500	8.7500	287.1094	298.3594	
3 (Right)	Perforated Plate	3.7500	21.1250	79.2188	11.2500	8.7500	287.1094	298.3594	
4	Plate	15.0000	0.3125	4.6875	0.4883	12.0625	2182.5586	2183.0469	
5	Plate	15.0000	24.4375	366.5625	0.4883	12.0625	2182.5586	2183.0469	
6	Cover Plate	11.7500	12.3750	145.4063	540.7448	0.0000	0.0000	540.7448	
Total		64.25		795.09	571.53		6629.09	7200.62	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3750 in	S _{right} =	581.87 in ³	x-bar =	12.3750 in	S _{right} =	581.87 in ³
I _y =	7200.62 in ⁴	S _{left} =	581.87 in ³	I _y =	7200.62 in ⁴	S _{left} =	581.87 in ³
C _{right} =	12.3750 in	A =	64.2500 in ²	C _{right} =	12.3750 in	A =	64.2500 in ²
C _{left} =	12.3750 in	r _y =	10.5864 in	C _{left} =	12.3750 in	r _y =	10.5864 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.5000$ in

Perforated Plate:

$A_3 = t = 0.6250$ in
 $B_3 = l = 5.7500$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.0000$ in

Left Web Plate:

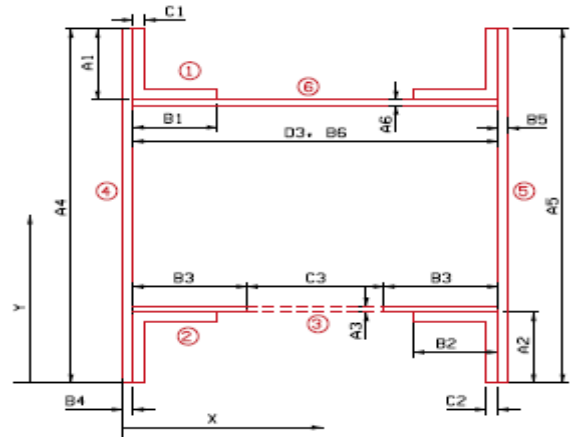
$A_4 = h = 22.0000$ in
 $B_4 = t = 0.8125$ in

Right Web Plate:

$A_5 = h = 22.0000$ in
 $B_5 = t = 0.8125$ in

Cover Plate:

$A_6 = t = 0.5000$ in
 $B_6 = l = 23.0000$ in



Member U112-L112

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.5000	18.2500	63.8750	0.0729	6.8243	162.9994	163.0723
	Vertical Leg	4.0000	20.0000	80.0000	5.3333	8.5743	294.0754	299.4088
2	Horizontal Leg	3.5000	3.7500	13.1250	0.0729	7.6757	206.2066	206.2795
	Vertical Leg	4.0000	2.0000	8.0000	5.3333	9.4257	355.3743	360.7076
3	Perforated Plate	7.1875	4.3125	30.9961	0.2340	7.1132	363.6690	363.9029
4	Plate	17.8750	11.0000	196.6250	720.9583	0.4257	3.2391	724.1974
5	Plate	17.8750	11.0000	196.6250	720.9583	0.4257	3.2391	724.1974
6	Cover Plate	11.5000	17.7500	204.1250	0.2396	6.3243	459.9649	460.2044
Total		69.44		793.37	1453.20		1848.77	3301.97
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	11.4257 in	S _{top} =	312.26 in ³	y-bar =	11.4257 in	S _{top} =	312.26 in ³
I _x =	3301.97 in ⁴	S _{bott.} =	289.00 in ³	I _x =	3301.97 in ⁴	S _{bott.} =	289.00 in ³
C _{top} =	10.5743 in	A =	69.4375 in ²	C _{top} =	10.5743 in	A =	69.4375 in ²
C _{bottom} =	11.4257 in	r _x =	6.8959 in	C _{bottom} =	11.4257 in	r _x =	6.8959 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.7500	3.0625	5.3594	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	1.0625	2.1250	0.0417	11.2500	253.1250	253.1667	
1 (Right)	Horizontal Leg	1.7500	21.5625	37.7344	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	23.5625	47.1250	0.0417	11.2500	253.1250	253.1667	
2 (Left)	Horizontal Leg	1.7500	3.0625	5.3594	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	1.0625	2.1250	0.0417	11.2500	253.1250	253.1667	
2 (Right)	Horizontal Leg	1.7500	21.5625	37.7344	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	23.5625	47.1250	0.0417	11.2500	253.1250	253.1667	
3 (Left)	Perforated Plate	3.5938	3.6875	13.2520	9.9015	8.6250	267.3413	277.2428	
3 (Right)	Perforated Plate	3.5938	20.9375	75.2441	9.9015	8.6250	267.3413	277.2428	
4	Plate	17.8750	0.4063	7.2617	0.9834	11.9063	2533.9384	2534.9217	
5	Plate	17.8750	24.2188	432.9102	0.9834	11.9063	2533.9384	2534.9217	
6	Cover Plate	11.5000	12.3125	141.5938	506.9583	0.0000	0.0000	506.9583	
Total		69.44		854.95	536.04		7214.00	7750.04	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3125 in	S _{right} =	629.44 in ³	x-bar =	12.3125 in	S _{right} =	629.44 in ³
I _y =	7750.04 in ⁴	S _{left} =	629.44 in ³	I _y =	7750.04 in ⁴	S _{left} =	629.44 in ³
C _{right} =	12.3125 in	A =	69.4375 in ²	C _{right} =	12.3125 in	A =	69.4375 in ²
C _{left} =	12.3125 in	r _y =	10.5646 in	C _{left} =	12.3125 in	r _y =	10.5646 in



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_t = 0.6875$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_t = 0.6875$ in

Perforated Plate:

$A_3 = t = 0.7500$ in
 $B_3 = l = 5.7500$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.0000$ in

Left Web Plate:

$A_4 = h = 24.0000$ in
 $B_4 = t = 1.0000$ in

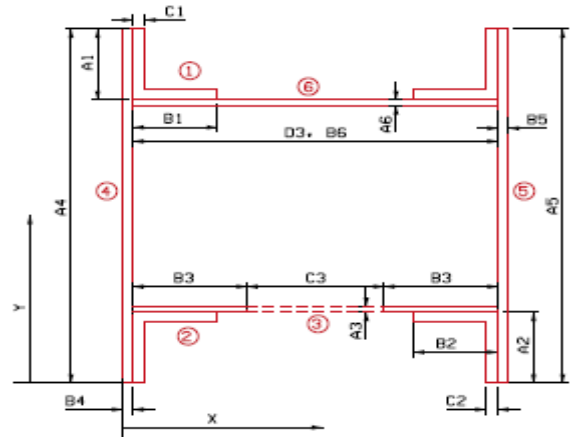
Right Web Plate:

$A_5 = h = 24.0000$ in
 $B_5 = t = 1.0000$ in

Cover Plate:

$A_6 = t = 0.6250$ in
 $B_6 = l = 23.0000$ in

****Silicon Steel**



Member U113-L113

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	4.5547	20.3438	92.6594	0.1794	7.8527	280.8620	281.0414
	Vertical Leg	5.5000	22.0000	121.0000	7.3333	9.5089	497.3074	504.6407
2	Horizontal Leg	4.5547	3.6563	16.6531	0.1794	8.8348	355.5128	355.6922
	Vertical Leg	5.5000	2.0000	11.0000	7.3333	10.4911	605.3454	612.6788
3	Perforated Plate	8.6250	4.3750	37.7344	0.4043	8.1161	568.1356	568.5399
4	Plate	24.0000	12.0000	288.0000	1152.0000	0.4911	5.7879	1157.7879
5	Plate	24.0000	12.0000	288.0000	1152.0000	0.4911	5.7879	1157.7879
6	Cover Plate	14.3750	19.6875	283.0078	0.4679	7.1964	744.4587	744.9266
Total		91.11		1138.05	2319.90		3063.20	5383.10
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	12.4911 in	S _{top} =	467.73 in ³	y-bar =	12.4911 in	S _{top} =	467.73 in ³
I _x =	5383.10 in ⁴	S _{bott.} =	430.96 in ³	I _x =	5383.10 in ⁴	S _{bott.} =	430.96 in ³
C _{top} =	11.5089 in	A =	91.1094 in ²	C _{top} =	11.5089 in	A =	91.1094 in ²
C _{bottom} =	12.4911 in	r _x =	7.6866 in	C _{bottom} =	12.4911 in	r _x =	7.6866 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.2773	3.3438	7.6149	2.0824	9.1563	190.9255	193.0078	
	Vertical Leg	2.7500	1.3438	3.6953	0.1083	11.1563	342.2703	342.3786	
1 (Right)	Horizontal Leg	2.2773	21.6563	49.3187	2.0824	9.1563	190.9255	193.0078	
	Vertical Leg	2.7500	23.6563	65.0547	0.1083	11.1563	342.2703	342.3786	
2 (Left)	Horizontal Leg	2.2773	3.3438	7.6149	2.0824	9.1563	190.9255	193.0078	
	Vertical Leg	2.7500	1.3438	3.6953	0.1083	11.1563	342.2703	342.3786	
2 (Right)	Horizontal Leg	2.2773	21.6563	49.3187	2.0824	9.1563	190.9255	193.0078	
	Vertical Leg	2.7500	23.6563	65.0547	0.1083	11.1563	342.2703	342.3786	
3 (Left)	Perforated Plate	4.3125	3.8750	16.7109	11.8818	8.6250	320.8096	332.6914	
3 (Right)	Perforated Plate	4.3125	21.1250	91.1016	11.8818	8.6250	320.8096	332.6914	
4	Plate	24.0000	0.5000	12.0000	2.0000	12.0000	3456.0000	3458.0000	
5	Plate	24.0000	24.5000	588.0000	2.0000	12.0000	3456.0000	3458.0000	
6	Cover Plate	14.3750	12.5000	179.6875	633.6979	0.0000	0.0000	633.6979	
Total		91.11		1138.87	670.22		9686.40	10356.63	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.5000 in	S _{right} =	828.53 in ³	x-bar =	12.5000 in	S _{right} =	828.53 in ³
I _y =	10356.63 in ⁴	S _{left} =	828.53 in ³	I _y =	10356.63 in ⁴	S _{left} =	828.53 in ³
C _{right} =	12.5000 in	A =	91.1094 in ²	C _{right} =	12.5000 in	A =	91.1094 in ²
C _{left} =	12.5000 in	r _y =	10.6617 in	C _{left} =	12.5000 in	r _y =	10.6617 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.5625$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.5625$ in

Perforated Plate:

$A_3 = t = 0.7500$ in
 $B_3 = l = 5.7500$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.0000$ in

Left Web Plate:

$A_4 = h = 24.0000$ in
 $B_4 = t = 1.0000$ in

Right Web Plate:

$A_5 = h = 24.0000$ in
 $B_5 = t = 1.0000$ in

Cover Plate:

$A_6 = t = 0.6250$ in
 $B_6 = l = 23.0000$ in



****Silicon Steel**

Member U114-L114

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.8672	20.2813	78.4314	0.1020	7.7713	233.5501	233.6520
	Vertical Leg	4.5000	22.0000	99.0000	6.0000	9.4900	405.2727	411.2727
2	Horizontal Leg	3.8672	3.7188	14.3811	0.1020	8.7912	298.8779	298.9799
	Vertical Leg	4.5000	2.0000	9.0000	6.0000	10.5100	497.0679	503.0679
3	Perforated Plate	8.6250	4.3750	37.7344	0.4043	8.1350	570.7834	571.1877
4	Plate	24.0000	12.0000	288.0000	1152.0000	0.5100	6.2417	1158.2417
5	Plate	24.0000	12.0000	288.0000	1152.0000	0.5100	6.2417	1158.2417
6	Cover Plate	14.3750	19.6875	283.0078	0.4679	7.1775	740.5553	741.0232
Total		87.73		1097.55	2317.08		2758.59	5075.67
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00	0.00	0.00	0.00



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	12.5100 in	S _{top} =	441.75 in ³	y-bar =	12.5100 in	S _{top} =	441.75 in ³
I _x =	5075.67 in ⁴	S _{bott.} =	405.73 in ³	I _x =	5075.67 in ⁴	S _{bott.} =	405.73 in ³
C _{top} =	11.4900 in	A =	87.7344 in ²	C _{top} =	11.4900 in	A =	87.7344 in ²
C _{bottom} =	12.5100 in	r _x =	7.6061 in	C _{bottom} =	12.5100 in	r _x =	7.6061 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.9336	3.2813	6.3446	1.9040	9.2188	164.3271	166.2312	
	Vertical Leg	2.2500	1.2813	2.8828	0.0593	11.2188	283.1858	283.2451	
1 (Right)	Horizontal Leg	1.9336	21.7188	41.9952	1.9040	9.2188	164.3271	166.2312	
	Vertical Leg	2.2500	23.7188	53.3672	0.0593	11.2188	283.1858	283.2451	
2 (Left)	Horizontal Leg	1.9336	3.2813	6.3446	1.9040	9.2188	164.3271	166.2312	
	Vertical Leg	2.2500	1.2813	2.8828	0.0593	11.2188	283.1858	283.2451	
2 (Right)	Horizontal Leg	1.9336	21.7188	41.9952	1.9040	9.2188	164.3271	166.2312	
	Vertical Leg	2.2500	23.7188	53.3672	0.0593	11.2188	283.1858	283.2451	
3 (Left)	Perforated Plate	4.3125	3.8750	16.7109	11.8818	8.6250	320.8096	332.6914	
3 (Right)	Perforated Plate	4.3125	21.1250	91.1016	11.8818	8.6250	320.8096	332.6914	
4	Plate	24.0000	0.5000	12.0000	2.0000	12.0000	3456.0000	3458.0000	
5	Plate	24.0000	24.5000	588.0000	2.0000	12.0000	3456.0000	3458.0000	
6	Cover Plate	14.3750	12.5000	179.6875	633.6979	0.0000	0.0000	633.6979	
Total		87.73		1096.68	669.31		9343.67	10012.99	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.5000 in	S _{right} =	801.04 in ³	x-bar =	12.5000 in	S _{right} =	801.04 in ³
I _y =	10012.99 in ⁴	S _{left} =	801.04 in ³	I _y =	10012.99 in ⁴	S _{left} =	801.04 in ³
C _{right} =	12.5000 in	A =	87.7344 in ²	C _{right} =	12.5000 in	A =	87.7344 in ²
C _{left} =	12.5000 in	r _y =	10.6831 in	C _{left} =	12.5000 in	r _y =	10.6831 in



Made By KMW
Checked By DWC

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:
 $A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.5625$ in

Bottom Angles:
 $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.5625$ in

Perforated Plate:
 $A_3 = t = 0.7500$ in
 $B_3 = l = 5.7500$ in

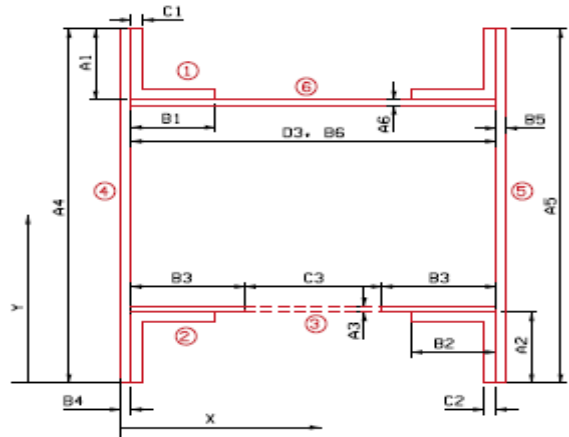
$C_3 = l = 11.5000$ in
 $D_3 = l = 23.0000$ in

Left Web Plate:
 $A_4 = h = 24.0000$ in
 $B_4 = t = 0.7500$ in

Right Web Plate:
 $A_5 = h = 24.0000$ in
 $B_5 = t = 0.7500$ in

Cover Plate:
 $A_6 = t = 0.6250$ in
 $B_6 = l = 23.0000$ in

****Silicon Steel**



Member U115-L115

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	3.8672	20.2813	78.4314	0.1020	7.6905	228.7185	228.8204	
	Vertical Leg	4.5000	22.0000	99.0000	6.0000	9.4092	398.4006	404.4006	
2	Horizontal Leg	3.8672	3.7188	14.3811	0.1020	8.8720	304.3975	304.4994	
	Vertical Leg	4.5000	2.0000	9.0000	6.0000	10.5908	504.7406	510.7406	
3	Perforated Plate	8.6250	4.3750	37.7344	0.4043	8.2158	582.1789	582.5832	
4	Plate	18.0000	12.0000	216.0000	864.0000	0.5908	6.2823	870.2823	
5	Plate	18.0000	12.0000	216.0000	864.0000	0.5908	6.2823	870.2823	
6	Cover Plate	14.3750	19.6875	283.0078	0.4679	7.0967	723.9748	724.4428	
Total		75.73		953.55	1741.08		2754.98	4496.05	
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	
1	0.0625	24.0000	-1.5000	12.0000	-18.0000	-72.0000	0.6027	-0.5449	-72.5449
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Total			-1.50	-18.00	-72.00		-0.54	-72.54	



Made By KMW
Checked By DWC

Date 2/6/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	12.5908 in	S _{top} =	394.07 in ³	y-bar =	12.6027 in	S _{top} =	388.12 in ³
I _x =	4496.05 in ⁴	S _{bott.} =	357.09 in ³	I _x =	4423.51 in ⁴	S _{bott.} =	351.00 in ³
C _{top} =	11.4092 in	A =	75.7344 in ²	C _{top} =	11.3973 in	A =	74.2344 in ²
C _{bottom} =	12.5908 in	r _x =	7.7049 in	C _{bottom} =	12.6027 in	r _x =	7.7194 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.9336	3.0313	5.8612	1.9040	9.2188	164.3271	166.2312	
	Vertical Leg	2.2500	1.0313	2.3203	0.0593	11.2188	283.1858	283.2451	
1 (Right)	Horizontal Leg	1.9336	21.4688	41.5118	1.9040	9.2188	164.3271	166.2312	
	Vertical Leg	2.2500	23.4688	52.8047	0.0593	11.2188	283.1858	283.2451	
2 (Left)	Horizontal Leg	1.9336	3.0313	5.8612	1.9040	9.2188	164.3271	166.2312	
	Vertical Leg	2.2500	1.0313	2.3203	0.0593	11.2188	283.1858	283.2451	
2 (Right)	Horizontal Leg	1.9336	21.4688	41.5118	1.9040	9.2188	164.3271	166.2312	
	Vertical Leg	2.2500	23.4688	52.8047	0.0593	11.2188	283.1858	283.2451	
3 (Left)	Perforated Plate	4.3125	3.6250	15.6328	11.8818	8.6250	320.8096	332.6914	
3 (Right)	Perforated Plate	4.3125	20.8750	90.0234	11.8818	8.6250	320.8096	332.6914	
4	Plate	18.0000	0.3750	6.7500	0.8438	11.8750	2538.2813	2539.1250	
5	Plate	18.0000	24.1250	434.2500	0.8438	11.8750	2538.2813	2539.1250	
6	Cover Plate	14.3750	12.2500	176.0938	633.6979	0.0000	0.0000	633.6979	
Total		75.73		927.75	667.00		7508.23	8175.24	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	24.0000	0.0625	-1.5000	0.0313	-0.0469	-0.0005	12.4656	-233.0885	-233.0890
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.50		-0.05	0.00		-233.09	-233.09

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2500 in	S _{right} =	667.37 in ³	x-bar =	12.4969 in	S _{right} =	661.67 in ³
I _y =	8175.24 in ⁴	S _{left} =	667.37 in ³	I _y =	7942.15 in ⁴	S _{left} =	635.53 in ³
C _{right} =	12.2500 in	A =	75.7344 in ²	C _{right} =	12.0031 in	A =	74.2344 in ²
C _{left} =	12.2500 in	r _y =	10.3897 in	C _{left} =	12.4969 in	r _y =	10.3435 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

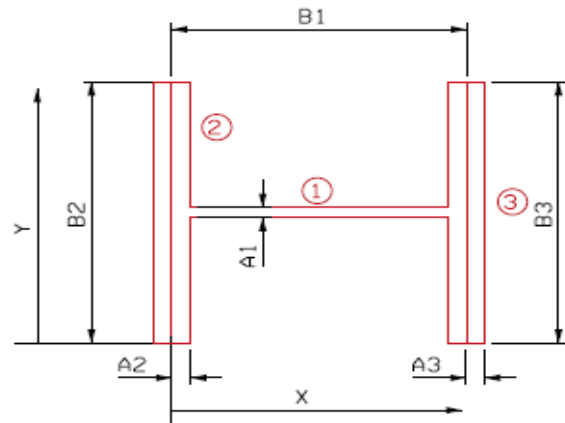
Rolled Beam CB24x 160

- $A_1 = t_w = 0.6650$ in
- $A_2 = t_f = 1.1240$ in
- $B_1 = d = 24.7140$ in
- $B_2 = b_f = 14.0950$ in

****Silicon Steel**

Cover Plate

- $A_3 = t = 0.5000$ in
- $B_3 = b = 16.0000$ in



Member U116-L116

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	8.0000	119.5191	0.5506	0.0000	0.0000	0.5506
2	Flange Plates		31.6856	8.0000	253.4845	524.5783	0.0000	0.0000	524.5783
3	Cover Plate		16.0000	8.0000	128.0000	341.3333	0.0000	0.0000	341.3333
Total			62.63		501.00	866.46		0.00	866.46
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	8.0000	in	S _{top} = 108.31 in ³	y-bar =	8.0000	in	S _{top} = 108.31 in ³
I _x =	866.46	in ⁴	S _{bott.} = 108.31 in ³	I _x =	866.46	in ⁴	S _{bott.} = 108.31 in ³
c _{top} =	8.0000	in	A = 62.6255 in ²	c _{top} =	8.0000	in	A = 62.6255 in ²
c _{bottom} =	8.0000	in	r _x = 3.7196 in	c _{bottom} =	8.0000	in	r _x = 3.7196 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	12.8570	192.0822	628.3732	0.0000	0.0000	628.3732
2	Left Flange		15.8428	1.0620	16.8250	1.6679	11.7950	2204.0796	2205.7476
	Right Flange		15.8428	24.6520	390.5562	1.6679	11.7950	2204.0796	2205.7476
3	Left Plate		8.0000	0.2500	2.0000	0.1667	12.6070	1271.4916	1271.6583
	Right Plate		8.0000	25.4640	203.7120	0.1667	12.6070	1271.4916	1271.6583
Total			62.63		805.18	632.04		6951.14	7583.18
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.8570	in	S _{right} =	589.81	in ³	x-bar =	12.8570	in	S _{right} =	589.81	in ³
I _y =	7583.18	n ⁴	S _{left} =	589.81	in ³	I _y =	7583.18	n ⁴	S _{left} =	589.81	in ³
C _{right} =	12.8570	in	A =	62.6255	in ²	C _{right} =	12.8570	in	A =	62.6255	in ²
C _{left} =	12.8570	in	r _y =	11.0040	in	C _{left} =	12.8570	in	r _y =	11.0040	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

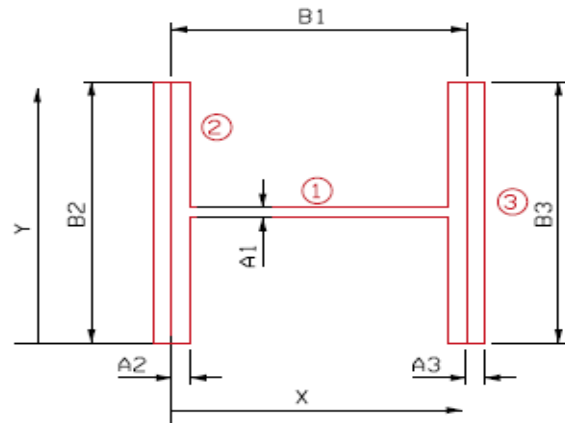
Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

****Silicon Steel**

Cover Plate

- $A_3 = t = 0.5625$ in
- $B_3 = b = 14.0000$ in



Member U117-L117

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		15.7500	7.0000	110.2500	257.2500	0.0000	0.0000	257.2500
Total			53.53		374.72	665.54		0.00	665.54
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	$S_{top} =$	95.08	in ³	y-bar =	7.0000	in	$S_{top} =$	95.08	in ³
$I_x =$	665.54	in ⁴	$S_{bott.} =$	95.08	in ³	$I_x =$	665.54	in ⁴	$S_{bott.} =$	95.08	in ³
$c_{top} =$	7.0000	in	A =	53.5316	in ²	$c_{top} =$	7.0000	in	A =	53.5316	in ²
$c_{bottom} =$	7.0000	in	$r_x =$	3.5260	in	$c_{bottom} =$	7.0000	in	$r_x =$	3.5260	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.6875	162.4713	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	1.0085	12.5941	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	24.3665	304.2889	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		7.8750	0.2813	2.2148	0.2076	12.4063	1212.0809	1212.2886
	Right Plate		7.8750	25.0938	197.6133	0.2076	12.4063	1212.0809	1212.2886
Total			53.53		679.18	540.68		5830.86	6371.54
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.6875	in	S _{right} = 502.19 in ³	x-bar =	12.6875	in	S _{right} = 502.19 in ³
I _y =	6371.54	n ⁴	S _{left} = 502.19 in ³	I _y =	6371.54	n ⁴	S _{left} = 502.19 in ³
C _{right} =	12.6875	in	A = 53.5316 in ²	C _{right} =	12.6875	in	A = 53.5316 in ²
C _{left} =	12.6875	in	r _y = 10.9098 in	C _{left} =	12.6875	in	r _y = 10.9098 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

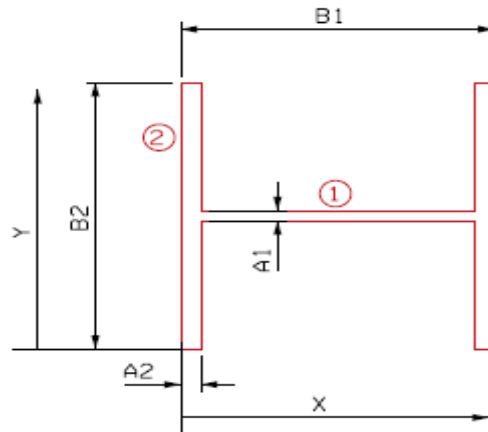
Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 100

- $A_1 = t_w = 0.4700$ in
- $A_2 = t_f = 0.7670$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 12.0000$ in

****Silicon Steel**



Member U118-L118

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		10.5590	6.0000	63.3541	0.1944	0.0000	0.0000	0.1944
2	Flange Plates		18.4080	6.0000	110.4480	220.8960	0.0000	0.0000	220.8960
Total			28.97		173.80	221.09		0.00	221.09
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	6.0000	in	S _{top} = 36.85 in ³	y-bar =	6.0000	in	S _{top} = 36.85 in ³
I _x =	221.09	in ⁴	S _{bott.} = 36.85 in ³	I _x =	221.09	in ⁴	S _{bott.} = 36.85 in ³
c _{top} =	6.0000	in	A = 28.9670 in ²	c _{top} =	6.0000	in	A = 28.9670 in ²
c _{bottom} =	6.0000	in	r _x = 2.7627 in	c _{bottom} =	6.0000	in	r _x = 2.7627 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	12.0000	126.7082	444.1134	0.0000	0.0000	444.1134
2	Left Flange		9.2040	0.3835	3.5297	0.4512	11.6165	1242.0160	1242.4673
	Right Flange		9.2040	23.6165	217.3663	0.4512	11.6165	1242.0160	1242.4673
Total			28.97		347.60	445.02		2484.03	2929.05
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.0000	in	S _{right} =	244.09	in ³	x-bar =	12.0000	in	S _{right} =	244.09	in ³
I _y =	2929.05	in ⁴	S _{left} =	244.09	in ³	I _y =	2929.05	in ⁴	S _{left} =	244.09	in ³
C _{right} =	12.0000	in	A =	28.9670	in ²	C _{right} =	12.0000	in	A =	28.9670	in ²
C _{left} =	12.0000	in	r _y =	10.0557	in	C _{left} =	12.0000	in	r _y =	10.0557	in



Made By KMW
Checked By DWC

Date 2/7/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

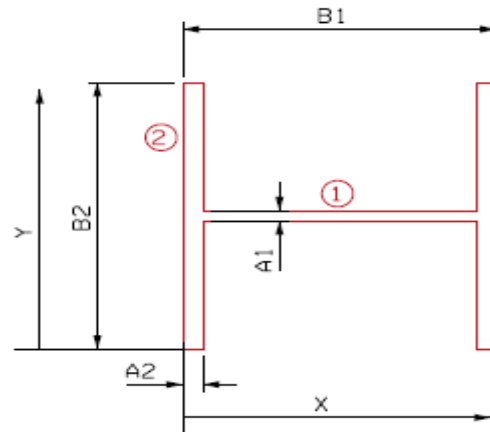
Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 110

- $A_1 = t_w = 0.5130$ in
- $A_2 = t_f = 0.8470$ in
- $B_1 = d = 24.1600$ in
- $B_2 = b_f = 12.0430$ in

****Silicon Steel**



Member U120-L120

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		11.5251	6.0215	69.3981	0.2528	0.0000	0.0000	0.2528
2	Flange Plates		20.4008	6.0215	122.8437	246.5677	0.0000	0.0000	246.5677
Total			31.93		192.24	246.82		0.00	246.82
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.2500	4.0000	-1.0000	10.0430	-10.0430	-1.3333	4.1515	-17.2353	-18.5686
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.00		-10.04	-1.33		-17.24	-18.57

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0215	in	S _{top} =	40.99	in ³	y-bar =	5.8915	in	S _{top} =	37.10	in ³
I _x =	246.82	in ⁴	S _{bott.} =	40.99	in ³	I _x =	228.25	in ⁴	S _{bott.} =	38.74	in ³
c _{top} =	6.0215	in	A =	31.9259	in ²	c _{top} =	6.1515	in	A =	30.9259	in ²
c _{bottom} =	6.0215	in	r _x =	2.7805	in	c _{bottom} =	5.8915	in	r _x =	2.7167	in



Made By KMW
Checked By DWC

Date 2/7/2012
Date 2/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		11.5251	12.0800	139.2227	484.7450	0.0000	0.0000	484.7450
2	Left Flange		10.2004	0.4235	4.3199	0.6098	11.6565	1385.9719	1386.5817
	Right Flange		10.2004	23.7365	242.1223	0.6098	11.6565	1385.9719	1386.5817
Total			31.93		385.66	485.96		2771.94	3257.91
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	4.0000	0.2500	-1.0000	0.1250	-0.1250	-0.0052	12.3416	-152.3143	-152.3195
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.00		-0.13	-0.01		-152.31	-152.32

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.0800	in	S _{right} =	269.69	in ³	x-bar =	12.4666	in	S _{right} =	265.58	in ³
I _y =	3257.91	in ⁴	S _{left} =	269.69	in ³	I _y =	3105.59	in ⁴	S _{left} =	249.11	in ³
C _{right} =	12.0800	in	A =	31.9259	in ²	C _{right} =	11.6934	in	A =	30.9259	in ²
C _{left} =	12.0800	in	r _y =	10.1018	in	C _{left} =	12.4666	in	r _y =	10.0210	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

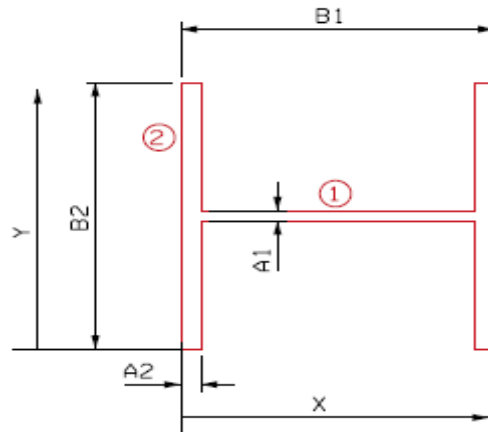
Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 160

- $A_1 = t_w = 0.6650$ in
- $A_2 = t_f = 1.1240$ in
- $B_1 = d = 24.7140$ in
- $B_2 = b_f = 14.0950$ in

****Silicon Steel**



Member U121-L121

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		14.9399	7.0475	105.2889	0.5506	0.0000	0.0000	0.5506
2	Flange Plates		31.6856	7.0475	223.3040	524.5783	0.0000	0.0000	524.5783
Total			46.63		328.59	525.13		0.00	525.13
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	7.0475	in	S _{top} = 74.51 in ³	y-bar =	7.0475	in	S _{top} = 74.51 in ³
I _x =	525.13	in ⁴	S _{bott.} = 74.51 in ³	I _x =	525.13	in ⁴	S _{bott.} = 74.51 in ³
c _{top} =	7.0475	in	A = 46.6255 in ²	c _{top} =	7.0475	in	A = 46.6255 in ²
c _{bottom} =	7.0475	in	r _x = 3.3560 in	c _{bottom} =	7.0475	in	r _x = 3.3560 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	12.3570	184.6122	628.3732	0.0000	0.0000	628.3732
2	Left Flange		15.8428	0.5620	8.9036	1.6679	11.7950	2204.0796	2205.7476
	Right Flange		15.8428	24.1520	382.6348	1.6679	11.7950	2204.0796	2205.7476
Total			46.63		576.15	631.71		4408.16	5039.87
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3570	in	S _{right} = 407.86 in ³	x-bar =	12.3570	in	S _{right} = 407.86 in ³
I _y =	5039.87	in ⁴	S _{left} = 407.86 in ³	I _y =	5039.87	in ⁴	S _{left} = 407.86 in ³
C _{right} =	12.3570	in	A = 46.6255 in ²	C _{right} =	12.3570	in	A = 46.6255 in ²
C _{left} =	12.3570	in	r _y = 10.3968 in	C _{left} =	12.3570	in	r _y = 10.3968 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 160

- $A_1 = t_w = 0.6650$ in
- $A_2 = t_f = 1.1240$ in
- $B_1 = d = 24.7140$ in
- $B_2 = b_f = 14.0950$ in

Cover Plate

- $A_3 = t = 0.6875$ in ****Silicon Steel**
- $B_3 = b = 16.0000$ in



Member U122-L122

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	8.0000	119.5191	0.5506	0.0000	0.0000	0.5506
2	Flange Plates		31.6856	8.0000	253.4845	524.5783	0.0000	0.0000	524.5783
3	Cover Plate		22.0000	8.0000	176.0000	469.3333	0.0000	0.0000	469.3333
Total			68.63		549.00	994.46		0.00	994.46
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	8.0000	in	S _{top} = 124.31 in ³	y-bar =	8.0000	in	S _{top} = 124.31 in ³
I _x =	994.46	in ⁴	S _{bott.} = 124.31 in ³	I _x =	994.46	in ⁴	S _{bott.} = 124.31 in ³
c _{top} =	8.0000	in	A = 68.6255 in ²	c _{top} =	8.0000	in	A = 68.6255 in ²
c _{bottom} =	8.0000	in	r _x = 3.8067 in	c _{bottom} =	8.0000	in	r _x = 3.8067 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	13.0445	194.8834	628.3732	0.0000	0.0000	628.3732
2	Left Flange		15.8428	1.2495	19.7956	1.6679	11.7950	2204.0796	2205.7476
	Right Flange		15.8428	24.8395	393.5267	1.6679	11.7950	2204.0796	2205.7476
3	Left Plate		11.0000	0.3438	3.7813	0.4333	12.7008	1774.3996	1774.8328
	Right Plate		11.0000	25.7453	283.1978	0.4333	12.7008	1774.3996	1774.8328
Total			68.63		895.18	632.58		7956.96	8589.53
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	13.0445	in	S _{right} = 658.48 in ³	x-bar =	13.0445	in	S _{right} = 658.48 in ³
I _y =	8589.53	n ⁴	S _{left} = 658.48 in ³	I _y =	8589.53	n ⁴	S _{left} = 658.48 in ³
C _{right} =	13.0445	in	A = 68.6255 in ²	C _{right} =	13.0445	in	A = 68.6255 in ²
C _{left} =	13.0445	in	r _y = 11.1877 in	C _{left} =	13.0445	in	r _y = 11.1877 in



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.5000$ in

Perforated Plate:

$A_3 = t = 0.6250$ in
 $B_3 = l = 5.7500$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.0000$ in

Left Web Plate:

$A_4 = h = 20.0000$ in
 $B_4 = t = 0.8750$ in

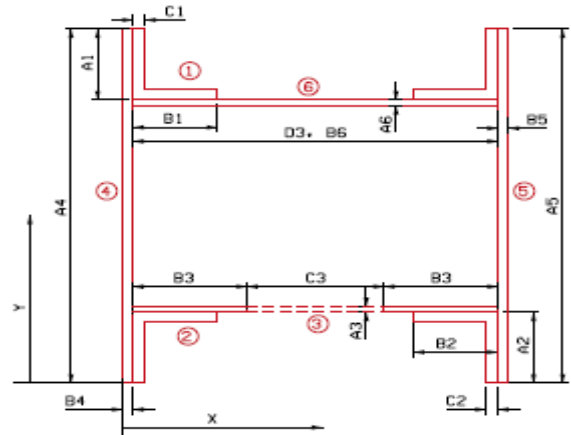
Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 0.8750$ in

Cover Plate:

$A_6 = t = 0.5000$ in
 $B_6 = l = 23.0000$ in

****Silicon Steel**



Member U123-L123

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.5000	16.2500	56.8750	0.0729	5.8824	121.1113	121.1842
	Vertical Leg	4.0000	18.0000	72.0000	5.3333	7.6324	233.0172	238.3505
2	Horizontal Leg	3.5000	3.7500	13.1250	0.0729	6.6176	153.2719	153.3448
	Vertical Leg	4.0000	2.0000	8.0000	5.3333	8.3676	280.0636	285.3969
3	Perforated Plate	7.1875	4.3125	30.9961	0.2340	6.0551	263.5198	263.7538
4	Plate	17.5000	10.0000	175.0000	583.3333	0.3676	2.3641	585.6975
5	Plate	17.5000	10.0000	175.0000	583.3333	0.3676	2.3641	585.6975
6	Cover Plate	11.5000	15.7500	181.1250	0.2396	5.3824	333.1638	333.4034
Total		68.69		712.12	1177.95		1388.88	2566.83
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	10.3676 in	S _{top} =	266.48 in ³	y-bar =	10.3676 in	S _{top} =	266.48 in ³
I _x =	2566.83 in ⁴	S _{bott.} =	247.58 in ³	I _x =	2566.83 in ⁴	S _{bott.} =	247.58 in ³
C _{top} =	9.6324 in	A =	68.6875 in ²	C _{top} =	9.6324 in	A =	68.6875 in ²
C _{bottom} =	10.3676 in	r _x =	6.1131 in	C _{bottom} =	10.3676 in	r _x =	6.1131 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.7500	3.1250	5.4688	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	1.1250	2.2500	0.0417	11.2500	253.1250	253.1667	
1 (Right)	Horizontal Leg	1.7500	21.6250	37.8438	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	23.6250	47.2500	0.0417	11.2500	253.1250	253.1667	
2 (Left)	Horizontal Leg	1.7500	3.1250	5.4688	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	1.1250	2.2500	0.0417	11.2500	253.1250	253.1667	
2 (Right)	Horizontal Leg	1.7500	21.6250	37.8438	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	23.6250	47.2500	0.0417	11.2500	253.1250	253.1667	
3 (Left)	Perforated Plate	3.5938	3.7500	13.4766	9.9015	8.6250	267.3413	277.2428	
3 (Right)	Perforated Plate	3.5938	21.0000	75.4688	9.9015	8.6250	267.3413	277.2428	
4	Plate	17.5000	0.4375	7.6563	1.1165	11.9375	2493.8184	2494.9349	
5	Plate	17.5000	24.3125	425.4688	1.1165	11.9375	2493.8184	2494.9349	
6	Cover Plate	11.5000	12.3750	142.3125	506.9583	0.0000	0.0000	506.9583	
Total		68.69		850.01	536.31		7133.76	7670.06	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3750 in	S _{right} =	619.80 in ³	x-bar =	12.3750 in	S _{right} =	619.80 in ³
I _y =	7670.06 in ⁴	S _{left} =	619.80 in ³	I _y =	7670.06 in ⁴	S _{left} =	619.80 in ³
C _{right} =	12.3750 in	A =	68.6875 in ²	C _{right} =	12.3750 in	A =	68.6875 in ²
C _{left} =	12.3750 in	r _y =	10.5672 in	C _{left} =	12.3750 in	r _y =	10.5672 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.6250$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.6250$ in

Perforated Plate:

$A_3 = t = 0.7500$ in
 $B_3 = l = 5.7500$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.0000$ in

Left Web Plate:

$A_4 = h = 24.0000$ in
 $B_4 = t = 0.8750$ in

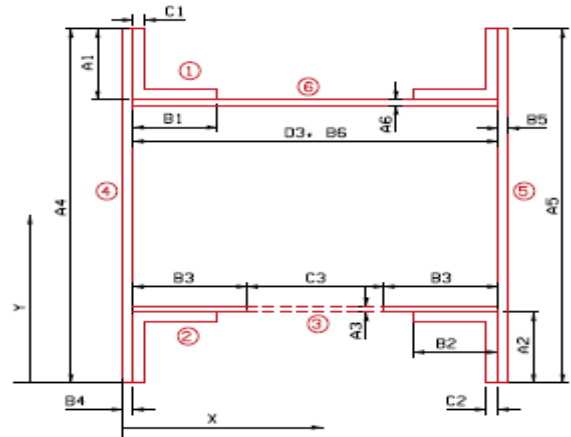
Right Web Plate:

$A_5 = h = 24.0000$ in
 $B_5 = t = 0.8750$ in

Cover Plate:

$A_6 = t = 0.6250$ in
 $B_6 = l = 23.0000$ in

****Silicon Steel**



Member U124-L124

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	4.2188	20.3125	85.6934	0.1373	7.7763	255.1090	255.2463
	Vertical Leg	5.0000	22.0000	110.0000	6.6667	9.4638	447.8141	454.4808
2	Horizontal Leg	4.2188	3.6875	15.5566	0.1373	8.8487	330.3287	330.4660
	Vertical Leg	5.0000	2.0000	10.0000	6.6667	10.5362	555.0613	561.7280
3	Perforated Plate	8.6250	4.3750	37.7344	0.4043	8.1612	574.4748	574.8791
4	Plate	21.0000	12.0000	252.0000	1008.0000	0.5362	6.0385	1014.0385
5	Plate	21.0000	12.0000	252.0000	1008.0000	0.5362	6.0385	1014.0385
6	Cover Plate	14.3750	19.6875	283.0078	0.4679	7.1513	735.1458	735.6137
Total		83.44		1045.99	2030.48		2910.01	4940.49
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00	0.00	0.00	0.00



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	12.5362 in	S _{top} =	430.97 in ³	y-bar =	12.5362 in	S _{top} =	430.97 in ³
I _x =	4940.49 in ⁴	S _{bott.} =	394.10 in ³	I _x =	4940.49 in ⁴	S _{bott.} =	394.10 in ³
C _{top} =	11.4638 in	A =	83.4375 in ²	C _{top} =	11.4638 in	A =	83.4375 in ²
C _{bottom} =	12.5362 in	r _x =	7.6949 in	C _{bottom} =	12.5362 in	r _x =	7.6949 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.1094	3.1875	6.7236	2.0023	9.1875	178.0527	180.0549	
	Vertical Leg	2.5000	1.1875	2.9688	0.0814	11.1875	312.9004	312.9818	
1 (Right)	Horizontal Leg	2.1094	21.5625	45.4834	2.0023	9.1875	178.0527	180.0549	
	Vertical Leg	2.5000	23.5625	58.9063	0.0814	11.1875	312.9004	312.9818	
2 (Left)	Horizontal Leg	2.1094	3.1875	6.7236	2.0023	9.1875	178.0527	180.0549	
	Vertical Leg	2.5000	1.1875	2.9688	0.0814	11.1875	312.9004	312.9818	
2 (Right)	Horizontal Leg	2.1094	21.5625	45.4834	2.0023	9.1875	178.0527	180.0549	
	Vertical Leg	2.5000	23.5625	58.9063	0.0814	11.1875	312.9004	312.9818	
3 (Left)	Perforated Plate	4.3125	3.7500	16.1719	11.8818	8.6250	320.8096	332.6914	
3 (Right)	Perforated Plate	4.3125	21.0000	90.5625	11.8818	8.6250	320.8096	332.6914	
4	Plate	21.0000	0.4375	9.1875	1.3398	11.9375	2992.5820	2993.9219	
5	Plate	21.0000	24.3125	510.5625	1.3398	11.9375	2992.5820	2993.9219	
6	Cover Plate	14.3750	12.3750	177.8906	633.6979	0.0000	0.0000	633.6979	
Total		83.44		1032.54	668.48		8590.60	9259.07	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3750 in	S _{right} =	748.21 in ³	x-bar =	12.3750 in	S _{right} =	748.21 in ³
I _y =	9259.07 in ⁴	S _{left} =	748.21 in ³	I _y =	9259.07 in ⁴	S _{left} =	748.21 in ³
C _{right} =	12.3750 in	A =	83.4375 in ²	C _{right} =	12.3750 in	A =	83.4375 in ²
C _{left} =	12.3750 in	r _y =	10.5342 in	C _{left} =	12.3750 in	r _y =	10.5342 in



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_t = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_t = 0.5000$ in

Perforated Plate:

$A_3 = t = 0.6250$ in
 $B_3 = l = 5.7500$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.0000$ in

Left Web Plate:

$A_4 = h = 26.0000$ in
 $B_4 = t = 0.8750$ in

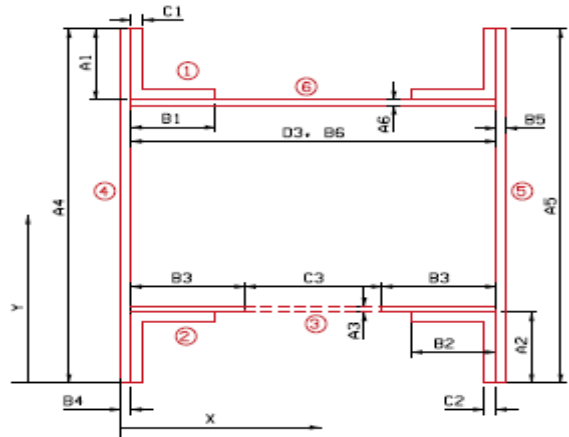
Right Web Plate:

$A_5 = h = 26.0000$ in
 $B_5 = t = 0.8750$ in

Cover Plate:

$A_6 = t = 0.5000$ in
 $B_6 = l = 23.0000$ in

****Silicon Steel**



Member U125-L125

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.5000	22.2500	77.8750	0.0729	8.7678	269.0606	269.1335
	Vertical Leg	4.0000	24.0000	96.0000	5.3333	10.5178	442.4971	447.8305
2	Horizontal Leg	3.5000	3.7500	13.1250	0.0729	9.7322	331.5045	331.5774
	Vertical Leg	4.0000	2.0000	8.0000	5.3333	11.4822	527.3629	532.6963
3	Perforated Plate	7.1875	4.3125	30.9961	0.2340	9.1697	604.3484	604.5824
4	Plate	22.7500	13.0000	295.7500	1281.5833	0.4822	5.2896	1286.8729
5	Plate	22.7500	13.0000	295.7500	1281.5833	0.4822	5.2896	1286.8729
6	Cover Plate	11.5000	21.7500	250.1250	0.2396	8.2678	786.1014	786.3410
Total		79.19		1067.62	2574.45		2971.45	5545.91
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	13.4822 in	S _{top} =	443.04 in ³	y-bar =	13.4822 in	S _{top} =	443.04 in ³
I _x =	5545.91 in ⁴	S _{bott.} =	411.35 in ³	I _x =	5545.91 in ⁴	S _{bott.} =	411.35 in ³
C _{top} =	12.5178 in	A =	79.1875 in ²	C _{top} =	12.5178 in	A =	79.1875 in ²
C _{bottom} =	13.4822 in	r _x =	8.3687 in	C _{bottom} =	13.4822 in	r _x =	8.3687 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.7500	3.1250	5.4688	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	1.1250	2.2500	0.0417	11.2500	253.1250	253.1667	
1 (Right)	Horizontal Leg	1.7500	21.6250	37.8438	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	23.6250	47.2500	0.0417	11.2500	253.1250	253.1667	
2 (Left)	Horizontal Leg	1.7500	3.1250	5.4688	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	1.1250	2.2500	0.0417	11.2500	253.1250	253.1667	
2 (Right)	Horizontal Leg	1.7500	21.6250	37.8438	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	23.6250	47.2500	0.0417	11.2500	253.1250	253.1667	
3 (Left)	Perforated Plate	3.5938	3.7500	13.4766	9.9015	8.6250	267.3413	277.2428	
3 (Right)	Perforated Plate	3.5938	21.0000	75.4688	9.9015	8.6250	267.3413	277.2428	
4	Plate	22.7500	0.4375	9.9531	1.4515	11.9375	3241.9639	3243.4154	
5	Plate	22.7500	24.3125	553.1094	1.4515	11.9375	3241.9639	3243.4154	
6	Cover Plate	11.5000	12.3750	142.3125	506.9583	0.0000	0.0000	506.9583	
Total		79.19		979.95	536.98		8630.05	9167.02	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3750 in	S _{right} =	740.77 in ³	x-bar =	12.3750 in	S _{right} =	740.77 in ³
I _y =	9167.02 in ⁴	S _{left} =	740.77 in ³	I _y =	9167.02 in ⁴	S _{left} =	740.77 in ³
C _{right} =	12.3750 in	A =	79.1875 in ²	C _{right} =	12.3750 in	A =	79.1875 in ²
C _{left} =	12.3750 in	r _y =	10.7593 in	C _{left} =	12.3750 in	r _y =	10.7593 in



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_t = 0.5625$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_t = 0.5625$ in

Perforated Plate:

$A_3 = t = 0.7500$ in
 $B_3 = l = 5.5000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 22.5000$ in

Left Web Plate:

$A_4 = h = 26.0000$ in
 $B_4 = t = 1.3750$ in

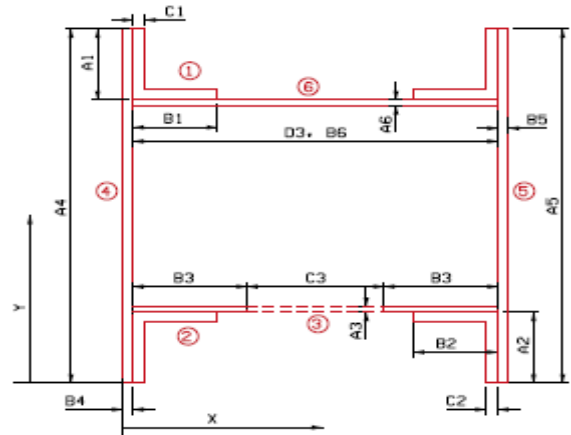
Right Web Plate:

$A_5 = h = 26.0000$ in
 $B_5 = t = 1.3750$ in

Cover Plate:

$A_6 = t = 0.6250$ in
 $B_6 = l = 22.5000$ in

****Silicon Steel**



Member U126-L126

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.8672	22.2813	86.1658	0.1020	8.8198	300.8242	300.9262
	Vertical Leg	4.5000	24.0000	108.0000	6.0000	10.5386	499.7748	505.7748
2	Horizontal Leg	3.8672	3.7188	14.3811	0.1020	9.7427	367.0741	367.1761
	Vertical Leg	4.5000	2.0000	9.0000	6.0000	11.4614	591.1416	597.1416
3	Perforated Plate	8.2500	4.3750	36.0938	0.3867	9.0864	681.1493	681.5360
4	Plate	35.7500	13.0000	464.7500	2013.9167	0.4614	7.6124	2021.5291
5	Plate	35.7500	13.0000	464.7500	2013.9167	0.4614	7.6124	2021.5291
6	Cover Plate	14.0625	21.6875	304.9805	0.4578	8.2261	951.5801	952.0379
Total		110.55		1488.12	4040.88		3406.77	7447.65
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	13.4614 in	S _{top} =	593.98 in ³	y-bar =	13.4614 in	S _{top} =	593.98 in ³
I _x =	7447.65 in ⁴	S _{bott.} =	553.26 in ³	I _x =	7447.65 in ⁴	S _{bott.} =	553.26 in ³
C _{top} =	12.5386 in	A =	110.5469 in ²	C _{top} =	12.5386 in	A =	110.5469 in ²
C _{bottom} =	13.4614 in	r _x =	8.2080 in	C _{bottom} =	13.4614 in	r _x =	8.2080 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.9336	3.6563	7.0697	1.9040	8.9688	155.5353	157.4393	
	Vertical Leg	2.2500	1.6563	3.7266	0.0593	10.9688	270.7053	270.7646	
1 (Right)	Horizontal Leg	1.9336	21.5938	41.7535	1.9040	8.9688	155.5353	157.4393	
	Vertical Leg	2.2500	23.5938	53.0859	0.0593	10.9688	270.7053	270.7646	
2 (Left)	Horizontal Leg	1.9336	3.6563	7.0697	1.9040	8.9688	155.5353	157.4393	
	Vertical Leg	2.2500	1.6563	3.7266	0.0593	10.9688	270.7053	270.7646	
2 (Right)	Horizontal Leg	1.9336	21.5938	41.7535	1.9040	8.9688	155.5353	157.4393	
	Vertical Leg	2.2500	23.5938	53.0859	0.0593	10.9688	270.7053	270.7646	
3 (Left)	Perforated Plate	4.1250	4.1250	17.0156	10.3984	8.5000	298.0313	308.4297	
3 (Right)	Perforated Plate	4.1250	21.1250	87.1406	10.3984	8.5000	298.0313	308.4297	
4	Plate	35.7500	0.6875	24.5781	5.6325	11.9375	5094.5146	5100.1471	
5	Plate	35.7500	24.5625	878.1094	5.6325	11.9375	5094.5146	5100.1471	
6	Cover Plate	14.0625	12.6250	177.5391	593.2617	0.0000	0.0000	593.2617	
Total		110.55		1395.65	633.18		12490.05	13123.23	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.6250 in	S _{right} =	1039.46 in ³	x-bar =	12.6250 in	S _{right} =	1039.46 in ³
I _y =	13123.23 in ⁴	S _{left} =	1039.46 in ³	I _y =	13123.23 in ⁴	S _{left} =	1039.46 in ³
C _{right} =	12.6250 in	A =	110.5469 in ²	C _{right} =	12.6250 in	A =	110.5469 in ²
C _{left} =	12.6250 in	r _y =	10.8955 in	C _{left} =	12.6250 in	r _y =	10.8955 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam WF14x 193

- $A_1 = t_w = 0.8900$ in
- $A_2 = t_f = 1.4380$ in
- $B_1 = d = 15.5000$ in
- $B_2 = b_f = 15.7100$ in



Member U127-L127

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		11.2354	7.8550	88.2538	0.7416	0.0000	0.0000	0.7416
2	Flange Plates		45.1820	7.8550	354.9043	929.2577	0.0000	0.0000	929.2577
Total			56.42		443.16	930.00		0.00	930.00
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	7.8550	in	S _{top} = 118.40 in ³	y-bar =	7.8550	in	S _{top} = 118.40 in ³
I _x =	930.00	in ⁴	S _{bottom} = 118.40 in ³	I _x =	930.00	in ⁴	S _{bottom} = 118.40 in ³
c _{top} =	7.8550	in	A = 56.4173 in ²	c _{top} =	7.8550	in	A = 56.4173 in ²
c _{bottom} =	7.8550	in	r _x = 4.0601 in	c _{bottom} =	7.8550	in	r _x = 4.0601 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		11.2354	7.7500	87.0740	149.2106	0.0000	0.0000	149.2106
2	Left Flange		22.5910	0.7190	16.2429	3.8929	7.0310	1116.7842	1120.6771
	Right Flange		22.5910	14.7810	333.9173	3.8929	7.0310	1116.7842	1120.6771
Total			56.42		437.23	157.00		2233.57	2390.56
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	7.7500	in	S _{right} =	308.46	in ³	x-bar =	7.7500	in	S _{right} =	308.46	in ³
I _y =	2390.56	in ⁴	S _{left} =	308.46	in ³	I _y =	2390.56	in ⁴	S _{left} =	308.46	in ³
C _{right} =	7.7500	in	A =	56.4173	in ²	C _{right} =	7.7500	in	A =	56.4173	in ²
C _{left} =	7.7500	in	r _y =	6.5094	in	C _{left} =	7.7500	in	r _y =	6.5094	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

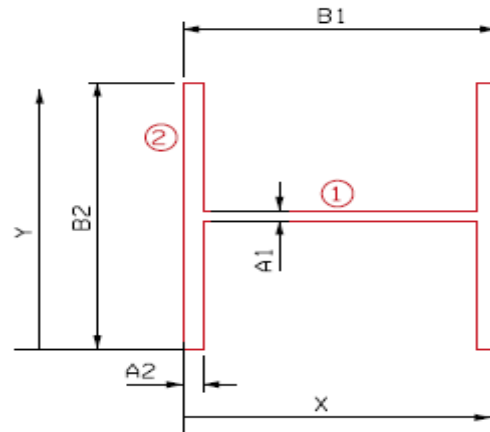
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam WF14x 167

- $A_1 = t_w = 0.7800$ in
- $A_2 = t_f = 1.2480$ in
- $B_1 = d = 15.1200$ in
- $B_2 = b_f = 15.6000$ in



Member U128-L128

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		9.8467	7.8000	76.8044	0.4992	0.0000	0.0000	0.4992
2	Flange Plates		38.9376	7.8000	303.7133	789.6545	0.0000	0.0000	789.6545
Total			48.78		380.52	790.15		0.00	790.15
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	7.8000	in	S _{top} = 101.30 in ³	y-bar =	7.8000	in	S _{top} = 101.30 in ³
I _x =	790.15	in ⁴	S _{bottom} = 101.30 in ³	I _x =	790.15	in ⁴	S _{bottom} = 101.30 in ³
c _{top} =	7.8000	in	A = 48.7843 in ²	c _{top} =	7.8000	in	A = 48.7843 in ²
c _{bottom} =	7.8000	in	r _x = 4.0245 in	c _{bottom} =	7.8000	in	r _x = 4.0245 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		9.8467	7.5600	74.4412	130.7689	0.0000	0.0000	130.7689
2	Left Flange		19.4688	0.6240	12.1485	2.5269	6.9360	936.6069	939.1338
	Right Flange		19.4688	14.4960	282.2197	2.5269	6.9360	936.6069	939.1338
Total			48.78		368.81	135.82		1873.21	2009.04
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	7.5600	in	S _{right} =	265.75	in ³	x-bar =	7.5600	in	S _{right} =	265.75	in ³
I _y =	2009.04	in ⁴	S _{left} =	265.75	in ³	I _y =	2009.04	in ⁴	S _{left} =	265.75	in ³
C _{right} =	7.5600	in	A =	48.7843	in ²	C _{right} =	7.5600	in	A =	48.7843	in ²
C _{left} =	7.5600	in	r _y =	6.4173	in	C _{left} =	7.5600	in	r _y =	6.4173	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam WF14x 127

- $A_1 = t_w = 0.6100$ in
- $A_2 = t_f = 0.9980$ in
- $B_1 = d = 14.6200$ in
- $B_2 = b_f = 14.6900$ in



Member U129-L129

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		7.7006	7.3450	56.5612	0.2388	0.0000	0.0000	0.2388
2	Flange Plates		29.3212	7.3450	215.3645	527.2841	0.0000	0.0000	527.2841
Total			37.02		271.93	527.52		0.00	527.52
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.3450	in	$S_{top} =$	71.82	in ³	y-bar =	7.3450	in	$S_{top} =$	71.82	in ³
$I_x =$	527.52	in ⁴	$S_{bott.} =$	71.82	in ³	$I_x =$	527.52	in ⁴	$S_{bott.} =$	71.82	in ³
$c_{top} =$	7.3450	in	A =	37.0219	in ²	$c_{top} =$	7.3450	in	A =	37.0219	in ²
$c_{bottom} =$	7.3450	in	$r_x =$	3.7748	in	$c_{bottom} =$	7.3450	in	$r_x =$	3.7748	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		7.7006	7.3100	56.2917	102.2679	0.0000	0.0000	102.2679
2	Left Flange		14.6606	0.4990	7.3156	1.2168	6.8110	680.1021	681.3189
	Right Flange		14.6606	14.1210	207.0226	1.2168	6.8110	680.1021	681.3189
Total			37.02		270.63	104.70		1360.20	1464.91
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties				
x-bar =	7.3100	in	S _{right} =	200.40 in ³	x-bar =	7.3100	in	S _{right} =	200.40 in ³
I _y =	1464.91	in ⁴	S _{left} =	200.40 in ³	I _y =	1464.91	in ⁴	S _{left} =	200.40 in ³
C _{right} =	7.3100	in	A =	37.0219 in ²	C _{right} =	7.3100	in	A =	37.0219 in ²
C _{left} =	7.3100	in	r _y =	6.2904 in	C _{left} =	7.3100	in	r _y =	6.2904 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

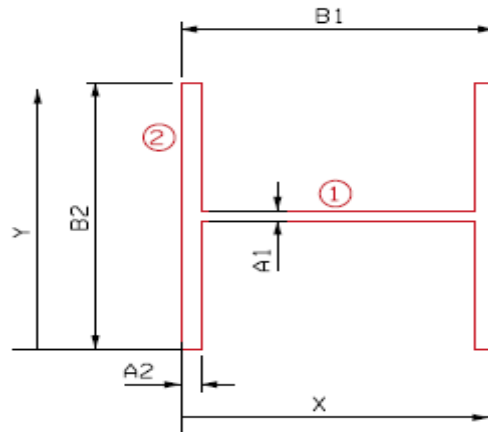
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam WF14x 95

- $A_1 = t_w = 0.4650$ in
- $A_2 = t_f = 0.7480$ in
- $B_1 = d = 14.1200$ in
- $B_2 = b_f = 14.5450$ in



Member U130-L130

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		5.8702	7.2725	42.6907	0.1058	0.0000	0.0000	0.1058
2	Flange Plates		21.7593	7.2725	158.2447	383.6114	0.0000	0.0000	383.6114
Total			27.63		200.94	383.72		0.00	383.72
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.2725	in	S _{top} =	52.76	in ³	y-bar =	7.2725	in	S _{top} =	52.76	in ³
I _x =	383.72	in ⁴	S _{bottom} =	52.76	in ³	I _x =	383.72	in ⁴	S _{bottom} =	52.76	in ³
c _{top} =	7.2725	in	A =	27.6295	in ²	c _{top} =	7.2725	in	A =	27.6295	in ²
c _{bottom} =	7.2725	in	r _x =	3.7267	in	c _{bottom} =	7.2725	in	r _x =	3.7267	in



Made By SFH
 Checked By NRF

Date 1/24/2012
 Date 1/26/2012

Job No. P402110046
 Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		5.8702	7.0600	41.4433	77.9584	0.0000	0.0000	77.9584
2	Left Flange		10.8797	0.3740	4.0690	0.5073	6.6860	486.3490	486.8563
	Right Flange		10.8797	13.7460	149.5518	0.5073	6.6860	486.3490	486.8563
Total			27.63		195.06	78.97		972.70	1051.67
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	7.0600	in	S _{right} =	148.96	in ³	x-bar =	7.0600	in	S _{right} =	148.96	in ³
I _y =	1051.67	in ⁴	S _{left} =	148.96	in ³	I _y =	1051.67	in ⁴	S _{left} =	148.96	in ³
C _{right} =	7.0600	in	A =	27.6295	in ²	C _{right} =	7.0600	in	A =	27.6295	in ²
C _{left} =	7.0600	in	r _y =	6.1696	in	C _{left} =	7.0600	in	r _y =	6.1696	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam WF14x 78

- $A_1 = t_w = 0.4280$ in
- $A_2 = t_f = 0.7180$ in
- $B_1 = d = 14.0600$ in
- $B_2 = b_f = 12.0000$ in



Member U131-L131

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		5.4031	6.0000	32.4184	0.0825	0.0000	0.0000	0.0825
2	Flange Plates		17.2320	6.0000	103.3920	206.7840	0.0000	0.0000	206.7840
Total			22.64		135.81	206.87		0.00	206.87
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0000	in	$S_{top} =$	34.48	in ³	y-bar =	6.0000	in	$S_{top} =$	34.48	in ³
$I_x =$	206.87	in ⁴	$S_{bott.} =$	34.48	in ³	$I_x =$	206.87	in ⁴	$S_{bott.} =$	34.48	in ³
$c_{top} =$	6.0000	in	A =	22.6351	in ²	$c_{top} =$	6.0000	in	A =	22.6351	in ²
$c_{bottom} =$	6.0000	in	$r_x =$	3.0231	in	$c_{bottom} =$	6.0000	in	$r_x =$	3.0231	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		5.4031	7.0300	37.9836	71.7552	0.0000	0.0000	71.7552
2	Left Flange		8.6160	0.3590	3.0931	0.3701	6.6710	383.4313	383.8015
	Right Flange		8.6160	13.7010	118.0478	0.3701	6.6710	383.4313	383.8015
Total			22.64		159.12	72.50		766.86	839.36
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	7.0300	in	S _{right} =	119.40	in ³	x-bar =	7.0300	in	S _{right} =	119.40	in ³
I _y =	839.36	in ⁴	S _{left} =	119.40	in ³	I _y =	839.36	in ⁴	S _{left} =	119.40	in ³
C _{right} =	7.0300	in	A =	22.6351	in ²	C _{right} =	7.0300	in	A =	22.6351	in ²
C _{left} =	7.0300	in	r _y =	6.0895	in	C _{left} =	7.0300	in	r _y =	6.0895	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam WF14x 84

- $A_1 = t_w = 0.4510$ in
- $A_2 = t_f = 0.7780$ in
- $B_1 = d = 14.1800$ in
- $B_2 = b_f = 12.0230$ in



Member U132-L132

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		5.6934	6.0115	34.2260	0.0965	0.0000	0.0000	0.0965
2	Flange Plates		18.7078	6.0115	112.4619	225.3548	0.0000	0.0000	225.3548
Total			24.40		146.69	225.45		0.00	225.45
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0115	in	$S_{top} =$	37.50	in ³	y-bar =	6.0115	in	$S_{top} =$	37.50	in ³
$I_x =$	225.45	in ⁴	$S_{bott.} =$	37.50	in ³	$I_x =$	225.45	in ⁴	$S_{bott.} =$	37.50	in ³
$c_{top} =$	6.0115	in	A =	24.4012	in ²	$c_{top} =$	6.0115	in	A =	24.4012	in ²
$c_{bottom} =$	6.0115	in	$r_x =$	3.0396	in	$c_{bottom} =$	6.0115	in	$r_x =$	3.0396	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		5.6934	7.0900	40.3664	75.6112	0.0000	0.0000	75.6112
2	Left Flange		9.3539	0.3890	3.6387	0.4718	6.7010	420.0217	420.4935
	Right Flange		9.3539	13.7910	128.9996	0.4718	6.7010	420.0217	420.4935
Total			24.40		173.00	76.55		840.04	916.60
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	7.0900	in	S _{right} =	129.28	in ³	x-bar =	7.0900	in	S _{right} =	129.28	in ³
I _y =	916.60	in ⁴	S _{left} =	129.28	in ³	I _y =	916.60	in ⁴	S _{left} =	129.28	in ³
C _{right} =	7.0900	in	A =	24.4012	in ²	C _{right} =	7.0900	in	A =	24.4012	in ²
C _{left} =	7.0900	in	r _y =	6.1289	in	C _{left} =	7.0900	in	r _y =	6.1289	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam WF14x 111

- $A_1 = t_w = 0.5400$ in
- $A_2 = t_f = 0.8730$ in
- $B_1 = d = 14.3700$ in
- $B_2 = b_f = 14.6200$ in



Member U133-L133

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		6.8170	7.3100	49.8320	0.1657	0.0000	0.0000	0.1657
2	Flange Plates		25.5265	7.3100	186.5989	454.6792	0.0000	0.0000	454.6792
Total			32.34		236.43	454.84		0.00	454.84
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.3100	in	$S_{top} =$	62.22	in ³	y-bar =	7.3100	in	$S_{top} =$	62.22	in ³
$I_x =$	454.84	in ⁴	$S_{bott.} =$	62.22	in ³	$I_x =$	454.84	in ⁴	$S_{bott.} =$	62.22	in ³
$c_{top} =$	7.3100	in	A =	32.3435	in ²	$c_{top} =$	7.3100	in	A =	32.3435	in ²
$c_{bottom} =$	7.3100	in	$r_x =$	3.7501	in	$c_{bottom} =$	7.3100	in	$r_x =$	3.7501	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		6.8170	7.1850	48.9799	90.5323	0.0000	0.0000	90.5323
2	Left Flange		12.7633	0.4365	5.5712	0.8106	6.7485	581.2676	582.0782
	Right Flange		12.7633	13.9335	177.8369	0.8106	6.7485	581.2676	582.0782
Total			32.34		232.39	92.15		1162.54	1254.69
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	7.1850	in	S _{right} =	174.63	in ³	x-bar =	7.1850	in	S _{right} =	174.63	in ³
I _y =	1254.69	in ⁴	S _{left} =	174.63	in ³	I _y =	1254.69	in ⁴	S _{left} =	174.63	in ³
C _{right} =	7.1850	in	A =	32.3435	in ²	C _{right} =	7.1850	in	A =	32.3435	in ²
C _{left} =	7.1850	in	r _y =	6.2284	in	C _{left} =	7.1850	in	r _y =	6.2284	in



Made By KMW
Checked By ADK

Date 2/6/2012
Date 2/15/2012

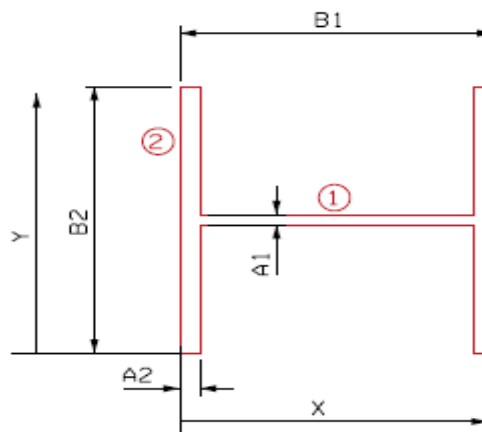
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam **WF14x 150**

- $A_1 = t_w = 0.6950$ in
- $A_2 = t_f = 1.1280$ in
- $B_1 = d = 14.8800$ in
- $B_2 = b_f = 15.5150$ in



Member U134-L134

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		8.7737	7.7575	68.0618	0.3532	0.0000	0.0000	0.3532
2	Flange Plates		35.0018	7.7575	271.5268	702.1230	0.0000	0.0000	702.1230
Total			43.78		339.59	702.48		0.00	702.48
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1250	6.0000	-0.7500	7.7575	-5.8181	-2.2500	0.0000	0.0000	-2.2500
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.75		-5.82	-2.25		0.00	-2.25

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.7575	in	$S_{top} =$	90.55	in ³	y-bar =	7.7575	in	$S_{top} =$	90.26	in ³
$I_x =$	702.48	in ⁴	$S_{bott.} =$	90.55	in ³	$I_x =$	700.23	in ⁴	$S_{bott.} =$	90.26	in ³
$C_{top} =$	7.7575	in	A =	43.7755	in ²	$C_{top} =$	7.7575	in	A =	43.0255	in ²
$C_{bottom} =$	7.7575	in	$r_x =$	4.0059	in	$C_{bottom} =$	7.7575	in	$r_x =$	4.0342	in



Made By KMW
Checked By ADK

Date 2/6/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		8.7737	7.4400	65.2762	116.5184	0.0000	0.0000	116.5184
2	Left Flange		17.5009	0.5640	9.8705	1.8557	6.8760	827.4326	829.2882
	Right Flange		17.5009	14.3160	250.5432	1.8557	6.8760	827.4326	829.2882
Total			43.78		325.69	120.23		1654.87	1775.09
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	6.0000	0.1250	-0.7500	0.0625	-0.0469	-0.0010	7.5061	-42.2562	-42.2571
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.75		-0.05	0.00		-42.26	-42.26

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	7.4400	in	S _{right} = 238.59 in ³	x-bar =	7.5686	in	S _{right} = 237.00 in ³
I _y =	1775.09	in ⁴	S _{left} = 238.59 in ³	I _y =	1732.84	in ⁴	S _{left} = 228.95 in ³
C _{right} =	7.4400	in	A = 43.7755 in ²	C _{right} =	7.3114	in	A = 43.0255 in ²
C _{left} =	7.4400	in	r _y = 6.3679 in	C _{left} =	7.5686	in	r _y = 6.3462 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam WF14x 184

- $A_1 = t_w = 0.8400$ in
- $A_2 = t_f = 1.3780$ in
- $B_1 = d = 15.3800$ in
- $B_2 = b_f = 15.6600$ in



Member U135-L135

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		10.6042	7.8300	83.0306	0.6235	0.0000	0.0000	0.6235
2	Flange Plates		43.1590	7.8300	337.9347	882.0095	0.0000	0.0000	882.0095
Total			53.76		420.97	882.63		0.00	882.63
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	7.8300	in	$S_{top} = 112.72$	in ³	y-bar =	7.8300	in	$S_{top} = 112.72$	in ³		
$I_x =$	882.63	in ⁴	$S_{bott.} = 112.72$	in ³	$I_x =$	882.63	in ⁴	$S_{bott.} = 112.72$	in ³		
$c_{top} =$	7.8300	in	A =	53.7631	in ²	$c_{top} =$	7.8300	in	A =	53.7631	in ²
$c_{bottom} =$	7.8300	in	$r_x =$	4.0518	in	$c_{bottom} =$	7.8300	in	$r_x =$	4.0518	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.6042	7.6900	81.5460	140.8280	0.0000	0.0000	140.8280
2	Left Flange		21.5795	0.6890	14.8683	3.4147	7.0010	1057.6967	1061.1114
	Right Flange		21.5795	14.6910	317.0241	3.4147	7.0010	1057.6967	1061.1114
Total			53.76		413.44	147.66		2115.39	2263.05
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	7.6900	in	S _{right} =	294.28	in ³	x-bar =	7.6900	in	S _{right} =	294.28	in ³
I _y =	2263.05	in ⁴	S _{left} =	294.28	in ³	I _y =	2263.05	in ⁴	S _{left} =	294.28	in ³
C _{right} =	7.6900	in	A =	53.7631	in ²	C _{right} =	7.6900	in	A =	53.7631	in ²
C _{left} =	7.6900	in	r _y =	6.4879	in	C _{left} =	7.6900	in	r _y =	6.4879	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 150

- $A_1 = t_w = 0.6330$ in
- $A_2 = t_f = 1.0480$ in
- $B_1 = d = 24.5620$ in
- $B_2 = b_f = 14.0630$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U0-L1

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.2210	7.0315	99.9948	0.4748	0.0000	0.0000	0.4748
2	Flange Plates		29.4760	7.0315	207.2608	485.7848	0.0000	0.0000	485.7848
3	Cover Plate		0.0000	7.0315	0.0000	0.0000	0.0000	0.0000	0.0000
Total			43.70		307.26	486.26		0.00	486.26
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0315	in	S _{top} =	69.15	in ³	y-bar =	7.0315	in	S _{top} =	69.15	in ³
I _x =	486.26	in ⁴	S _{bott.} =	69.15	in ³	I _x =	486.26	in ⁴	S _{bott.} =	69.15	in ³
c _{top} =	7.0315	in	A =	43.6970	in ²	c _{top} =	7.0315	in	A =	43.6970	in ²
c _{bottom} =	7.0315	in	r _x =	3.3359	in	c _{bottom} =	7.0315	in	r _x =	3.3359	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.2210	12.2810	174.6478	598.1357	0.0000	0.0000	598.1357
2	Left Flange		14.7380	0.5240	7.7227	1.3489	11.7570	2037.1936	2038.5425
	Right Flange		14.7380	24.0380	354.2726	1.3489	11.7570	2037.1936	2038.5425
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.2810	0.0000	0.0000
	Right Plate		0.0000	24.5620	0.0000	0.0000	12.2810	0.0000	0.0000
Total			43.70		536.64	600.83		4074.39	4675.22
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.2810	in	S _{right} =	380.69	in ³	x-bar =	12.2810	in	S _{right} =	380.69	in ³
I _y =	4675.22	n ⁴	S _{left} =	380.69	in ³	I _y =	4675.22	n ⁴	S _{left} =	380.69	in ³
C _{right} =	12.2810	in	A =	43.6970	in ²	C _{right} =	12.2810	in	A =	43.6970	in ²
C _{left} =	12.2810	in	r _y =	10.3437	in	C _{left} =	12.2810	in	r _y =	10.3437	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

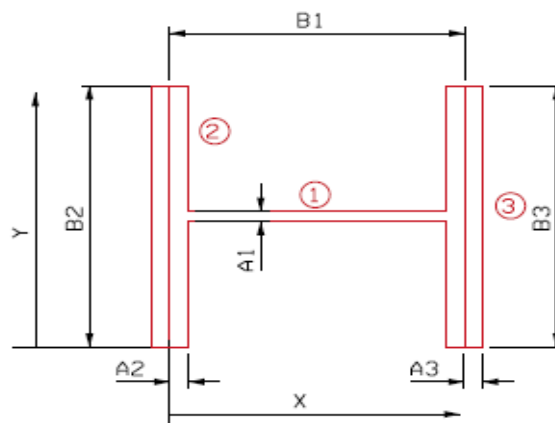
Element Dimensions (without Section Losses):

Rolled Beam CB24x 150

- $A_1 = t_w = 0.6330$ in
- $A_2 = t_f = 1.0480$ in
- $B_1 = d = 24.5620$ in
- $B_2 = b_f = 14.0630$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U1-L2

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.2210	7.0315	99.9948	0.4748	0.0000	0.0000	0.4748
2	Flange Plates		29.4760	7.0315	207.2608	485.7848	0.0000	0.0000	485.7848
3	Cover Plate		0.0000	7.0315	0.0000	0.0000	0.0000	0.0000	0.0000
Total			43.70		307.26	486.26		0.00	486.26
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0315	in	$S_{top} =$	69.15	in ³	y-bar =	7.0315	in	$S_{top} =$	69.15	in ³
$I_x =$	486.26	in ⁴	$S_{bott.} =$	69.15	in ³	$I_x =$	486.26	in ⁴	$S_{bott.} =$	69.15	in ³
$c_{top} =$	7.0315	in	A =	43.6970	in ²	$c_{top} =$	7.0315	in	A =	43.6970	in ²
$c_{bottom} =$	7.0315	in	$r_x =$	3.3359	in	$c_{bottom} =$	7.0315	in	$r_x =$	3.3359	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.2210	12.2810	174.6478	598.1357	0.0000	0.0000	598.1357
2	Left Flange		14.7380	0.5240	7.7227	1.3489	11.7570	2037.1936	2038.5425
	Right Flange		14.7380	24.0380	354.2726	1.3489	11.7570	2037.1936	2038.5425
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.2810	0.0000	0.0000
	Right Plate		0.0000	24.5620	0.0000	0.0000	12.2810	0.0000	0.0000
Total			43.70		536.64	600.83		4074.39	4675.22
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2810	in	S _{right} = 380.69 in ³	x-bar =	12.2810	in	S _{right} = 380.69 in ³
I _y =	4675.22	n ⁴	S _{left} = 380.69 in ³	I _y =	4675.22	n ⁴	S _{left} = 380.69 in ³
C _{right} =	12.2810	in	A = 43.6970 in ²	C _{right} =	12.2810	in	A = 43.6970 in ²
C _{left} =	12.2810	in	r _y = 10.3437 in	C _{left} =	12.2810	in	r _y = 10.3437 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 120

- $A_1 = t_w = 0.5590$ in
- $A_2 = t_f = 0.9220$ in
- $B_1 = d = 24.3100$ in
- $B_2 = b_f = 12.0890$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U2-L3

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x, gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.5585	6.0445	75.9098	0.3270	0.0000	0.0000	0.3270
2	Flange Plates		22.2921	6.0445	134.7447	271.4881	0.0000	0.0000	271.4881
3	Cover Plate		0.0000	6.0445	0.0000	0.0000	0.0000	0.0000	0.0000
Total			34.85		210.65	271.82		0.00	271.82
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0445	in	$S_{top} =$	44.97	in ³	y-bar =	6.0445	in	$S_{top} =$	44.97	in ³
$I_x =$	271.82	in ⁴	$S_{bott.} =$	44.97	in ³	$I_x =$	271.82	in ⁴	$S_{bott.} =$	44.97	in ³
$c_{top} =$	6.0445	in	A =	34.8506	in ²	$c_{top} =$	6.0445	in	A =	34.8506	in ²
$c_{bottom} =$	6.0445	in	$r_x =$	2.7927	in	$c_{bottom} =$	6.0445	in	$r_x =$	2.7927	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.5585	12.1550	152.6485	528.2115	0.0000	0.0000	528.2115
2	Left Flange		11.1461	0.4610	5.1383	0.7896	11.6940	1524.2194	1525.0090
	Right Flange		11.1461	23.8490	265.8223	0.7896	11.6940	1524.2194	1525.0090
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.1550	0.0000	0.0000
	Right Plate		0.0000	24.3100	0.0000	0.0000	12.1550	0.0000	0.0000
Total			34.85		423.61	529.79		3048.44	3578.23
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.1550	in	S _{right} =	294.38	in ³	x-bar =	12.1550	in	S _{right} =	294.38	in ³
I _y =	3578.23	n ⁴	S _{left} =	294.38	in ³	I _y =	3578.23	n ⁴	S _{left} =	294.38	in ³
C _{right} =	12.1550	in	A =	34.8506	in ²	C _{right} =	12.1550	in	A =	34.8506	in ²
C _{left} =	12.1550	in	r _y =	10.1328	in	C _{left} =	12.1550	in	r _y =	10.1328	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 100

- $A_1 = t_w = 0.4700$ in
- $A_2 = t_f = 0.7670$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 12.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U3-L4

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	6.0000	63.3541	0.1944	0.0000	0.0000	0.1944
2	Flange Plates		18.4080	6.0000	110.4480	220.8960	0.0000	0.0000	220.8960
3	Cover Plate		0.0000	6.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			28.97		173.80	221.09		0.00	221.09
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0000	in	$S_{top} =$	36.85	in ³	y-bar =	6.0000	in	$S_{top} =$	36.85	in ³
$I_x =$	221.09	in ⁴	$S_{bott.} =$	36.85	in ³	$I_x =$	221.09	in ⁴	$S_{bott.} =$	36.85	in ³
$c_{top} =$	6.0000	in	A =	28.9670	in ²	$c_{top} =$	6.0000	in	A =	28.9670	in ²
$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in	$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	12.0000	126.7082	444.1134	0.0000	0.0000	444.1134
2	Left Flange		9.2040	0.3835	3.5297	0.4512	11.6165	1242.0160	1242.4673
	Right Flange		9.2040	23.6165	217.3663	0.4512	11.6165	1242.0160	1242.4673
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.0000	0.0000	0.0000
	Right Plate		0.0000	24.0000	0.0000	0.0000	12.0000	0.0000	0.0000
Total			28.97		347.60	445.02		2484.03	2929.05
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.0000	in	S _{right} = 244.09 in ³	x-bar =	12.0000	in	S _{right} = 244.09 in ³
I _y =	2929.05	in ⁴	S _{left} = 244.09 in ³	I _y =	2929.05	in ⁴	S _{left} = 244.09 in ³
C _{right} =	12.0000	in	A = 28.9670 in ²	C _{right} =	12.0000	in	A = 28.9670 in ²
C _{left} =	12.0000	in	r _y = 10.0557 in	C _{left} =	12.0000	in	r _y = 10.0557 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U4-L5

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		0.0000	7.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			37.78		264.47	408.29		0.00	408.29
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	S _{top} =	58.33	in ³	y-bar =	7.0000	in	S _{top} =	58.33	in ³
I _x =	408.29	in ⁴	S _{bott.} =	58.33	in ³	I _x =	408.29	in ⁴	S _{bott.} =	58.33	in ³
c _{top} =	7.0000	in	A =	37.7816	in ²	c _{top} =	7.0000	in	A =	37.7816	in ²
c _{bottom} =	7.0000	in	r _x =	3.2873	in	c _{bottom} =	7.0000	in	r _x =	3.2873	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	12.8056	12.1250	155.2681	538.6056	0.0000	0.0000	538.6056	
2	Left Flange	12.4880	0.4460	5.5696	0.8280	11.6790	1703.3512	1704.1792	
	Right Flange	12.4880	23.8040	297.2644	0.8280	11.6790	1703.3512	1704.1792	
3	Left Plate	0.0000	0.0000	0.0000	0.0000	12.1250	0.0000	0.0000	
	Right Plate	0.0000	24.2500	0.0000	0.0000	12.1250	0.0000	0.0000	
Total		37.78		458.10	540.26		3406.70	3946.96	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250	in	S _{right} = 325.52 in ³	x-bar =	12.1250	in	S _{right} = 325.52 in ³
I _y =	3946.96	in ⁴	S _{left} = 325.52 in ³	I _y =	3946.96	in ⁴	S _{left} = 325.52 in ³
C _{right} =	12.1250	in	A = 37.7816 in ²	C _{right} =	12.1250	in	A = 37.7816 in ²
C _{left} =	12.1250	in	r _y = 10.2210 in	C _{left} =	12.1250	in	r _y = 10.2210 in



Made By KMW
Checked By ADK

Date 1/30/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 150

- $A_1 = t_w = 0.6330$ in
- $A_2 = t_f = 1.0480$ in
- $B_1 = d = 24.5620$ in
- $B_2 = b_f = 14.0630$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U6-L5

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.2210	7.0315	99.9948	0.4748	0.0000	0.0000	0.4748
2	Flange Plates		29.4760	7.0315	207.2608	485.7848	0.0000	0.0000	485.7848
3	Cover Plate		0.0000	7.0315	0.0000	0.0000	0.0000	0.0000	0.0000
Total			43.70		307.26	486.26		0.00	486.26
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	6.0000	0.2500	-1.5000	7.2230	-10.8345	-0.0078	0.2006	-0.0604	-0.0682
2	3.0000	0.1250	-0.3750	7.2855	-2.7321	-0.0005	0.2631	-0.0260	-0.0265
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.88		-13.57	-0.01		-0.09	-0.09

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0315	in	$S_{top} =$	69.15	in ³	y-bar =	7.0224	in	$S_{top} =$	69.14	in ³
$I_x =$	486.26	in ⁴	$S_{bott.} =$	69.15	in ³	$I_x =$	486.17	in ⁴	$S_{bott.} =$	69.23	in ³
$c_{top} =$	7.0315	in	A =	43.6970	in ²	$c_{top} =$	7.0315	in	A =	41.8220	in ²
$c_{bottom} =$	7.0315	in	$r_x =$	3.3359	in	$c_{bottom} =$	7.0224	in	$r_x =$	3.4095	in



Made By KMW
Checked By ADK

Date 1/30/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.2210	12.2810	174.6478	598.1357	0.0000	0.0000	598.1357
2	Left Flange		14.7380	0.5240	7.7227	1.3489	11.7570	2037.1936	2038.5425
	Right Flange		14.7380	24.0380	354.2726	1.3489	11.7570	2037.1936	2038.5425
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.2810	0.0000	0.0000
	Right Plate		0.0000	24.5620	0.0000	0.0000	12.2810	0.0000	0.0000
Total			43.70		536.64	600.83		4074.39	4675.22
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.2500	6.0000	-1.5000	4.0480	-6.0720	-4.5000	8.4410	-106.8761	-111.3761
2	0.1250	3.0000	-0.3750	22.0140	-8.2553	-0.2813	9.5250	-34.0220	-34.3032
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.88		-14.33	-4.78		-140.90	-145.68

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2810	in	S _{right} = 380.69 in ³	x-bar =	12.4890	in	S _{right} = 375.18 in ³
I _y =	4675.22	in ⁴	S _{left} = 380.69 in ³	I _y =	4529.54	in ⁴	S _{left} = 362.68 in ³
C _{right} =	12.2810	in	A = 43.6970 in ²	C _{right} =	12.0730	in	A = 41.8220 in ²
C _{left} =	12.2810	in	r _y = 10.3437 in	C _{left} =	12.4890	in	r _y = 10.4070 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.6875$ in
- $B_3 = b = 14.0000$ in



Member U7-L6

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		19.2500	7.0000	134.7500	314.4167	0.0000	0.0000	314.4167
Total			57.03		399.22	722.70		0.00	722.70
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	7.0000	in	$S_{top} = 103.24$	in ³	y-bar =	7.0000	in	$S_{top} = 103.24$	in ³		
$I_x =$	722.70	in ⁴	$S_{bott.} = 103.24$	in ³	$I_x =$	722.70	in ⁴	$S_{bott.} = 103.24$	in ³		
$c_{top} =$	7.0000	in	A =	57.0316	in ²	$c_{top} =$	7.0000	in	A =	57.0316	in ²
$c_{bottom} =$	7.0000	in	$r_x =$	3.5598	in	$c_{bottom} =$	7.0000	in	$r_x =$	3.5598	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.8125	164.0720	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	1.1335	14.1551	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	24.4915	305.8499	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		9.6250	0.3438	3.3086	0.3791	12.4688	1496.3961	1496.7752
	Right Plate		9.6250	25.2813	243.3320	0.3791	12.4688	1496.3961	1496.7752
Total			57.03		730.72	541.02		6399.49	6940.51
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.8125	in	S _{right} =	541.70	in ³	x-bar =	12.8125	in	S _{right} =	541.70	in ³
I _y =	6940.51	in ⁴	S _{left} =	541.70	in ³	I _y =	6940.51	in ⁴	S _{left} =	541.70	in ³
C _{right} =	12.8125	in	A =	57.0316	in ²	C _{right} =	12.8125	in	A =	57.0316	in ²
C _{left} =	12.8125	in	r _y =	11.0316	in	C _{left} =	12.8125	in	r _y =	11.0316	in



Made By KMW
Checked By ADK

Date 1/30/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.6250$ in
- $B_3 = b = 14.0000$ in



Member U8-L7

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		17.5000	7.0000	122.5000	285.8333	0.0000	0.0000	285.8333
Total			55.28		386.97	694.12		0.00	694.12
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	2.0000	0.2500	-0.5000	7.1600	-3.5800	-0.0026	0.1771	-0.0157	-0.0183
2	2.0000	0.2500	-0.5000	7.1600	-3.5800	-0.0026	0.1771	-0.0157	-0.0183
3	4.0000	0.1250	-0.5000	7.2225	-3.6113	-0.0007	0.2396	-0.0287	-0.0294
4	0.2500	2.0000	-0.5000	8.2850	-4.1425	-0.1667	1.3021	-0.8478	-1.0145
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.00		-14.91	-0.17		-0.91	-1.08

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	$S_{top} =$	99.16	in ³	y-bar =	6.9829	in	$S_{top} =$	99.01	in ³
$I_x =$	694.12	in ⁴	$S_{bott.} =$	99.16	in ³	$I_x =$	693.04	in ⁴	$S_{bott.} =$	99.25	in ³
$c_{top} =$	7.0000	in	A =	55.2816	in ²	$c_{top} =$	7.0000	in	A =	53.2816	in ²
$c_{bottom} =$	7.0000	in	$r_x =$	3.5435	in	$c_{bottom} =$	6.9829	in	$r_x =$	3.6065	in



Made By KMW
 Checked By ADK

Date 1/30/2012
 Date 2/15/2012

Job No. P402110046
 Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.7500	163.2717	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	1.0710	13.3746	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	24.4290	305.0694	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		8.7500	0.3125	2.7344	0.2848	12.4375	1353.5498	1353.8346
	Right Plate		8.7500	25.1875	220.3906	0.2848	12.4375	1353.5498	1353.8346
Total			55.28		704.84	540.83		6113.80	6654.63
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.2500	2.0000	-0.5000	2.5170	-1.2585	-0.1667	10.1264	-51.2721	-51.4388
2	0.2500	2.0000	-0.5000	22.9830	-11.4915	-0.1667	10.3396	-53.4535	-53.6202
3	0.1250	4.0000	-0.5000	12.7500	-6.3750	-0.6667	0.1066	-0.0057	-0.6723
4	2.0000	0.2500	-0.5000	24.1080	-12.0540	-0.0026	11.4646	-65.7183	-65.7210
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.00		-31.18	-1.00		-170.45	-171.45

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.7500	in	S _{right} = 521.93 in ³	x-bar =	12.6434	in	S _{right} = 504.27 in ³
I _y =	6654.63	in ⁴	S _{left} = 521.93 in ³	I _y =	6483.18	in ⁴	S _{left} = 512.77 in ³
C _{right} =	12.7500	in	A = 55.2816 in ²	C _{right} =	12.8566	in	A = 53.2816 in ²
C _{left} =	12.7500	in	r _y = 10.9716 in	C _{left} =	12.6434	in	r _y = 11.0308 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 160

- $A_1 = t_w = 0.6650$ in
- $A_2 = t_f = 1.1240$ in
- $B_1 = d = 24.7140$ in
- $B_2 = b_f = 14.0950$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U9-L8

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	7.0475	105.2889	0.5506	0.0000	0.0000	0.5506
2	Flange Plates		31.6856	7.0475	223.3040	524.5783	0.0000	0.0000	524.5783
3	Cover Plate		0.0000	7.0475	0.0000	0.0000	0.0000	0.0000	0.0000
Total			46.63		328.59	525.13		0.00	525.13
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	7.0475	in	S _{top} = 74.51 in ³	y-bar =	7.0475	in	S _{top} = 74.51 in ³
I _x =	525.13	in ⁴	S _{bott.} = 74.51 in ³	I _x =	525.13	in ⁴	S _{bott.} = 74.51 in ³
c _{top} =	7.0475	in	A = 46.6255 in ²	c _{top} =	7.0475	in	A = 46.6255 in ²
c _{bottom} =	7.0475	in	r _x = 3.3560 in	c _{bottom} =	7.0475	in	r _x = 3.3560 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	14.9399	12.3570	184.6122	628.3732	0.0000	0.0000	628.3732	
2	Left Flange	15.8428	0.5620	8.9036	1.6679	11.7950	2204.0796	2205.7476	
	Right Flange	15.8428	24.1520	382.6348	1.6679	11.7950	2204.0796	2205.7476	
3	Left Plate	0.0000	0.0000	0.0000	0.0000	12.3570	0.0000	0.0000	
	Right Plate	0.0000	24.7140	0.0000	0.0000	12.3570	0.0000	0.0000	
Total		46.63		576.15	631.71		4408.16	5039.87	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3570	in	S _{right} = 407.86 in ³	x-bar =	12.3570	in	S _{right} = 407.86 in ³
I _y =	5039.87	in ⁴	S _{left} = 407.86 in ³	I _y =	5039.87	in ⁴	S _{left} = 407.86 in ³
C _{right} =	12.3570	in	A = 46.6255 in ²	C _{right} =	12.3570	in	A = 46.6255 in ²
C _{left} =	12.3570	in	r _y = 10.3968 in	C _{left} =	12.3570	in	r _y = 10.3968 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U10-L11

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		0.0000	7.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			37.78		264.47	408.29		0.00	408.29
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	S _{top} =	58.33	in ³	y-bar =	7.0000	in	S _{top} =	58.33	in ³
I _x =	408.29	in ⁴	S _{bott.} =	58.33	in ³	I _x =	408.29	in ⁴	S _{bott.} =	58.33	in ³
c _{top} =	7.0000	in	A =	37.7816	in ²	c _{top} =	7.0000	in	A =	37.7816	in ²
c _{bottom} =	7.0000	in	r _x =	3.2873	in	c _{bottom} =	7.0000	in	r _x =	3.2873	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	12.8056	12.1250	155.2681	538.6056	0.0000	0.0000	538.6056	
2	Left Flange	12.4880	0.4460	5.5696	0.8280	11.6790	1703.3512	1704.1792	
	Right Flange	12.4880	23.8040	297.2644	0.8280	11.6790	1703.3512	1704.1792	
3	Left Plate	0.0000	0.0000	0.0000	0.0000	12.1250	0.0000	0.0000	
	Right Plate	0.0000	24.2500	0.0000	0.0000	12.1250	0.0000	0.0000	
Total		37.78		458.10	540.26		3406.70	3946.96	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250	in	S _{right} = 325.52 in ³	x-bar =	12.1250	in	S _{right} = 325.52 in ³
I _y =	3946.96	in ⁴	S _{left} = 325.52 in ³	I _y =	3946.96	in ⁴	S _{left} = 325.52 in ³
C _{right} =	12.1250	in	A = 37.7816 in ²	C _{right} =	12.1250	in	A = 37.7816 in ²
C _{left} =	12.1250	in	r _y = 10.2210 in	C _{left} =	12.1250	in	r _y = 10.2210 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U10-L9

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		0.0000	7.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			37.78		264.47	408.29		0.00	408.29
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	S _{top} =	58.33	in ³	y-bar =	7.0000	in	S _{top} =	58.33	in ³
I _x =	408.29	in ⁴	S _{bott.} =	58.33	in ³	I _x =	408.29	in ⁴	S _{bott.} =	58.33	in ³
c _{top} =	7.0000	in	A =	37.7816	in ²	c _{top} =	7.0000	in	A =	37.7816	in ²
c _{bottom} =	7.0000	in	r _x =	3.2873	in	c _{bottom} =	7.0000	in	r _x =	3.2873	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.1250	155.2681	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	0.4460	5.5696	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	23.8040	297.2644	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.1250	0.0000	0.0000
	Right Plate		0.0000	24.2500	0.0000	0.0000	12.1250	0.0000	0.0000
Total			37.78		458.10	540.26		3406.70	3946.96
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.1250	in	S _{right} =	325.52	in ³	x-bar =	12.1250	in	S _{right} =	325.52	in ³
I _y =	3946.96	in ⁴	S _{left} =	325.52	in ³	I _y =	3946.96	in ⁴	S _{left} =	325.52	in ³
C _{right} =	12.1250	in	A =	37.7816	in ²	C _{right} =	12.1250	in	A =	37.7816	in ²
C _{left} =	12.1250	in	r _y =	10.2210	in	C _{left} =	12.1250	in	r _y =	10.2210	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U11-L12

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		0.0000	7.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			37.78		264.47	408.29		0.00	408.29
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	S _{top} =	58.33	in ³	y-bar =	7.0000	in	S _{top} =	58.33	in ³
I _x =	408.29	in ⁴	S _{bott.} =	58.33	in ³	I _x =	408.29	in ⁴	S _{bott.} =	58.33	in ³
c _{top} =	7.0000	in	A =	37.7816	in ²	c _{top} =	7.0000	in	A =	37.7816	in ²
c _{bottom} =	7.0000	in	r _x =	3.2873	in	c _{bottom} =	7.0000	in	r _x =	3.2873	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.1250	155.2681	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	0.4460	5.5696	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	23.8040	297.2644	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.1250	0.0000	0.0000
	Right Plate		0.0000	24.2500	0.0000	0.0000	12.1250	0.0000	0.0000
Total			37.78		458.10	540.26		3406.70	3946.96
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.1250	in	S _{right} =	325.52	in ³	x-bar =	12.1250	in	S _{right} =	325.52	in ³
I _y =	3946.96	in ⁴	S _{left} =	325.52	in ³	I _y =	3946.96	in ⁴	S _{left} =	325.52	in ³
C _{right} =	12.1250	in	A =	37.7816	in ²	C _{right} =	12.1250	in	A =	37.7816	in ²
C _{left} =	12.1250	in	r _y =	10.2210	in	C _{left} =	12.1250	in	r _y =	10.2210	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 140

- $A_1 = t_w = 0.6010$ in
- $A_2 = t_f = 0.9700$ in
- $B_1 = d = 24.4060$ in
- $B_2 = b_f = 14.0310$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U12-L13

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		13.5021	7.0155	94.7237	0.4064	0.0000	0.0000	0.4064
2	Flange Plates		27.2201	7.0155	190.9629	446.5667	0.0000	0.0000	446.5667
3	Cover Plate		0.0000	7.0155	0.0000	0.0000	0.0000	0.0000	0.0000
Total			40.72		285.69	446.97		0.00	446.97
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0155	in	S _{top} =	63.71	in ³	y-bar =	7.0155	in	S _{top} =	63.71	in ³
I _x =	446.97	in ⁴	S _{bott.} =	63.71	in ³	I _x =	446.97	in ⁴	S _{bott.} =	63.71	in ³
C _{top} =	7.0155	in	A =	40.7222	in ²	C _{top} =	7.0155	in	A =	40.7222	in ²
C _{bottom} =	7.0155	in	r _x =	3.3130	in	C _{bottom} =	7.0155	in	r _x =	3.3130	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	13.5021	12.2030	164.7657	567.8982	0.0000	0.0000	567.8982	
2	Left Flange	13.6101	0.4850	6.6009	1.0671	11.7180	1868.8195	1869.8866	
	Right Flange	13.6101	23.9210	325.5665	1.0671	11.7180	1868.8195	1869.8866	
3	Left Plate	0.0000	0.0000	0.0000	0.0000	12.2030	0.0000	0.0000	
	Right Plate	0.0000	24.4060	0.0000	0.0000	12.2030	0.0000	0.0000	
Total		40.72		496.93	570.03		3737.64	4307.67	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2030	in	S _{right} = 353.00 in ³	x-bar =	12.2030	in	S _{right} = 353.00 in ³
I _y =	4307.67	in ⁴	S _{left} = 353.00 in ³	I _y =	4307.67	in ⁴	S _{left} = 353.00 in ³
C _{right} =	12.2030	in	A = 40.7222 in ²	C _{right} =	12.2030	in	A = 40.7222 in ²
C _{left} =	12.2030	in	r _y = 10.2850 in	C _{left} =	12.2030	in	r _y = 10.2850 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 120

- $A_1 = t_w = 0.5590$ in
- $A_2 = t_f = 0.9220$ in
- $B_1 = d = 24.3100$ in
- $B_2 = b_f = 12.0890$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U13-L14

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.5585	6.0445	75.9098	0.3270	0.0000	0.0000	0.3270
2	Flange Plates		22.2921	6.0445	134.7447	271.4881	0.0000	0.0000	271.4881
3	Cover Plate		0.0000	6.0445	0.0000	0.0000	0.0000	0.0000	0.0000
Total			34.85		210.65	271.82		0.00	271.82
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	6.0445	in	S _{top} = 44.97 in ³	y-bar =	6.0445	in	S _{top} = 44.97 in ³
I _x =	271.82	in ⁴	S _{bott.} = 44.97 in ³	I _x =	271.82	in ⁴	S _{bott.} = 44.97 in ³
c _{top} =	6.0445	in	A = 34.8506 in ²	c _{top} =	6.0445	in	A = 34.8506 in ²
c _{bottom} =	6.0445	in	r _x = 2.7927 in	c _{bottom} =	6.0445	in	r _x = 2.7927 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.5585	12.1550	152.6485	528.2115	0.0000	0.0000	528.2115
2	Left Flange		11.1461	0.4610	5.1383	0.7896	11.6940	1524.2194	1525.0090
	Right Flange		11.1461	23.8490	265.8223	0.7896	11.6940	1524.2194	1525.0090
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.1550	0.0000	0.0000
	Right Plate		0.0000	24.3100	0.0000	0.0000	12.1550	0.0000	0.0000
Total			34.85		423.61	529.79		3048.44	3578.23
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1550	in	S _{right} = 294.38 in ³	x-bar =	12.1550	in	S _{right} = 294.38 in ³
I _y =	3578.23	n ⁴	S _{left} = 294.38 in ³	I _y =	3578.23	n ⁴	S _{left} = 294.38 in ³
C _{right} =	12.1550	in	A = 34.8506 in ²	C _{right} =	12.1550	in	A = 34.8506 in ²
C _{left} =	12.1550	in	r _y = 10.1328 in	C _{left} =	12.1550	in	r _y = 10.1328 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 100

- $A_1 = t_w = 0.4700$ in
- $A_2 = t_f = 0.7670$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 12.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U14-L15

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	6.0000	63.3541	0.1944	0.0000	0.0000	0.1944
2	Flange Plates		18.4080	6.0000	110.4480	220.8960	0.0000	0.0000	220.8960
3	Cover Plate		0.0000	6.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			28.97		173.80	221.09		0.00	221.09
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0000	in	S _{top} =	36.85	in ³	y-bar =	6.0000	in	S _{top} =	36.85	in ³
I _x =	221.09	in ⁴	S _{bott.} =	36.85	in ³	I _x =	221.09	in ⁴	S _{bott.} =	36.85	in ³
c _{top} =	6.0000	in	A =	28.9670	in ²	c _{top} =	6.0000	in	A =	28.9670	in ²
c _{bottom} =	6.0000	in	r _x =	2.7627	in	c _{bottom} =	6.0000	in	r _x =	2.7627	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	12.0000	126.7082	444.1134	0.0000	0.0000	444.1134
2	Left Flange		9.2040	0.3835	3.5297	0.4512	11.6165	1242.0160	1242.4673
	Right Flange		9.2040	23.6165	217.3663	0.4512	11.6165	1242.0160	1242.4673
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.0000	0.0000	0.0000
	Right Plate		0.0000	24.0000	0.0000	0.0000	12.0000	0.0000	0.0000
Total			28.97		347.60	445.02		2484.03	2929.05
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.0000	in	S _{right} = 244.09 in ³	x-bar =	12.0000	in	S _{right} = 244.09 in ³
I _y =	2929.05	in ⁴	S _{left} = 244.09 in ³	I _y =	2929.05	in ⁴	S _{left} = 244.09 in ³
C _{right} =	12.0000	in	A = 28.9670 in ²	C _{right} =	12.0000	in	A = 28.9670 in ²
C _{left} =	12.0000	in	r _y = 10.0557 in	C _{left} =	12.0000	in	r _y = 10.0557 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 100

- $A_1 = t_w = 0.4700$ in
- $A_2 = t_f = 0.7670$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 12.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U16-L15

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	6.0000	63.3541	0.1944	0.0000	0.0000	0.1944
2	Flange Plates		18.4080	6.0000	110.4480	220.8960	0.0000	0.0000	220.8960
3	Cover Plate		0.0000	6.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			28.97		173.80	221.09		0.00	221.09
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0000	in	$S_{top} =$	36.85	in ³	y-bar =	6.0000	in	$S_{top} =$	36.85	in ³
$I_x =$	221.09	in ⁴	$S_{bott.} =$	36.85	in ³	$I_x =$	221.09	in ⁴	$S_{bott.} =$	36.85	in ³
$c_{top} =$	6.0000	in	A =	28.9670	in ²	$c_{top} =$	6.0000	in	A =	28.9670	in ²
$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in	$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	12.0000	126.7082	444.1134	0.0000	0.0000	444.1134
2	Left Flange		9.2040	0.3835	3.5297	0.4512	11.6165	1242.0160	1242.4673
	Right Flange		9.2040	23.6165	217.3663	0.4512	11.6165	1242.0160	1242.4673
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.0000	0.0000	0.0000
	Right Plate		0.0000	24.0000	0.0000	0.0000	12.0000	0.0000	0.0000
Total			28.97		347.60	445.02		2484.03	2929.05
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.0000	in	S _{right} =	244.09	in ³	x-bar =	12.0000	in	S _{right} =	244.09	in ³
I _y =	2929.05	n ⁴	S _{left} =	244.09	in ³	I _y =	2929.05	n ⁴	S _{left} =	244.09	in ³
C _{right} =	12.0000	in	A =	28.9670	in ²	C _{right} =	12.0000	in	A =	28.9670	in ²
C _{left} =	12.0000	in	r _y =	10.0557	in	C _{left} =	12.0000	in	r _y =	10.0557	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

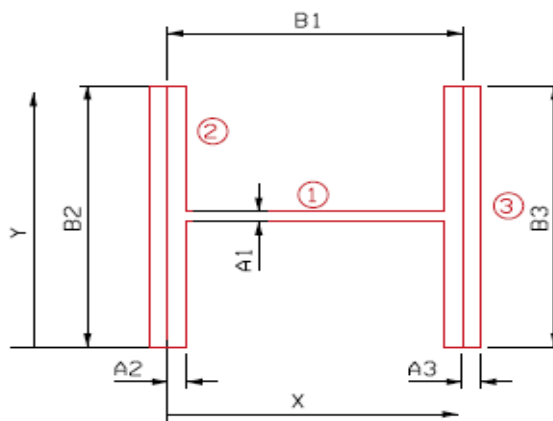
Element Dimensions (without Section Losses):

Rolled Beam CB24x 120

- $A_1 = t_w = 0.5590$ in
- $A_2 = t_f = 0.9220$ in
- $B_1 = d = 24.3100$ in
- $B_2 = b_f = 12.0890$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U17-L16

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.5585	6.0445	75.9098	0.3270	0.0000	0.0000	0.3270
2	Flange Plates		22.2921	6.0445	134.7447	271.4881	0.0000	0.0000	271.4881
3	Cover Plate		0.0000	6.0445	0.0000	0.0000	0.0000	0.0000	0.0000
Total			34.85		210.65	271.82		0.00	271.82
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0445	in	S _{top} =	44.97	in ³	y-bar =	6.0445	in	S _{top} =	44.97	in ³
I _x =	271.82	in ⁴	S _{bott.} =	44.97	in ³	I _x =	271.82	in ⁴	S _{bott.} =	44.97	in ³
c _{top} =	6.0445	in	A =	34.8506	in ²	c _{top} =	6.0445	in	A =	34.8506	in ²
c _{bottom} =	6.0445	in	r _x =	2.7927	in	c _{bottom} =	6.0445	in	r _x =	2.7927	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	12.5585	12.1550	152.6485	528.2115	0.0000	0.0000	528.2115	
2	Left Flange	11.1461	0.4610	5.1383	0.7896	11.6940	1524.2194	1525.0090	
	Right Flange	11.1461	23.8490	265.8223	0.7896	11.6940	1524.2194	1525.0090	
3	Left Plate	0.0000	0.0000	0.0000	0.0000	12.1550	0.0000	0.0000	
	Right Plate	0.0000	24.3100	0.0000	0.0000	12.1550	0.0000	0.0000	
Total		34.85		423.61	529.79		3048.44	3578.23	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1550 in	S _{right} =	294.38 in ³	x-bar =	12.1550 in	S _{right} =	294.38 in ³
I _y =	3578.23 in ⁴	S _{left} =	294.38 in ³	I _y =	3578.23 in ⁴	S _{left} =	294.38 in ³
C _{right} =	12.1550 in	A =	34.8506 in ²	C _{right} =	12.1550 in	A =	34.8506 in ²
C _{left} =	12.1550 in	r _y =	10.1328 in	C _{left} =	12.1550 in	r _y =	10.1328 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U18-L17

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		0.0000	7.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			37.78		264.47	408.29		0.00	408.29
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	S _{top} =	58.33	in ³	y-bar =	7.0000	in	S _{top} =	58.33	in ³
I _x =	408.29	in ⁴	S _{bott.} =	58.33	in ³	I _x =	408.29	in ⁴	S _{bott.} =	58.33	in ³
c _{top} =	7.0000	in	A =	37.7816	in ²	c _{top} =	7.0000	in	A =	37.7816	in ²
c _{bottom} =	7.0000	in	r _x =	3.2873	in	c _{bottom} =	7.0000	in	r _x =	3.2873	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.1250	155.2681	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	0.4460	5.5696	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	23.8040	297.2644	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.1250	0.0000	0.0000
	Right Plate		0.0000	24.2500	0.0000	0.0000	12.1250	0.0000	0.0000
Total			37.78		458.10	540.26		3406.70	3946.96
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.1250	in	S _{right} =	325.52	in ³	x-bar =	12.1250	in	S _{right} =	325.52	in ³
I _y =	3946.96	in ⁴	S _{left} =	325.52	in ³	I _y =	3946.96	in ⁴	S _{left} =	325.52	in ³
C _{right} =	12.1250	in	A =	37.7816	in ²	C _{right} =	12.1250	in	A =	37.7816	in ²
C _{left} =	12.1250	in	r _y =	10.2210	in	C _{left} =	12.1250	in	r _y =	10.2210	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U19-L18

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		0.0000	7.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			37.78		264.47	408.29		0.00	408.29
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	S _{top} =	58.33	in ³	y-bar =	7.0000	in	S _{top} =	58.33	in ³
I _x =	408.29	in ⁴	S _{bott.} =	58.33	in ³	I _x =	408.29	in ⁴	S _{bott.} =	58.33	in ³
c _{top} =	7.0000	in	A =	37.7816	in ²	c _{top} =	7.0000	in	A =	37.7816	in ²
c _{bottom} =	7.0000	in	r _x =	3.2873	in	c _{bottom} =	7.0000	in	r _x =	3.2873	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	12.8056	12.1250	155.2681	538.6056	0.0000	0.0000	538.6056	
2	Left Flange	12.4880	0.4460	5.5696	0.8280	11.6790	1703.3512	1704.1792	
	Right Flange	12.4880	23.8040	297.2644	0.8280	11.6790	1703.3512	1704.1792	
3	Left Plate	0.0000	0.0000	0.0000	0.0000	12.1250	0.0000	0.0000	
	Right Plate	0.0000	24.2500	0.0000	0.0000	12.1250	0.0000	0.0000	
Total		37.78		458.10	540.26		3406.70	3946.96	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250	in	S _{right} = 325.52 in ³	x-bar =	12.1250	in	S _{right} = 325.52 in ³
I _y =	3946.96	in ⁴	S _{left} = 325.52 in ³	I _y =	3946.96	in ⁴	S _{left} = 325.52 in ³
C _{right} =	12.1250	in	A = 37.7816 in ²	C _{right} =	12.1250	in	A = 37.7816 in ²
C _{left} =	12.1250	in	r _y = 10.2210 in	C _{left} =	12.1250	in	r _y = 10.2210 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.3750$ in
- $B_3 = b = 14.0000$ in



Member U20-L19

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		10.5000	7.0000	73.5000	171.5000	0.0000	0.0000	171.5000
Total			48.28		337.97	579.79		0.00	579.79
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	$S_{top} =$	82.83	in ³	y-bar =	7.0000	in	$S_{top} =$	82.83	in ³
$I_x =$	579.79	in ⁴	$S_{bott.} =$	82.83	in ³	$I_x =$	579.79	in ⁴	$S_{bott.} =$	82.83	in ³
$c_{top} =$	7.0000	in	A =	48.2816	in ²	$c_{top} =$	7.0000	in	A =	48.2816	in ²
$c_{bottom} =$	7.0000	in	$r_x =$	3.4653	in	$c_{bottom} =$	7.0000	in	$r_x =$	3.4653	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.5000	160.0703	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	0.8210	10.2526	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	24.1790	301.9474	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		5.2500	0.1875	0.9844	0.0615	12.3125	795.8877	795.9492
	Right Plate		5.2500	24.8125	130.2656	0.0615	12.3125	795.8877	795.9492
Total			48.28		603.52	540.38		4998.48	5538.86
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.5000	in	S _{right} =	443.11	in ³	x-bar =	12.5000	in	S _{right} =	443.11	in ³
I _y =	5538.86	n ⁴	S _{left} =	443.11	in ³	I _y =	5538.86	n ⁴	S _{left} =	443.11	in ³
C _{right} =	12.5000	in	A =	48.2816	in ²	C _{right} =	12.5000	in	A =	48.2816	in ²
C _{left} =	12.5000	in	r _y =	10.7107	in	C _{left} =	12.5000	in	r _y =	10.7107	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U20-L21

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		0.0000	7.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			37.78		264.47	408.29		0.00	408.29
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	S _{top} =	58.33	in ³	y-bar =	7.0000	in	S _{top} =	58.33	in ³
I _x =	408.29	in ⁴	S _{bott.} =	58.33	in ³	I _x =	408.29	in ⁴	S _{bott.} =	58.33	in ³
c _{top} =	7.0000	in	A =	37.7816	in ²	c _{top} =	7.0000	in	A =	37.7816	in ²
c _{bottom} =	7.0000	in	r _x =	3.2873	in	c _{bottom} =	7.0000	in	r _x =	3.2873	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	12.8056	12.1250	155.2681	538.6056	0.0000	0.0000	538.6056	
2	Left Flange	12.4880	0.4460	5.5696	0.8280	11.6790	1703.3512	1704.1792	
	Right Flange	12.4880	23.8040	297.2644	0.8280	11.6790	1703.3512	1704.1792	
3	Left Plate	0.0000	0.0000	0.0000	0.0000	12.1250	0.0000	0.0000	
	Right Plate	0.0000	24.2500	0.0000	0.0000	12.1250	0.0000	0.0000	
Total		37.78		458.10	540.26		3406.70	3946.96	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250	in	S _{right} = 325.52 in ³	x-bar =	12.1250	in	S _{right} = 325.52 in ³
I _y =	3946.96	in ⁴	S _{left} = 325.52 in ³	I _y =	3946.96	in ⁴	S _{left} = 325.52 in ³
C _{right} =	12.1250	in	A = 37.7816 in ²	C _{right} =	12.1250	in	A = 37.7816 in ²
C _{left} =	12.1250	in	r _y = 10.2210 in	C _{left} =	12.1250	in	r _y = 10.2210 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 110

- $A_1 = t_w = 0.5130$ in
- $A_2 = t_f = 0.8470$ in
- $B_1 = d = 24.1600$ in
- $B_2 = b_f = 12.0430$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U21-L22

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		11.5251	6.0215	69.3981	0.2528	0.0000	0.0000	0.2528
2	Flange Plates		20.4008	6.0215	122.8437	246.5677	0.0000	0.0000	246.5677
3	Cover Plate		0.0000	6.0215	0.0000	0.0000	0.0000	0.0000	0.0000
Total			31.93		192.24	246.82		0.00	246.82
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0215	in	S _{top} =	40.99	in ³	y-bar =	6.0215	in	S _{top} =	40.99	in ³
I _x =	246.82	in ⁴	S _{bott.} =	40.99	in ³	I _x =	246.82	in ⁴	S _{bott.} =	40.99	in ³
c _{top} =	6.0215	in	A =	31.9259	in ²	c _{top} =	6.0215	in	A =	31.9259	in ²
c _{bottom} =	6.0215	in	r _x =	2.7805	in	c _{bottom} =	6.0215	in	r _x =	2.7805	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		11.5251	12.0800	139.2227	484.7450	0.0000	0.0000	484.7450
2	Left Flange		10.2004	0.4235	4.3199	0.6098	11.6565	1385.9719	1386.5817
	Right Flange		10.2004	23.7365	242.1223	0.6098	11.6565	1385.9719	1386.5817
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.0800	0.0000	0.0000
	Right Plate		0.0000	24.1600	0.0000	0.0000	12.0800	0.0000	0.0000
Total			31.93		385.66	485.96		2771.94	3257.91
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.0800	in	S _{right} = 269.69 in ³	x-bar =	12.0800	in	S _{right} = 269.69 in ³
I _y =	3257.91	in ⁴	S _{left} = 269.69 in ³	I _y =	3257.91	in ⁴	S _{left} = 269.69 in ³
C _{right} =	12.0800	in	A = 31.9259 in ²	C _{right} =	12.0800	in	A = 31.9259 in ²
C _{left} =	12.0800	in	r _y = 10.1018 in	C _{left} =	12.0800	in	r _y = 10.1018 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

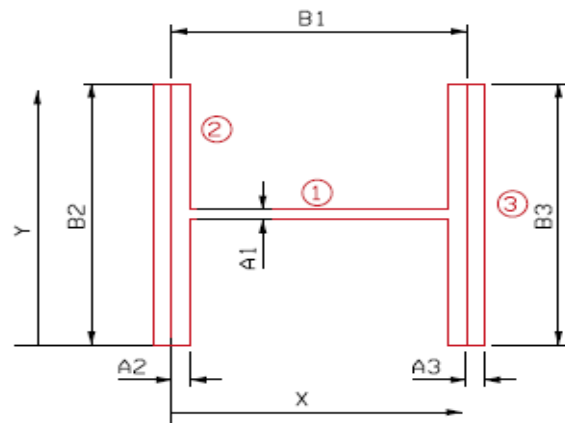
Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U22-L23

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		0.0000	7.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			37.78		264.47	408.29		0.00	408.29
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	S _{top} =	58.33	in ³	y-bar =	7.0000	in	S _{top} =	58.33	in ³
I _x =	408.29	in ⁴	S _{bott.} =	58.33	in ³	I _x =	408.29	in ⁴	S _{bott.} =	58.33	in ³
c _{top} =	7.0000	in	A =	37.7816	in ²	c _{top} =	7.0000	in	A =	37.7816	in ²
c _{bottom} =	7.0000	in	r _x =	3.2873	in	c _{bottom} =	7.0000	in	r _x =	3.2873	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.1250	155.2681	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	0.4460	5.5696	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	23.8040	297.2644	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.1250	0.0000	0.0000
	Right Plate		0.0000	24.2500	0.0000	0.0000	12.1250	0.0000	0.0000
Total			37.78		458.10	540.26		3406.70	3946.96
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.1250	in	S _{right} =	325.52	in ³	x-bar =	12.1250	in	S _{right} =	325.52	in ³
I _y =	3946.96	in ⁴	S _{left} =	325.52	in ³	I _y =	3946.96	in ⁴	S _{left} =	325.52	in ³
C _{right} =	12.1250	in	A =	37.7816	in ²	C _{right} =	12.1250	in	A =	37.7816	in ²
C _{left} =	12.1250	in	r _y =	10.2210	in	C _{left} =	12.1250	in	r _y =	10.2210	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U23-L24

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		0.0000	7.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			37.78		264.47	408.29		0.00	408.29
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	S _{top} =	58.33	in ³	y-bar =	7.0000	in	S _{top} =	58.33	in ³
I _x =	408.29	in ⁴	S _{bott.} =	58.33	in ³	I _x =	408.29	in ⁴	S _{bott.} =	58.33	in ³
c _{top} =	7.0000	in	A =	37.7816	in ²	c _{top} =	7.0000	in	A =	37.7816	in ²
c _{bottom} =	7.0000	in	r _x =	3.2873	in	c _{bottom} =	7.0000	in	r _x =	3.2873	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.1250	155.2681	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	0.4460	5.5696	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	23.8040	297.2644	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.1250	0.0000	0.0000
	Right Plate		0.0000	24.2500	0.0000	0.0000	12.1250	0.0000	0.0000
Total			37.78		458.10	540.26		3406.70	3946.96
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.1250	in	S _{right} =	325.52	in ³	x-bar =	12.1250	in	S _{right} =	325.52	in ³
I _y =	3946.96	in ⁴	S _{left} =	325.52	in ³	I _y =	3946.96	in ⁴	S _{left} =	325.52	in ³
C _{right} =	12.1250	in	A =	37.7816	in ²	C _{right} =	12.1250	in	A =	37.7816	in ²
C _{left} =	12.1250	in	r _y =	10.2210	in	C _{left} =	12.1250	in	r _y =	10.2210	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 100

- $A_1 = t_w = 0.4700$ in
- $A_2 = t_f = 0.7670$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 12.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U24-L25

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	6.0000	63.3541	0.1944	0.0000	0.0000	0.1944
2	Flange Plates		18.4080	6.0000	110.4480	220.8960	0.0000	0.0000	220.8960
3	Cover Plate		0.0000	6.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			28.97		173.80	221.09		0.00	221.09
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0000	in	S _{top} =	36.85	in ³	y-bar =	6.0000	in	S _{top} =	36.85	in ³
I _x =	221.09	in ⁴	S _{bott.} =	36.85	in ³	I _x =	221.09	in ⁴	S _{bott.} =	36.85	in ³
c _{top} =	6.0000	in	A =	28.9670	in ²	c _{top} =	6.0000	in	A =	28.9670	in ²
c _{bottom} =	6.0000	in	r _x =	2.7627	in	c _{bottom} =	6.0000	in	r _x =	2.7627	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	12.0000	126.7082	444.1134	0.0000	0.0000	444.1134
2	Left Flange		9.2040	0.3835	3.5297	0.4512	11.6165	1242.0160	1242.4673
	Right Flange		9.2040	23.6165	217.3663	0.4512	11.6165	1242.0160	1242.4673
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.0000	0.0000	0.0000
	Right Plate		0.0000	24.0000	0.0000	0.0000	12.0000	0.0000	0.0000
Total			28.97		347.60	445.02		2484.03	2929.05
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.0000	in	S _{right} =	244.09	in ³	x-bar =	12.0000	in	S _{right} =	244.09	in ³
I _y =	2929.05	n ⁴	S _{left} =	244.09	in ³	I _y =	2929.05	n ⁴	S _{left} =	244.09	in ³
C _{right} =	12.0000	in	A =	28.9670	in ²	C _{right} =	12.0000	in	A =	28.9670	in ²
C _{left} =	12.0000	in	r _y =	10.0557	in	C _{left} =	12.0000	in	r _y =	10.0557	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 100

- $A_1 = t_w = 0.4700$ in
- $A_2 = t_f = 0.7670$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 12.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U26-L25

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	6.0000	63.3541	0.1944	0.0000	0.0000	0.1944
2	Flange Plates		18.4080	6.0000	110.4480	220.8960	0.0000	0.0000	220.8960
3	Cover Plate		0.0000	6.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			28.97		173.80	221.09		0.00	221.09
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0000	in	S _{top} =	36.85	in ³	y-bar =	6.0000	in	S _{top} =	36.85	in ³
I _x =	221.09	in ⁴	S _{bott.} =	36.85	in ³	I _x =	221.09	in ⁴	S _{bott.} =	36.85	in ³
c _{top} =	6.0000	in	A =	28.9670	in ²	c _{top} =	6.0000	in	A =	28.9670	in ²
c _{bottom} =	6.0000	in	r _x =	2.7627	in	c _{bottom} =	6.0000	in	r _x =	2.7627	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	12.0000	126.7082	444.1134	0.0000	0.0000	444.1134
2	Left Flange		9.2040	0.3835	3.5297	0.4512	11.6165	1242.0160	1242.4673
	Right Flange		9.2040	23.6165	217.3663	0.4512	11.6165	1242.0160	1242.4673
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.0000	0.0000	0.0000
	Right Plate		0.0000	24.0000	0.0000	0.0000	12.0000	0.0000	0.0000
Total			28.97		347.60	445.02		2484.03	2929.05
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.0000	in	S _{right} =	244.09	in ³	x-bar =	12.0000	in	S _{right} =	244.09	in ³
I _y =	2929.05	n ⁴	S _{left} =	244.09	in ³	I _y =	2929.05	n ⁴	S _{left} =	244.09	in ³
C _{right} =	12.0000	in	A =	28.9670	in ²	C _{right} =	12.0000	in	A =	28.9670	in ²
C _{left} =	12.0000	in	r _y =	10.0557	in	C _{left} =	12.0000	in	r _y =	10.0557	in



Made By KMW
Checked By ADK

Date 1/30/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 100

- $A_1 = t_w = 0.4700$ in
- $A_2 = t_f = 0.7670$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 12.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U27-L26

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	6.0000	63.3541	0.1944	0.0000	0.0000	0.1944
2	Flange Plates		18.4080	6.0000	110.4480	220.8960	0.0000	0.0000	220.8960
3	Cover Plate		0.0000	6.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			28.97		173.80	221.09		0.00	221.09
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0000	in	S _{top} =	36.85	in ³	y-bar =	6.0000	in	S _{top} =	36.85	in ³
I _x =	221.09	in ⁴	S _{bott.} =	36.85	in ³	I _x =	221.09	in ⁴	S _{bott.} =	36.85	in ³
c _{top} =	6.0000	in	A =	28.9670	in ²	c _{top} =	6.0000	in	A =	28.9670	in ²
c _{bottom} =	6.0000	in	r _x =	2.7627	in	c _{bottom} =	6.0000	in	r _x =	2.7627	in



Made By KMW
Checked By ADK

Date 1/30/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	12.0000	126.7082	444.1134	0.0000	0.0000	444.1134
2	Left Flange		9.2040	0.3835	3.5297	0.4512	11.6165	1242.0160	1242.4673
	Right Flange		9.2040	23.6165	217.3663	0.4512	11.6165	1242.0160	1242.4673
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.0000	0.0000	0.0000
	Right Plate		0.0000	24.0000	0.0000	0.0000	12.0000	0.0000	0.0000
Total			28.97		347.60	445.02		2484.03	2929.05
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.0000	in	S _{right} = 244.09 in ³	x-bar =	12.0000	in	S _{right} = 244.09 in ³
I _y =	2929.05	n ⁴	S _{left} = 244.09 in ³	I _y =	2929.05	n ⁴	S _{left} = 244.09 in ³
C _{right} =	12.0000	in	A = 28.9670 in ²	C _{right} =	12.0000	in	A = 28.9670 in ²
C _{left} =	12.0000	in	r _y = 10.0557 in	C _{left} =	12.0000	in	r _y = 10.0557 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 110

- $A_1 = t_w = 0.5130$ in
- $A_2 = t_f = 0.8470$ in
- $B_1 = d = 24.1600$ in
- $B_2 = b_f = 12.0430$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U28-L27

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x, gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		11.5251	6.0215	69.3981	0.2528	0.0000	0.0000	0.2528
2	Flange Plates		20.4008	6.0215	122.8437	246.5677	0.0000	0.0000	246.5677
3	Cover Plate		0.0000	6.0215	0.0000	0.0000	0.0000	0.0000	0.0000
Total			31.93		192.24	246.82		0.00	246.82
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0215	in	$S_{top} =$	40.99	in ³	y-bar =	6.0215	in	$S_{top} =$	40.99	in ³
$I_x =$	246.82	in ⁴	$S_{bott.} =$	40.99	in ³	$I_x =$	246.82	in ⁴	$S_{bott.} =$	40.99	in ³
$c_{top} =$	6.0215	in	A =	31.9259	in ²	$c_{top} =$	6.0215	in	A =	31.9259	in ²
$c_{bottom} =$	6.0215	in	$r_x =$	2.7805	in	$c_{bottom} =$	6.0215	in	$r_x =$	2.7805	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		11.5251	12.0800	139.2227	484.7450	0.0000	0.0000	484.7450
2	Left Flange		10.2004	0.4235	4.3199	0.6098	11.6565	1385.9719	1386.5817
	Right Flange		10.2004	23.7365	242.1223	0.6098	11.6565	1385.9719	1386.5817
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.0800	0.0000	0.0000
	Right Plate		0.0000	24.1600	0.0000	0.0000	12.0800	0.0000	0.0000
Total			31.93		385.66	485.96		2771.94	3257.91
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.0800	in	S _{right} = 269.69 in ³	x-bar =	12.0800	in	S _{right} = 269.69 in ³
I _y =	3257.91	in ⁴	S _{left} = 269.69 in ³	I _y =	3257.91	in ⁴	S _{left} = 269.69 in ³
C _{right} =	12.0800	in	A = 31.9259 in ²	C _{right} =	12.0800	in	A = 31.9259 in ²
C _{left} =	12.0800	in	r _y = 10.1018 in	C _{left} =	12.0800	in	r _y = 10.1018 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441** *kmw update 4/27/12*

Element Dimensions (without Section Losses):

Rolled Beam CB24x 110

- $A_1 = t_w = 0.5130$ in
- $A_2 = t_f = 0.8470$ in
- $B_1 = d = 24.1600$ in
- $B_2 = b_f = 12.0430$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U29-L28

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		11.5251	6.0215	69.3981	0.2528	0.0000	0.0000	0.2528
2	Flange Plates		20.4008	6.0215	122.8437	246.5677	0.0000	0.0000	246.5677
3	Cover Plate		0.0000	6.0215	0.0000	0.0000	0.0000	0.0000	0.0000
Total			31.93		192.24	246.82		0.00	246.82
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	22.4660	0.1875	-4.2124	6.1843	-26.0504	-0.0123	0.4631	-0.9033	-0.9156
2	7.4887	0.0625	-0.4680	6.1530	-2.8799	-0.0002	0.4318	-0.0873	-0.0874
3	0.1875	5.7650	-1.0809	9.1605	-9.9019	-2.9938	3.4393	-12.7864	-15.7801
4	0.1875	5.7650	-1.0809	9.1605	-9.9019	-2.9938	3.4393	-12.7864	-15.7801
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-6.84		-48.73	-6.00		-26.56	-32.56

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0215	in	S _{top} =	40.99	in ³	y-bar =	5.7212	in	S _{top} =	35.58	in ³
I _x =	246.82	in ⁴	S _{bott.} =	40.99	in ³	I _x =	214.26	in ⁴	S _{bott.} =	37.45	in ³
c _{top} =	6.0215	in	A =	31.9259	in ²	c _{top} =	6.0215	in	A =	25.0836	in ²
c _{bottom} =	6.0215	in	r _x =	2.7805	in	c _{bottom} =	5.7212	in	r _x =	2.9226	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441** *kmw update 4/27/12*

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		11.5251	12.0800	139.2227	484.7450	0.0000	0.0000	484.7450
2	Left Flange		10.2004	0.4235	4.3199	0.6098	11.6565	1385.9719	1386.5817
	Right Flange		10.2004	23.7365	242.1223	0.6098	11.6565	1385.9719	1386.5817
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.0800	0.0000	0.0000
	Right Plate		0.0000	24.1600	0.0000	0.0000	12.0800	0.0000	0.0000
Total			31.93		385.66	485.96		2771.94	3257.91
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1875	22.4660	-4.2124	12.0800	-50.8855	-177.1729	0.0000	0.0000	-177.1729
2	0.0625	7.4887	-0.4680	12.0800	-5.6539	-2.1873	0.0000	0.0000	-2.1873
3	5.7650	0.1875	-1.0809	0.7533	-0.8142	-0.0032	11.3268	-138.6792	-138.6823
4	5.7650	0.1875	-1.0809	23.4068	-25.3012	-0.0032	11.3268	-138.6792	-138.6823
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-6.84		-82.65	-179.37		-277.36	-456.72

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.0800	in	S _{right} = 269.69 in ³	x-bar =	12.0800	in	S _{right} = 231.89 in ³
I _y =	3257.91	in ⁴	S _{left} = 269.69 in ³	I _y =	2801.18	in ⁴	S _{left} = 231.89 in ³
C _{right} =	12.0800	in	A = 31.9259 in ²	C _{right} =	12.0800	in	A = 25.0836 in ²
C _{left} =	12.0800	in	r _y = 10.1018 in	C _{left} =	12.0800	in	r _y = 10.5676 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 100

- $A_1 = t_w = 0.4700$ in
- $A_2 = t_f = 0.7670$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 12.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U30-L29

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	6.0000	63.3541	0.1944	0.0000	0.0000	0.1944
2	Flange Plates		18.4080	6.0000	110.4480	220.8960	0.0000	0.0000	220.8960
3	Cover Plate		0.0000	6.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			28.97		173.80	221.09		0.00	221.09
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0000	in	$S_{top} =$	36.85	in ³	y-bar =	6.0000	in	$S_{top} =$	36.85	in ³
$I_x =$	221.09	in ⁴	$S_{bott.} =$	36.85	in ³	$I_x =$	221.09	in ⁴	$S_{bott.} =$	36.85	in ³
$c_{top} =$	6.0000	in	A =	28.9670	in ²	$c_{top} =$	6.0000	in	A =	28.9670	in ²
$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in	$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	12.0000	126.7082	444.1134	0.0000	0.0000	444.1134
2	Left Flange		9.2040	0.3835	3.5297	0.4512	11.6165	1242.0160	1242.4673
	Right Flange		9.2040	23.6165	217.3663	0.4512	11.6165	1242.0160	1242.4673
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.0000	0.0000	0.0000
	Right Plate		0.0000	24.0000	0.0000	0.0000	12.0000	0.0000	0.0000
Total			28.97		347.60	445.02		2484.03	2929.05
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.0000	in	S _{right} = 244.09 in ³	x-bar =	12.0000	in	S _{right} = 244.09 in ³
I _y =	2929.05	in ⁴	S _{left} = 244.09 in ³	I _y =	2929.05	in ⁴	S _{left} = 244.09 in ³
C _{right} =	12.0000	in	A = 28.9670 in ²	C _{right} =	12.0000	in	A = 28.9670 in ²
C _{left} =	12.0000	in	r _y = 10.0557 in	C _{left} =	12.0000	in	r _y = 10.0557 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U30-L31

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		0.0000	7.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			37.78		264.47	408.29		0.00	408.29
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	S _{top} =	58.33	in ³	y-bar =	7.0000	in	S _{top} =	58.33	in ³
I _x =	408.29	in ⁴	S _{bott.} =	58.33	in ³	I _x =	408.29	in ⁴	S _{bott.} =	58.33	in ³
c _{top} =	7.0000	in	A =	37.7816	in ²	c _{top} =	7.0000	in	A =	37.7816	in ²
c _{bottom} =	7.0000	in	r _x =	3.2873	in	c _{bottom} =	7.0000	in	r _x =	3.2873	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.1250	155.2681	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	0.4460	5.5696	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	23.8040	297.2644	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.1250	0.0000	0.0000
	Right Plate		0.0000	24.2500	0.0000	0.0000	12.1250	0.0000	0.0000
Total			37.78		458.10	540.26		3406.70	3946.96
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.1250	in	S _{right} =	325.52	in ³	x-bar =	12.1250	in	S _{right} =	325.52	in ³
I _y =	3946.96	in ⁴	S _{left} =	325.52	in ³	I _y =	3946.96	in ⁴	S _{left} =	325.52	in ³
C _{right} =	12.1250	in	A =	37.7816	in ²	C _{right} =	12.1250	in	A =	37.7816	in ²
C _{left} =	12.1250	in	r _y =	10.2210	in	C _{left} =	12.1250	in	r _y =	10.2210	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 160

- $A_1 = t_w = 0.6650$ in
- $A_2 = t_f = 1.1240$ in
- $B_1 = d = 24.7140$ in
- $B_2 = b_f = 14.0950$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U31-L32

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	7.0475	105.2889	0.5506	0.0000	0.0000	0.5506
2	Flange Plates		31.6856	7.0475	223.3040	524.5783	0.0000	0.0000	524.5783
3	Cover Plate		0.0000	7.0475	0.0000	0.0000	0.0000	0.0000	0.0000
Total			46.63		328.59	525.13		0.00	525.13
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0475	in	S _{top} =	74.51	in ³	y-bar =	7.0475	in	S _{top} =	74.51	in ³
I _x =	525.13	in ⁴	S _{bott.} =	74.51	in ³	I _x =	525.13	in ⁴	S _{bott.} =	74.51	in ³
c _{top} =	7.0475	in	A =	46.6255	in ²	c _{top} =	7.0475	in	A =	46.6255	in ²
c _{bottom} =	7.0475	in	r _x =	3.3560	in	c _{bottom} =	7.0475	in	r _x =	3.3560	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	12.3570	184.6122	628.3732	0.0000	0.0000	628.3732
2	Left Flange		15.8428	0.5620	8.9036	1.6679	11.7950	2204.0796	2205.7476
	Right Flange		15.8428	24.1520	382.6348	1.6679	11.7950	2204.0796	2205.7476
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.3570	0.0000	0.0000
	Right Plate		0.0000	24.7140	0.0000	0.0000	12.3570	0.0000	0.0000
Total			46.63		576.15	631.71		4408.16	5039.87
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3570	in	S _{right} = 407.86 in ³	x-bar =	12.3570	in	S _{right} = 407.86 in ³
I _y =	5039.87	in ⁴	S _{left} = 407.86 in ³	I _y =	5039.87	in ⁴	S _{left} = 407.86 in ³
C _{right} =	12.3570	in	A = 46.6255 in ²	C _{right} =	12.3570	in	A = 46.6255 in ²
C _{left} =	12.3570	in	r _y = 10.3968 in	C _{left} =	12.3570	in	r _y = 10.3968 in



Made By KMW
Checked By ADK

Date 1/30/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.4375$ in
- $B_3 = b = 14.0000$ in



Member U32-L33

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		12.2500	7.0000	85.7500	200.0833	0.0000	0.0000	200.0833
Total			50.03		350.22	608.37		0.00	608.37
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.2500	14.0000	-3.5000	7.0000	-24.5000	-57.1667	0.0169	-0.0010	-57.1677
2	0.2500	14.0000	-3.5000	7.0000	-24.5000	-57.1667	0.0169	-0.0010	-57.1677
3	0.0625	3.5000	-0.2188	1.7500	-0.3828	-0.2233	5.2669	-6.0682	-6.2915
4	0.0625	3.5000	-0.2188	7.0000	-1.5313	-0.2233	0.0169	-0.0001	-0.2234
5	22.4660	0.0625	-1.4041	7.2538	-10.1852	-0.0005	0.2369	-0.0788	-0.0792
6	7.4887	0.0625	-0.4680	7.2225	-3.3804	-0.0002	0.2056	-0.0198	-0.0199
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-9.31		-64.48	-114.78		-6.17	-120.95

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	$S_{top} =$	86.91	in ³	y-bar =	7.0169	in	$S_{top} =$	69.63	in ³
$I_x =$	608.37	in ⁴	$S_{bott.} =$	86.91	in ³	$I_x =$	487.42	in ⁴	$S_{bott.} =$	69.46	in ³
$c_{top} =$	7.0000	in	A =	50.0316	in ²	$c_{top} =$	7.0000	in	A =	40.7220	in ²
$c_{bottom} =$	7.0000	in	$r_x =$	3.4871	in	$c_{bottom} =$	7.0169	in	$r_x =$	3.4597	in



Made By KMW
Checked By ADK

Date 1/30/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.5625	160.8706	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	0.8835	11.0331	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	24.2415	302.7279	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		6.1250	0.2188	1.3398	0.0977	12.3438	933.2550	933.3527
	Right Plate		6.1250	24.9063	152.5508	0.0977	12.3438	933.2550	933.3527
Total			50.03		628.52	540.46		5273.21	5813.67
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	14.0000	0.2500	-3.5000	0.1250	-0.4375	-0.0182	12.4368	-541.3615	-541.3797
2	14.0000	0.2500	-3.5000	25.0000	-87.5000	-0.0182	12.4382	-541.4784	-541.4966
3	3.5000	0.0625	-0.2188	0.2813	-0.0615	-0.0001	12.2806	-32.9903	-32.9903
4	3.5000	0.0625	-0.2188	24.9688	-5.4619	-0.0001	12.4069	-33.6726	-33.6726
5	0.0625	22.4660	-1.4041	12.5625	-17.6393	-59.0576	0.0007	0.0000	-59.0576
6	0.0625	7.4887	-0.4680	12.5625	-5.8798	-2.1873	0.0007	0.0000	-2.1873
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-9.31		-116.98	-61.28		-1149.50	-1210.78

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.5625 in	S _{right} =	462.78 in ³	x-bar =	12.5618 in	S _{right} =	366.38 in ³
I _y =	5813.67 in ⁴	S _{left} =	462.78 in ³	I _y =	4602.89 in ⁴	S _{left} =	366.42 in ³
C _{right} =	12.5625 in	A =	50.0316 in ²	C _{right} =	12.5632 in	A =	40.7220 in ²
C _{left} =	12.5625 in	r _y =	10.7796 in	C _{left} =	12.5618 in	r _y =	10.6317 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 150

- $A_1 = t_w = 0.6330$ in
- $A_2 = t_f = 1.0480$ in
- $B_1 = d = 24.5620$ in
- $B_2 = b_f = 14.0630$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U33-L34

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.2210	7.0315	99.9948	0.4748	0.0000	0.0000	0.4748
2	Flange Plates		29.4760	7.0315	207.2608	485.7848	0.0000	0.0000	485.7848
3	Cover Plate		0.0000	7.0315	0.0000	0.0000	0.0000	0.0000	0.0000
Total			43.70		307.26	486.26		0.00	486.26
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0315	in	S _{top} =	69.15	in ³	y-bar =	7.0315	in	S _{top} =	69.15	in ³
I _x =	486.26	in ⁴	S _{bott.} =	69.15	in ³	I _x =	486.26	in ⁴	S _{bott.} =	69.15	in ³
c _{top} =	7.0315	in	A =	43.6970	in ²	c _{top} =	7.0315	in	A =	43.6970	in ²
c _{bottom} =	7.0315	in	r _x =	3.3359	in	c _{bottom} =	7.0315	in	r _x =	3.3359	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.2210	12.2810	174.6478	598.1357	0.0000	0.0000	598.1357
2	Left Flange		14.7380	0.5240	7.7227	1.3489	11.7570	2037.1936	2038.5425
	Right Flange		14.7380	24.0380	354.2726	1.3489	11.7570	2037.1936	2038.5425
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.2810	0.0000	0.0000
	Right Plate		0.0000	24.5620	0.0000	0.0000	12.2810	0.0000	0.0000
Total			43.70		536.64	600.83		4074.39	4675.22
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2810	in	S _{right} = 380.69 in ³	x-bar =	12.2810	in	S _{right} = 380.69 in ³
I _y =	4675.22	in ⁴	S _{left} = 380.69 in ³	I _y =	4675.22	in ⁴	S _{left} = 380.69 in ³
C _{right} =	12.2810	in	A = 43.6970 in ²	C _{right} =	12.2810	in	A = 43.6970 in ²
C _{left} =	12.2810	in	r _y = 10.3437 in	C _{left} =	12.2810	in	r _y = 10.3437 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 100

- $A_1 = t_w = 0.4700$ in
- $A_2 = t_f = 0.7670$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 12.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U34-L35

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	6.0000	63.3541	0.1944	0.0000	0.0000	0.1944
2	Flange Plates		18.4080	6.0000	110.4480	220.8960	0.0000	0.0000	220.8960
3	Cover Plate		0.0000	6.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			28.97		173.80	221.09		0.00	221.09
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0000	in	S _{top} =	36.85	in ³	y-bar =	6.0000	in	S _{top} =	36.85	in ³
I _x =	221.09	in ⁴	S _{bott.} =	36.85	in ³	I _x =	221.09	in ⁴	S _{bott.} =	36.85	in ³
c _{top} =	6.0000	in	A =	28.9670	in ²	c _{top} =	6.0000	in	A =	28.9670	in ²
c _{bottom} =	6.0000	in	r _x =	2.7627	in	c _{bottom} =	6.0000	in	r _x =	2.7627	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	12.0000	126.7082	444.1134	0.0000	0.0000	444.1134
2	Left Flange		9.2040	0.3835	3.5297	0.4512	11.6165	1242.0160	1242.4673
	Right Flange		9.2040	23.6165	217.3663	0.4512	11.6165	1242.0160	1242.4673
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.0000	0.0000	0.0000
	Right Plate		0.0000	24.0000	0.0000	0.0000	12.0000	0.0000	0.0000
Total			28.97		347.60	445.02		2484.03	2929.05
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.0000	in	S _{right} =	244.09	in ³	x-bar =	12.0000	in	S _{right} =	244.09	in ³
I _y =	2929.05	n ⁴	S _{left} =	244.09	in ³	I _y =	2929.05	n ⁴	S _{left} =	244.09	in ³
C _{right} =	12.0000	in	A =	28.9670	in ²	C _{right} =	12.0000	in	A =	28.9670	in ²
C _{left} =	12.0000	in	r _y =	10.0557	in	C _{left} =	12.0000	in	r _y =	10.0557	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 100

- $A_1 = t_w = 0.4700$ in
- $A_2 = t_f = 0.7670$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 12.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U36-L35

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	6.0000	63.3541	0.1944	0.0000	0.0000	0.1944
2	Flange Plates		18.4080	6.0000	110.4480	220.8960	0.0000	0.0000	220.8960
3	Cover Plate		0.0000	6.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			28.97		173.80	221.09		0.00	221.09
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0000	in	$S_{top} =$	36.85	in ³	y-bar =	6.0000	in	$S_{top} =$	36.85	in ³
$I_x =$	221.09	in ⁴	$S_{bott.} =$	36.85	in ³	$I_x =$	221.09	in ⁴	$S_{bott.} =$	36.85	in ³
$c_{top} =$	6.0000	in	A =	28.9670	in ²	$c_{top} =$	6.0000	in	A =	28.9670	in ²
$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in	$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	12.0000	126.7082	444.1134	0.0000	0.0000	444.1134
2	Left Flange		9.2040	0.3835	3.5297	0.4512	11.6165	1242.0160	1242.4673
	Right Flange		9.2040	23.6165	217.3663	0.4512	11.6165	1242.0160	1242.4673
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.0000	0.0000	0.0000
	Right Plate		0.0000	24.0000	0.0000	0.0000	12.0000	0.0000	0.0000
Total			28.97		347.60	445.02		2484.03	2929.05
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.0000	in	S _{right} =	244.09	in ³	x-bar =	12.0000	in	S _{right} =	244.09	in ³
I _y =	2929.05	n ⁴	S _{left} =	244.09	in ³	I _y =	2929.05	n ⁴	S _{left} =	244.09	in ³
C _{right} =	12.0000	in	A =	28.9670	in ²	C _{right} =	12.0000	in	A =	28.9670	in ²
C _{left} =	12.0000	in	r _y =	10.0557	in	C _{left} =	12.0000	in	r _y =	10.0557	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 150

- $A_1 = t_w = 0.6330$ in
- $A_2 = t_f = 1.0480$ in
- $B_1 = d = 24.5620$ in
- $B_2 = b_f = 14.0630$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U37-L36

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.2210	7.0315	99.9948	0.4748	0.0000	0.0000	0.4748
2	Flange Plates		29.4760	7.0315	207.2608	485.7848	0.0000	0.0000	485.7848
3	Cover Plate		0.0000	7.0315	0.0000	0.0000	0.0000	0.0000	0.0000
Total			43.70		307.26	486.26		0.00	486.26
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0315	in	S _{top} =	69.15	in ³	y-bar =	7.0315	in	S _{top} =	69.15	in ³
I _x =	486.26	in ⁴	S _{bott.} =	69.15	in ³	I _x =	486.26	in ⁴	S _{bott.} =	69.15	in ³
c _{top} =	7.0315	in	A =	43.6970	in ²	c _{top} =	7.0315	in	A =	43.6970	in ²
c _{bottom} =	7.0315	in	r _x =	3.3359	in	c _{bottom} =	7.0315	in	r _x =	3.3359	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	14.2210	12.2810	174.6478	598.1357	0.0000	0.0000	598.1357	
2	Left Flange	14.7380	0.5240	7.7227	1.3489	11.7570	2037.1936	2038.5425	
	Right Flange	14.7380	24.0380	354.2726	1.3489	11.7570	2037.1936	2038.5425	
3	Left Plate	0.0000	0.0000	0.0000	0.0000	12.2810	0.0000	0.0000	
	Right Plate	0.0000	24.5620	0.0000	0.0000	12.2810	0.0000	0.0000	
Total		43.70		536.64	600.83		4074.39	4675.22	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2810	in	S _{right} = 380.69 in ³	x-bar =	12.2810	in	S _{right} = 380.69 in ³
I _y =	4675.22	in ⁴	S _{left} = 380.69 in ³	I _y =	4675.22	in ⁴	S _{left} = 380.69 in ³
C _{right} =	12.2810	in	A = 43.6970 in ²	C _{right} =	12.2810	in	A = 43.6970 in ²
C _{left} =	12.2810	in	r _y = 10.3437 in	C _{left} =	12.2810	in	r _y = 10.3437 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.4375$ in
- $B_3 = b = 14.0000$ in



Member U38-L37

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		12.2500	7.0000	85.7500	200.0833	0.0000	0.0000	200.0833
Total			50.03		350.22	608.37		0.00	608.37
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	$S_{top} =$	86.91	in ³	y-bar =	7.0000	in	$S_{top} =$	86.91	in ³
$I_x =$	608.37	in ⁴	$S_{bott.} =$	86.91	in ³	$I_x =$	608.37	in ⁴	$S_{bott.} =$	86.91	in ³
$c_{top} =$	7.0000	in	A =	50.0316	in ²	$c_{top} =$	7.0000	in	A =	50.0316	in ²
$c_{bottom} =$	7.0000	in	$r_x =$	3.4871	in	$c_{bottom} =$	7.0000	in	$r_x =$	3.4871	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.5625	160.8706	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	0.8835	11.0331	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	24.2415	302.7279	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		6.1250	0.2188	1.3398	0.0977	12.3438	933.2550	933.3527
	Right Plate		6.1250	24.9063	152.5508	0.0977	12.3438	933.2550	933.3527
Total			50.03		628.52	540.46		5273.21	5813.67
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.5625	in	S _{right} = 462.78 in ³	x-bar =	12.5625	in	S _{right} = 462.78 in ³
I _y =	5813.67	in ⁴	S _{left} = 462.78 in ³	I _y =	5813.67	in ⁴	S _{left} = 462.78 in ³
C _{right} =	12.5625	in	A = 50.0316 in ²	C _{right} =	12.5625	in	A = 50.0316 in ²
C _{left} =	12.5625	in	r _y = 10.7796 in	C _{left} =	12.5625	in	r _y = 10.7796 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 150

- $A_1 = t_w = 0.6330$ in
- $A_2 = t_f = 1.0480$ in
- $B_1 = d = 24.5620$ in
- $B_2 = b_f = 14.0630$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U39-L38

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.2210	7.0315	99.9948	0.4748	0.0000	0.0000	0.4748
2	Flange Plates		29.4760	7.0315	207.2608	485.7848	0.0000	0.0000	485.7848
3	Cover Plate		0.0000	7.0315	0.0000	0.0000	0.0000	0.0000	0.0000
Total			43.70		307.26	486.26		0.00	486.26
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0315	in	S _{top} =	69.15	in ³	y-bar =	7.0315	in	S _{top} =	69.15	in ³
I _x =	486.26	in ⁴	S _{bott.} =	69.15	in ³	I _x =	486.26	in ⁴	S _{bott.} =	69.15	in ³
c _{top} =	7.0315	in	A =	43.6970	in ²	c _{top} =	7.0315	in	A =	43.6970	in ²
c _{bottom} =	7.0315	in	r _x =	3.3359	in	c _{bottom} =	7.0315	in	r _x =	3.3359	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.2210	12.2810	174.6478	598.1357	0.0000	0.0000	598.1357
2	Left Flange		14.7380	0.5240	7.7227	1.3489	11.7570	2037.1936	2038.5425
	Right Flange		14.7380	24.0380	354.2726	1.3489	11.7570	2037.1936	2038.5425
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.2810	0.0000	0.0000
	Right Plate		0.0000	24.5620	0.0000	0.0000	12.2810	0.0000	0.0000
Total			43.70		536.64	600.83		4074.39	4675.22
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.2810	in	S _{right} =	380.69	in ³	x-bar =	12.2810	in	S _{right} =	380.69	in ³
I _y =	4675.22	n ⁴	S _{left} =	380.69	in ³	I _y =	4675.22	n ⁴	S _{left} =	380.69	in ³
C _{right} =	12.2810	in	A =	43.6970	in ²	C _{right} =	12.2810	in	A =	43.6970	in ²
C _{left} =	12.2810	in	r _y =	10.3437	in	C _{left} =	12.2810	in	r _y =	10.3437	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U40-L39

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		0.0000	7.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			37.78		264.47	408.29		0.00	408.29
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	S _{top} =	58.33	in ³	y-bar =	7.0000	in	S _{top} =	58.33	in ³
I _x =	408.29	in ⁴	S _{bott.} =	58.33	in ³	I _x =	408.29	in ⁴	S _{bott.} =	58.33	in ³
c _{top} =	7.0000	in	A =	37.7816	in ²	c _{top} =	7.0000	in	A =	37.7816	in ²
c _{bottom} =	7.0000	in	r _x =	3.2873	in	c _{bottom} =	7.0000	in	r _x =	3.2873	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.1250	155.2681	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	0.4460	5.5696	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	23.8040	297.2644	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.1250	0.0000	0.0000
	Right Plate		0.0000	24.2500	0.0000	0.0000	12.1250	0.0000	0.0000
Total			37.78		458.10	540.26		3406.70	3946.96
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.1250	in	S _{right} =	325.52	in ³	x-bar =	12.1250	in	S _{right} =	325.52	in ³
I _y =	3946.96	in ⁴	S _{left} =	325.52	in ³	I _y =	3946.96	in ⁴	S _{left} =	325.52	in ³
C _{right} =	12.1250	in	A =	37.7816	in ²	C _{right} =	12.1250	in	A =	37.7816	in ²
C _{left} =	12.1250	in	r _y =	10.2210	in	C _{left} =	12.1250	in	r _y =	10.2210	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 100

- $A_1 = t_w = 0.4700$ in
- $A_2 = t_f = 0.7670$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 12.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U40-L41

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	6.0000	63.3541	0.1944	0.0000	0.0000	0.1944
2	Flange Plates		18.4080	6.0000	110.4480	220.8960	0.0000	0.0000	220.8960
3	Cover Plate		0.0000	6.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			28.97		173.80	221.09		0.00	221.09
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0000	in	S _{top} =	36.85	in ³	y-bar =	6.0000	in	S _{top} =	36.85	in ³
I _x =	221.09	in ⁴	S _{bott.} =	36.85	in ³	I _x =	221.09	in ⁴	S _{bott.} =	36.85	in ³
c _{top} =	6.0000	in	A =	28.9670	in ²	c _{top} =	6.0000	in	A =	28.9670	in ²
c _{bottom} =	6.0000	in	r _x =	2.7627	in	c _{bottom} =	6.0000	in	r _x =	2.7627	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	12.0000	126.7082	444.1134	0.0000	0.0000	444.1134
2	Left Flange		9.2040	0.3835	3.5297	0.4512	11.6165	1242.0160	1242.4673
	Right Flange		9.2040	23.6165	217.3663	0.4512	11.6165	1242.0160	1242.4673
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.0000	0.0000	0.0000
	Right Plate		0.0000	24.0000	0.0000	0.0000	12.0000	0.0000	0.0000
Total			28.97		347.60	445.02		2484.03	2929.05
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.0000	in	S _{right} =	244.09	in ³	x-bar =	12.0000	in	S _{right} =	244.09	in ³
I _y =	2929.05	n ⁴	S _{left} =	244.09	in ³	I _y =	2929.05	n ⁴	S _{left} =	244.09	in ³
C _{right} =	12.0000	in	A =	28.9670	in ²	C _{right} =	12.0000	in	A =	28.9670	in ²
C _{left} =	12.0000	in	r _y =	10.0557	in	C _{left} =	12.0000	in	r _y =	10.0557	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 120

- $A_1 = t_w = 0.5590$ in
- $A_2 = t_f = 0.9220$ in
- $B_1 = d = 24.3100$ in
- $B_2 = b_f = 12.0890$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U41-L42

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.5585	6.0445	75.9098	0.3270	0.0000	0.0000	0.3270
2	Flange Plates		22.2921	6.0445	134.7447	271.4881	0.0000	0.0000	271.4881
3	Cover Plate		0.0000	6.0445	0.0000	0.0000	0.0000	0.0000	0.0000
Total			34.85		210.65	271.82		0.00	271.82
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0445	in	S _{top} =	44.97	in ³	y-bar =	6.0445	in	S _{top} =	44.97	in ³
I _x =	271.82	in ⁴	S _{bott.} =	44.97	in ³	I _x =	271.82	in ⁴	S _{bott.} =	44.97	in ³
c _{top} =	6.0445	in	A =	34.8506	in ²	c _{top} =	6.0445	in	A =	34.8506	in ²
c _{bottom} =	6.0445	in	r _x =	2.7927	in	c _{bottom} =	6.0445	in	r _x =	2.7927	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	12.5585	12.1550	152.6485	528.2115	0.0000	0.0000	528.2115	
2	Left Flange	11.1461	0.4610	5.1383	0.7896	11.6940	1524.2194	1525.0090	
	Right Flange	11.1461	23.8490	265.8223	0.7896	11.6940	1524.2194	1525.0090	
3	Left Plate	0.0000	0.0000	0.0000	0.0000	12.1550	0.0000	0.0000	
	Right Plate	0.0000	24.3100	0.0000	0.0000	12.1550	0.0000	0.0000	
Total		34.85		423.61	529.79		3048.44	3578.23	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1550	in	S _{right} = 294.38 in ³	x-bar =	12.1550	in	S _{right} = 294.38 in ³
I _y =	3578.23	n ⁴	S _{left} = 294.38 in ³	I _y =	3578.23	n ⁴	S _{left} = 294.38 in ³
C _{right} =	12.1550	in	A = 34.8506 in ²	C _{right} =	12.1550	in	A = 34.8506 in ²
C _{left} =	12.1550	in	r _y = 10.1328 in	C _{left} =	12.1550	in	r _y = 10.1328 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U42-L43

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		0.0000	7.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			37.78		264.47	408.29		0.00	408.29
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	S _{top} =	58.33	in ³	y-bar =	7.0000	in	S _{top} =	58.33	in ³
I _x =	408.29	in ⁴	S _{bott.} =	58.33	in ³	I _x =	408.29	in ⁴	S _{bott.} =	58.33	in ³
c _{top} =	7.0000	in	A =	37.7816	in ²	c _{top} =	7.0000	in	A =	37.7816	in ²
c _{bottom} =	7.0000	in	r _x =	3.2873	in	c _{bottom} =	7.0000	in	r _x =	3.2873	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.1250	155.2681	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	0.4460	5.5696	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	23.8040	297.2644	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.1250	0.0000	0.0000
	Right Plate		0.0000	24.2500	0.0000	0.0000	12.1250	0.0000	0.0000
Total			37.78		458.10	540.26		3406.70	3946.96
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.1250	in	S _{right} =	325.52	in ³	x-bar =	12.1250	in	S _{right} =	325.52	in ³
I _y =	3946.96	in ⁴	S _{left} =	325.52	in ³	I _y =	3946.96	in ⁴	S _{left} =	325.52	in ³
C _{right} =	12.1250	in	A =	37.7816	in ²	C _{right} =	12.1250	in	A =	37.7816	in ²
C _{left} =	12.1250	in	r _y =	10.2210	in	C _{left} =	12.1250	in	r _y =	10.2210	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 120

- $A_1 = t_w = 0.5590$ in
- $A_2 = t_f = 0.9220$ in
- $B_1 = d = 24.3100$ in
- $B_2 = b_f = 12.0890$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U43-L44

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.5585	6.0445	75.9098	0.3270	0.0000	0.0000	0.3270
2	Flange Plates		22.2921	6.0445	134.7447	271.4881	0.0000	0.0000	271.4881
3	Cover Plate		0.0000	6.0445	0.0000	0.0000	0.0000	0.0000	0.0000
Total			34.85		210.65	271.82		0.00	271.82
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0445	in	S _{top} =	44.97	in ³	y-bar =	6.0445	in	S _{top} =	44.97	in ³
I _x =	271.82	in ⁴	S _{bott.} =	44.97	in ³	I _x =	271.82	in ⁴	S _{bott.} =	44.97	in ³
c _{top} =	6.0445	in	A =	34.8506	in ²	c _{top} =	6.0445	in	A =	34.8506	in ²
c _{bottom} =	6.0445	in	r _x =	2.7927	in	c _{bottom} =	6.0445	in	r _x =	2.7927	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	12.5585	12.1550	152.6485	528.2115	0.0000	0.0000	528.2115	
2	Left Flange	11.1461	0.4610	5.1383	0.7896	11.6940	1524.2194	1525.0090	
	Right Flange	11.1461	23.8490	265.8223	0.7896	11.6940	1524.2194	1525.0090	
3	Left Plate	0.0000	0.0000	0.0000	0.0000	12.1550	0.0000	0.0000	
	Right Plate	0.0000	24.3100	0.0000	0.0000	12.1550	0.0000	0.0000	
Total		34.85		423.61	529.79		3048.44	3578.23	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1550 in	S _{right} =	294.38 in ³	x-bar =	12.1550 in	S _{right} =	294.38 in ³
I _y =	3578.23 in ⁴	S _{left} =	294.38 in ³	I _y =	3578.23 in ⁴	S _{left} =	294.38 in ³
C _{right} =	12.1550 in	A =	34.8506 in ²	C _{right} =	12.1550 in	A =	34.8506 in ²
C _{left} =	12.1550 in	r _y =	10.1328 in	C _{left} =	12.1550 in	r _y =	10.1328 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 74

- $A_1 = t_w = 0.4120$ in
- $A_2 = t_f = 0.6800$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 9.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U44-L45

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		9.3277	4.5000	41.9746	0.1319	0.0000	0.0000	0.1319
2	Flange Plates		12.2400	4.5000	55.0800	82.6200	0.0000	0.0000	82.6200
3	Cover Plate		0.0000	4.5000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			21.57		97.05	82.75		0.00	82.75
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	4.5000	in	S _{top} =	18.39	in ³	y-bar =	4.5000	in	S _{top} =	18.39	in ³
I _x =	82.75	in ⁴	S _{bott.} =	18.39	in ³	I _x =	82.75	in ⁴	S _{bott.} =	18.39	in ³
c _{top} =	4.5000	in	A =	21.5677	in ²	c _{top} =	4.5000	in	A =	21.5677	in ²
c _{bottom} =	4.5000	in	r _x =	1.9588	in	c _{bottom} =	4.5000	in	r _x =	1.9588	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		9.3277	12.0000	111.9322	398.4238	0.0000	0.0000	398.4238
2	Left Flange		6.1200	0.3400	2.0808	0.2358	11.6600	832.0483	832.2841
	Right Flange		6.1200	23.6600	144.7992	0.2358	11.6600	832.0483	832.2841
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.0000	0.0000	0.0000
	Right Plate		0.0000	24.0000	0.0000	0.0000	12.0000	0.0000	0.0000
Total			21.57		258.81	398.90		1664.10	2062.99
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.0000	in	S _{right} =	171.92	in ³	x-bar =	12.0000	in	S _{right} =	171.92	in ³
I _y =	2062.99	n ⁴	S _{left} =	171.92	in ³	I _y =	2062.99	n ⁴	S _{left} =	171.92	in ³
C _{right} =	12.0000	in	A =	21.5677	in ²	C _{right} =	12.0000	in	A =	21.5677	in ²
C _{left} =	12.0000	in	r _y =	9.7802	in	C _{left} =	12.0000	in	r _y =	9.7802	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 74

- $A_1 = t_w = 0.4120$ in
- $A_2 = t_f = 0.6800$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 9.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U46-L45

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		9.3277	4.5000	41.9746	0.1319	0.0000	0.0000	0.1319
2	Flange Plates		12.2400	4.5000	55.0800	82.6200	0.0000	0.0000	82.6200
3	Cover Plate		0.0000	4.5000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			21.57		97.05	82.75		0.00	82.75
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	4.5000	in	S _{top} =	18.39	in ³	y-bar =	4.5000	in	S _{top} =	18.39	in ³
I _x =	82.75	in ⁴	S _{bott.} =	18.39	in ³	I _x =	82.75	in ⁴	S _{bott.} =	18.39	in ³
c _{top} =	4.5000	in	A =	21.5677	in ²	c _{top} =	4.5000	in	A =	21.5677	in ²
c _{bottom} =	4.5000	in	r _x =	1.9588	in	c _{bottom} =	4.5000	in	r _x =	1.9588	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		9.3277	12.0000	111.9322	398.4238	0.0000	0.0000	398.4238
2	Left Flange		6.1200	0.3400	2.0808	0.2358	11.6600	832.0483	832.2841
	Right Flange		6.1200	23.6600	144.7992	0.2358	11.6600	832.0483	832.2841
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.0000	0.0000	0.0000
	Right Plate		0.0000	24.0000	0.0000	0.0000	12.0000	0.0000	0.0000
Total			21.57		258.81	398.90		1664.10	2062.99
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.0000	in	S _{right} =	171.92	in ³	x-bar =	12.0000	in	S _{right} =	171.92	in ³
I _y =	2062.99	n ⁴	S _{left} =	171.92	in ³	I _y =	2062.99	n ⁴	S _{left} =	171.92	in ³
C _{right} =	12.0000	in	A =	21.5677	in ²	C _{right} =	12.0000	in	A =	21.5677	in ²
C _{left} =	12.0000	in	r _y =	9.7802	in	C _{left} =	12.0000	in	r _y =	9.7802	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 120

- $A_1 = t_w = 0.5590$ in
- $A_2 = t_f = 0.9220$ in
- $B_1 = d = 24.3100$ in
- $B_2 = b_f = 12.0890$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U47-L46

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.5585	6.0445	75.9098	0.3270	0.0000	0.0000	0.3270
2	Flange Plates		22.2921	6.0445	134.7447	271.4881	0.0000	0.0000	271.4881
3	Cover Plate		0.0000	6.0445	0.0000	0.0000	0.0000	0.0000	0.0000
Total			34.85		210.65	271.82		0.00	271.82
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0445	in	S _{top} =	44.97	in ³	y-bar =	6.0445	in	S _{top} =	44.97	in ³
I _x =	271.82	in ⁴	S _{bott.} =	44.97	in ³	I _x =	271.82	in ⁴	S _{bott.} =	44.97	in ³
c _{top} =	6.0445	in	A =	34.8506	in ²	c _{top} =	6.0445	in	A =	34.8506	in ²
c _{bottom} =	6.0445	in	r _x =	2.7927	in	c _{bottom} =	6.0445	in	r _x =	2.7927	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.5585	12.1550	152.6485	528.2115	0.0000	0.0000	528.2115
2	Left Flange		11.1461	0.4610	5.1383	0.7896	11.6940	1524.2194	1525.0090
	Right Flange		11.1461	23.8490	265.8223	0.7896	11.6940	1524.2194	1525.0090
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.1550	0.0000	0.0000
	Right Plate		0.0000	24.3100	0.0000	0.0000	12.1550	0.0000	0.0000
Total			34.85		423.61	529.79		3048.44	3578.23
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1550	in	S _{right} = 294.38 in ³	x-bar =	12.1550	in	S _{right} = 294.38 in ³
I _y =	3578.23	n ⁴	S _{left} = 294.38 in ³	I _y =	3578.23	n ⁴	S _{left} = 294.38 in ³
C _{right} =	12.1550	in	A = 34.8506 in ²	C _{right} =	12.1550	in	A = 34.8506 in ²
C _{left} =	12.1550	in	r _y = 10.1328 in	C _{left} =	12.1550	in	r _y = 10.1328 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U48-L47

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		0.0000	7.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			37.78		264.47	408.29		0.00	408.29
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	S _{top} =	58.33	in ³	y-bar =	7.0000	in	S _{top} =	58.33	in ³
I _x =	408.29	in ⁴	S _{bott.} =	58.33	in ³	I _x =	408.29	in ⁴	S _{bott.} =	58.33	in ³
c _{top} =	7.0000	in	A =	37.7816	in ²	c _{top} =	7.0000	in	A =	37.7816	in ²
c _{bottom} =	7.0000	in	r _x =	3.2873	in	c _{bottom} =	7.0000	in	r _x =	3.2873	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	12.8056	12.1250	155.2681	538.6056	0.0000	0.0000	538.6056	
2	Left Flange	12.4880	0.4460	5.5696	0.8280	11.6790	1703.3512	1704.1792	
	Right Flange	12.4880	23.8040	297.2644	0.8280	11.6790	1703.3512	1704.1792	
3	Left Plate	0.0000	0.0000	0.0000	0.0000	12.1250	0.0000	0.0000	
	Right Plate	0.0000	24.2500	0.0000	0.0000	12.1250	0.0000	0.0000	
Total		37.78		458.10	540.26		3406.70	3946.96	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250	in	S _{right} = 325.52 in ³	x-bar =	12.1250	in	S _{right} = 325.52 in ³
I _y =	3946.96	in ⁴	S _{left} = 325.52 in ³	I _y =	3946.96	in ⁴	S _{left} = 325.52 in ³
C _{right} =	12.1250	in	A = 37.7816 in ²	C _{right} =	12.1250	in	A = 37.7816 in ²
C _{left} =	12.1250	in	r _y = 10.2210 in	C _{left} =	12.1250	in	r _y = 10.2210 in



Made By KMW
Checked By ADK

Date 2/2/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 120

- $A_1 = t_w = 0.5590$ in
- $A_2 = t_f = 0.9220$ in
- $B_1 = d = 24.3100$ in
- $B_2 = b_f = 12.0890$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U49-L48

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.5585	6.0445	75.9098	0.3270	0.0000	0.0000	0.3270
2	Flange Plates		22.2921	6.0445	134.7447	271.4881	0.0000	0.0000	271.4881
3	Cover Plate		0.0000	6.0445	0.0000	0.0000	0.0000	0.0000	0.0000
Total			34.85		210.65	271.82		0.00	271.82
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.2500	6.0740	-1.5185	9.0520	-13.7455	-4.6686	3.3919	-17.4698	-22.1384
2	0.2500	6.0740	-1.5185	9.0520	-13.7455	-4.6686	3.3919	-17.4698	-22.1384
3	22.9660	0.2500	-5.7415	6.1990	-35.5916	-0.0299	0.5389	-1.6671	-1.6970
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-8.78		-63.08	-9.37		-36.61	-45.97

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0445	in	S _{top} =	44.97	in ³	y-bar =	5.6601	in	S _{top} =	37.36	in ³
I _x =	271.82	in ⁴	S _{bott.} =	44.97	in ³	I _x =	225.84	in ⁴	S _{bott.} =	39.90	in ³
c _{top} =	6.0445	in	A =	34.8506	in ²	c _{top} =	6.0445	in	A =	26.0721	in ²
c _{bottom} =	6.0445	in	r _x =	2.7927	in	c _{bottom} =	5.6601	in	r _x =	2.9432	in



Made By KMW
Checked By ADK

Date 2/2/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.5585	12.1550	152.6485	528.2115	0.0000	0.0000	528.2115
2	Left Flange		11.1461	0.4610	5.1383	0.7896	11.6940	1524.2194	1525.0090
	Right Flange		11.1461	23.8490	265.8223	0.7896	11.6940	1524.2194	1525.0090
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.1550	0.0000	0.0000
	Right Plate		0.0000	24.3100	0.0000	0.0000	12.1550	0.0000	0.0000
Total			34.85		423.61	529.79		3048.44	3578.23
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	6.0740	0.2500	-1.5185	0.7970	-1.2102	-0.0079	11.3580	-195.8928	-195.9007
2	6.0740	0.2500	-1.5185	23.5130	-35.7045	-0.0079	11.3580	-195.8928	-195.9007
3	0.2500	22.9660	-5.7415	12.1550	-69.7879	-252.3567	0.0000	0.0000	-252.3567
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-8.78		-106.70	-252.37		-391.79	-644.16

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1550	in	S _{right} = 294.38 in ³	x-bar =	12.1550	in	S _{right} = 241.39 in ³
I _y =	3578.23	in ⁴	S _{left} = 294.38 in ³	I _y =	2934.07	in ⁴	S _{left} = 241.39 in ³
C _{right} =	12.1550	in	A = 34.8506 in ²	C _{right} =	12.1550	in	A = 26.0721 in ²
C _{left} =	12.1550	in	r _y = 10.1328 in	C _{left} =	12.1550	in	r _y = 10.6083 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 100

- $A_1 = t_w = 0.4700$ in
- $A_2 = t_f = 0.7670$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 12.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U50-L49

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	6.0000	63.3541	0.1944	0.0000	0.0000	0.1944
2	Flange Plates		18.4080	6.0000	110.4480	220.8960	0.0000	0.0000	220.8960
3	Cover Plate		0.0000	6.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			28.97		173.80	221.09		0.00	221.09
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0000	in	S _{top} =	36.85	in ³	y-bar =	6.0000	in	S _{top} =	36.85	in ³
I _x =	221.09	in ⁴	S _{bott.} =	36.85	in ³	I _x =	221.09	in ⁴	S _{bott.} =	36.85	in ³
c _{top} =	6.0000	in	A =	28.9670	in ²	c _{top} =	6.0000	in	A =	28.9670	in ²
c _{bottom} =	6.0000	in	r _x =	2.7627	in	c _{bottom} =	6.0000	in	r _x =	2.7627	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	10.5590	12.0000	126.7082	444.1134	0.0000	0.0000	444.1134	
2	Left Flange	9.2040	0.3835	3.5297	0.4512	11.6165	1242.0160	1242.4673	
	Right Flange	9.2040	23.6165	217.3663	0.4512	11.6165	1242.0160	1242.4673	
3	Left Plate	0.0000	0.0000	0.0000	0.0000	12.0000	0.0000	0.0000	
	Right Plate	0.0000	24.0000	0.0000	0.0000	12.0000	0.0000	0.0000	
Total		28.97		347.60	445.02		2484.03	2929.05	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.0000	in	S _{right} = 244.09 in ³	x-bar =	12.0000	in	S _{right} = 244.09 in ³
I _y =	2929.05	in ⁴	S _{left} = 244.09 in ³	I _y =	2929.05	in ⁴	S _{left} = 244.09 in ³
C _{right} =	12.0000	in	A = 28.9670 in ²	C _{right} =	12.0000	in	A = 28.9670 in ²
C _{left} =	12.0000	in	r _y = 10.0557 in	C _{left} =	12.0000	in	r _y = 10.0557 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U50-L51

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		0.0000	7.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			37.78		264.47	408.29		0.00	408.29
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	$S_{top} =$	58.33	in ³	y-bar =	7.0000	in	$S_{top} =$	58.33	in ³
$I_x =$	408.29	in ⁴	$S_{bott.} =$	58.33	in ³	$I_x =$	408.29	in ⁴	$S_{bott.} =$	58.33	in ³
$c_{top} =$	7.0000	in	A =	37.7816	in ²	$c_{top} =$	7.0000	in	A =	37.7816	in ²
$c_{bottom} =$	7.0000	in	$r_x =$	3.2873	in	$c_{bottom} =$	7.0000	in	$r_x =$	3.2873	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.1250	155.2681	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	0.4460	5.5696	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	23.8040	297.2644	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.1250	0.0000	0.0000
	Right Plate		0.0000	24.2500	0.0000	0.0000	12.1250	0.0000	0.0000
Total			37.78		458.10	540.26		3406.70	3946.96
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.1250	in	S _{right} =	325.52	in ³	x-bar =	12.1250	in	S _{right} =	325.52	in ³
I _y =	3946.96	in ⁴	S _{left} =	325.52	in ³	I _y =	3946.96	in ⁴	S _{left} =	325.52	in ³
C _{right} =	12.1250	in	A =	37.7816	in ²	C _{right} =	12.1250	in	A =	37.7816	in ²
C _{left} =	12.1250	in	r _y =	10.2210	in	C _{left} =	12.1250	in	r _y =	10.2210	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 150

- $A_1 = t_w = 0.6330$ in
- $A_2 = t_f = 1.0480$ in
- $B_1 = d = 24.5620$ in
- $B_2 = b_f = 14.0630$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U51-L52

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.2210	7.0315	99.9948	0.4748	0.0000	0.0000	0.4748
2	Flange Plates		29.4760	7.0315	207.2608	485.7848	0.0000	0.0000	485.7848
3	Cover Plate		0.0000	7.0315	0.0000	0.0000	0.0000	0.0000	0.0000
Total			43.70		307.26	486.26		0.00	486.26
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0315	in	S _{top} =	69.15	in ³	y-bar =	7.0315	in	S _{top} =	69.15	in ³
I _x =	486.26	in ⁴	S _{bott.} =	69.15	in ³	I _x =	486.26	in ⁴	S _{bott.} =	69.15	in ³
c _{top} =	7.0315	in	A =	43.6970	in ²	c _{top} =	7.0315	in	A =	43.6970	in ²
c _{bottom} =	7.0315	in	r _x =	3.3359	in	c _{bottom} =	7.0315	in	r _x =	3.3359	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.2210	12.2810	174.6478	598.1357	0.0000	0.0000	598.1357
2	Left Flange		14.7380	0.5240	7.7227	1.3489	11.7570	2037.1936	2038.5425
	Right Flange		14.7380	24.0380	354.2726	1.3489	11.7570	2037.1936	2038.5425
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.2810	0.0000	0.0000
	Right Plate		0.0000	24.5620	0.0000	0.0000	12.2810	0.0000	0.0000
Total			43.70		536.64	600.83		4074.39	4675.22
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.2810	in	S _{right} =	380.69	in ³	x-bar =	12.2810	in	S _{right} =	380.69	in ³
I _y =	4675.22	n ⁴	S _{left} =	380.69	in ³	I _y =	4675.22	n ⁴	S _{left} =	380.69	in ³
C _{right} =	12.2810	in	A =	43.6970	in ²	C _{right} =	12.2810	in	A =	43.6970	in ²
C _{left} =	12.2810	in	r _y =	10.3437	in	C _{left} =	12.2810	in	r _y =	10.3437	in



Made By KMW
Checked By ADK

Date 1/31/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 160

- $A_1 = t_w = 0.6650$ in
- $A_2 = t_f = 1.1240$ in
- $B_1 = d = 24.7140$ in
- $B_2 = b_f = 14.0950$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U52-L53

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	7.0475	105.2889	0.5506	0.0000	0.0000	0.5506
2	Flange Plates		31.6856	7.0475	223.3040	524.5783	0.0000	0.0000	524.5783
3	Cover Plate		0.0000	7.0475	0.0000	0.0000	0.0000	0.0000	0.0000
Total			46.63		328.59	525.13		0.00	525.13
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	22.4660	0.2500	-5.6165	7.2550	-40.7477	-0.0293	0.2359	-0.3126	-0.3419
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-5.62		-40.75	-0.03		-0.31	-0.34

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0475	in	S _{top} =	74.51	in ³	y-bar =	7.0191	in	S _{top} =	74.46	in ³
I _x =	525.13	in ⁴	S _{bott.} =	74.51	in ³	I _x =	524.79	in ⁴	S _{bott.} =	74.77	in ³
c _{top} =	7.0475	in	A =	46.6255	in ²	c _{top} =	7.0475	in	A =	41.0090	in ²
c _{bottom} =	7.0475	in	r _x =	3.3560	in	c _{bottom} =	7.0191	in	r _x =	3.5773	in



Made By KMW
Checked By ADK

Date 1/31/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y, gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	14.9399	12.3570	184.6122	628.3732	0.0000	0.0000	628.3732	
2	Left Flange	15.8428	0.5620	8.9036	1.6679	11.7950	2204.0796	2205.7476	
	Right Flange	15.8428	24.1520	382.6348	1.6679	11.7950	2204.0796	2205.7476	
3	Left Plate	0.0000	0.0000	0.0000	0.0000	12.3570	0.0000	0.0000	
	Right Plate	0.0000	24.7140	0.0000	0.0000	12.3570	0.0000	0.0000	
Total		46.63		576.15	631.71		4408.16	5039.87	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.2500	22.4660	-5.6165	12.3570	-69.4031	-236.2305	0.0000	0.0000	-236.2305
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-5.62		-69.40	-236.23		0.00	-236.23

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3570	in	S _{right} = 407.86 in ³	x-bar =	12.3570	in	S _{right} = 388.74 in ³
I _y =	5039.87	n ⁴	S _{left} = 407.86 in ³	I _y =	4803.64	n ⁴	S _{left} = 388.74 in ³
C _{right} =	12.3570	in	A = 46.6255 in ²	C _{right} =	12.3570	in	A = 41.0090 in ²
C _{left} =	12.3570	in	r _y = 10.3968 in	C _{left} =	12.3570	in	r _y = 10.8230 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 150

- $A_1 = t_w = 0.6330$ in
- $A_2 = t_f = 1.0480$ in
- $B_1 = d = 24.5620$ in
- $B_2 = b_f = 14.0630$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U53-L54

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.2210	7.0315	99.9948	0.4748	0.0000	0.0000	0.4748
2	Flange Plates		29.4760	7.0315	207.2608	485.7848	0.0000	0.0000	485.7848
3	Cover Plate		0.0000	7.0315	0.0000	0.0000	0.0000	0.0000	0.0000
Total			43.70		307.26	486.26		0.00	486.26
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0315	in	S _{top} =	69.15	in ³	y-bar =	7.0315	in	S _{top} =	69.15	in ³
I _x =	486.26	in ⁴	S _{bott.} =	69.15	in ³	I _x =	486.26	in ⁴	S _{bott.} =	69.15	in ³
c _{top} =	7.0315	in	A =	43.6970	in ²	c _{top} =	7.0315	in	A =	43.6970	in ²
c _{bottom} =	7.0315	in	r _x =	3.3359	in	c _{bottom} =	7.0315	in	r _x =	3.3359	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.2210	12.2810	174.6478	598.1357	0.0000	0.0000	598.1357
2	Left Flange		14.7380	0.5240	7.7227	1.3489	11.7570	2037.1936	2038.5425
	Right Flange		14.7380	24.0380	354.2726	1.3489	11.7570	2037.1936	2038.5425
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.2810	0.0000	0.0000
	Right Plate		0.0000	24.5620	0.0000	0.0000	12.2810	0.0000	0.0000
Total			43.70		536.64	600.83		4074.39	4675.22
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.2810	in	S _{right} =	380.69	in ³	x-bar =	12.2810	in	S _{right} =	380.69	in ³
I _y =	4675.22	n ⁴	S _{left} =	380.69	in ³	I _y =	4675.22	n ⁴	S _{left} =	380.69	in ³
C _{right} =	12.2810	in	A =	43.6970	in ²	C _{right} =	12.2810	in	A =	43.6970	in ²
C _{left} =	12.2810	in	r _y =	10.3437	in	C _{left} =	12.2810	in	r _y =	10.3437	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U54-L55

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		0.0000	7.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			37.78		264.47	408.29		0.00	408.29
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	$S_{top} =$	58.33	in ³	y-bar =	7.0000	in	$S_{top} =$	58.33	in ³
$I_x =$	408.29	in ⁴	$S_{bott.} =$	58.33	in ³	$I_x =$	408.29	in ⁴	$S_{bott.} =$	58.33	in ³
$c_{top} =$	7.0000	in	A =	37.7816	in ²	$c_{top} =$	7.0000	in	A =	37.7816	in ²
$c_{bottom} =$	7.0000	in	$r_x =$	3.2873	in	$c_{bottom} =$	7.0000	in	$r_x =$	3.2873	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.1250	155.2681	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	0.4460	5.5696	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	23.8040	297.2644	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.1250	0.0000	0.0000
	Right Plate		0.0000	24.2500	0.0000	0.0000	12.1250	0.0000	0.0000
Total			37.78		458.10	540.26		3406.70	3946.96
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.1250	in	S _{right} =	325.52	in ³	x-bar =	12.1250	in	S _{right} =	325.52	in ³
I _y =	3946.96	in ⁴	S _{left} =	325.52	in ³	I _y =	3946.96	in ⁴	S _{left} =	325.52	in ³
C _{right} =	12.1250	in	A =	37.7816	in ²	C _{right} =	12.1250	in	A =	37.7816	in ²
C _{left} =	12.1250	in	r _y =	10.2210	in	C _{left} =	12.1250	in	r _y =	10.2210	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2011

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U55-L56

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		0.0000	7.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			37.78		264.47	408.29		0.00	408.29
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	$S_{top} =$	58.33	in ³	y-bar =	7.0000	in	$S_{top} =$	58.33	in ³
$I_x =$	408.29	in ⁴	$S_{bott.} =$	58.33	in ³	$I_x =$	408.29	in ⁴	$S_{bott.} =$	58.33	in ³
$c_{top} =$	7.0000	in	A =	37.7816	in ²	$c_{top} =$	7.0000	in	A =	37.7816	in ²
$c_{bottom} =$	7.0000	in	$r_x =$	3.2873	in	$c_{bottom} =$	7.0000	in	$r_x =$	3.2873	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2011

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.1250	155.2681	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	0.4460	5.5696	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	23.8040	297.2644	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.1250	0.0000	0.0000
	Right Plate		0.0000	24.2500	0.0000	0.0000	12.1250	0.0000	0.0000
Total			37.78		458.10	540.26		3406.70	3946.96
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.1250	in	S _{right} =	325.52	in ³	x-bar =	12.1250	in	S _{right} =	325.52	in ³
I _y =	3946.96	in ⁴	S _{left} =	325.52	in ³	I _y =	3946.96	in ⁴	S _{left} =	325.52	in ³
C _{right} =	12.1250	in	A =	37.7816	in ²	C _{right} =	12.1250	in	A =	37.7816	in ²
C _{left} =	12.1250	in	r _y =	10.2210	in	C _{left} =	12.1250	in	r _y =	10.2210	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam **CB24x 100**

- $A_1 = t_w = 0.4700$ in
- $A_2 = t_f = 0.7670$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 12.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U57-L56

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	6.0000	63.3541	0.1944	0.0000	0.0000	0.1944
2	Flange Plates		18.4080	6.0000	110.4480	220.8960	0.0000	0.0000	220.8960
3	Cover Plate		0.0000	6.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			28.97		173.80	221.09		0.00	221.09
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0000	in	S _{top} =	36.85	in ³	y-bar =	6.0000	in	S _{top} =	36.85	in ³
I _x =	221.09	in ⁴	S _{bott.} =	36.85	in ³	I _x =	221.09	in ⁴	S _{bott.} =	36.85	in ³
c _{top} =	6.0000	in	A =	28.9670	in ²	c _{top} =	6.0000	in	A =	28.9670	in ²
c _{bottom} =	6.0000	in	r _x =	2.7627	in	c _{bottom} =	6.0000	in	r _x =	2.7627	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	10.5590	12.0000	126.7082	444.1134	0.0000	0.0000	444.1134	
2	Left Flange	9.2040	0.3835	3.5297	0.4512	11.6165	1242.0160	1242.4673	
	Right Flange	9.2040	23.6165	217.3663	0.4512	11.6165	1242.0160	1242.4673	
3	Left Plate	0.0000	0.0000	0.0000	0.0000	12.0000	0.0000	0.0000	
	Right Plate	0.0000	24.0000	0.0000	0.0000	12.0000	0.0000	0.0000	
Total		28.97		347.60	445.02		2484.03	2929.05	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.0000	in	S _{right} = 244.09 in ³	x-bar =	12.0000	in	S _{right} = 244.09 in ³
I _y =	2929.05	in ⁴	S _{left} = 244.09 in ³	I _y =	2929.05	in ⁴	S _{left} = 244.09 in ³
C _{right} =	12.0000	in	A = 28.9670 in ²	C _{right} =	12.0000	in	A = 28.9670 in ²
C _{left} =	12.0000	in	r _y = 10.0557 in	C _{left} =	12.0000	in	r _y = 10.0557 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 150

- $A_1 = t_w = 0.6330$ in
- $A_2 = t_f = 1.0480$ in
- $B_1 = d = 24.5620$ in
- $B_2 = b_f = 14.0630$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U58-L57

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.2210	7.0315	99.9948	0.4748	0.0000	0.0000	0.4748
2	Flange Plates		29.4760	7.0315	207.2608	485.7848	0.0000	0.0000	485.7848
3	Cover Plate		0.0000	7.0315	0.0000	0.0000	0.0000	0.0000	0.0000
Total			43.70		307.26	486.26		0.00	486.26
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0315	in	S _{top} =	69.15	in ³	y-bar =	7.0315	in	S _{top} =	69.15	in ³
I _x =	486.26	in ⁴	S _{bott.} =	69.15	in ³	I _x =	486.26	in ⁴	S _{bott.} =	69.15	in ³
c _{top} =	7.0315	in	A =	43.6970	in ²	c _{top} =	7.0315	in	A =	43.6970	in ²
c _{bottom} =	7.0315	in	r _x =	3.3359	in	c _{bottom} =	7.0315	in	r _x =	3.3359	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	14.2210	12.2810	174.6478	598.1357	0.0000	0.0000	598.1357	
2	Left Flange	14.7380	0.5240	7.7227	1.3489	11.7570	2037.1936	2038.5425	
	Right Flange	14.7380	24.0380	354.2726	1.3489	11.7570	2037.1936	2038.5425	
3	Left Plate	0.0000	0.0000	0.0000	0.0000	12.2810	0.0000	0.0000	
	Right Plate	0.0000	24.5620	0.0000	0.0000	12.2810	0.0000	0.0000	
Total		43.70		536.64	600.83		4074.39	4675.22	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2810	in	S _{right} = 380.69 in ³	x-bar =	12.2810	in	S _{right} = 380.69 in ³
I _y =	4675.22	in ⁴	S _{left} = 380.69 in ³	I _y =	4675.22	in ⁴	S _{left} = 380.69 in ³
C _{right} =	12.2810	in	A = 43.6970 in ²	C _{right} =	12.2810	in	A = 43.6970 in ²
C _{left} =	12.2810	in	r _y = 10.3437 in	C _{left} =	12.2810	in	r _y = 10.3437 in



Made By KMW
Checked By ADK

Date 1/31/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.3750$ in
- $B_3 = b = 14.0000$ in



Member U59-L58

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		10.5000	7.0000	73.5000	171.5000	0.0000	0.0000	171.5000
Total			48.28		337.97	579.79		0.00	579.79
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	22.4660	0.1250	-2.8083	7.2225	-20.2826	-0.0037	0.2426	-0.1652	-0.1689
2	11.2330	0.1250	-1.4041	7.1600	-10.0535	-0.0018	0.1801	-0.0455	-0.0474
3	0.1250	14.0000	-1.7500	7.0000	-12.2500	-28.5833	0.0201	-0.0007	-28.5840
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-5.96		-42.59	-28.59		-0.21	-28.80

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	S _{top} =	82.83	in ³	y-bar =	6.9799	in	S _{top} =	78.71	in ³
I _x =	579.79	in ⁴	S _{bott.} =	82.83	in ³	I _x =	550.99	in ⁴	S _{bott.} =	78.94	in ³
c _{top} =	7.0000	in	A =	48.2816	in ²	c _{top} =	7.0000	in	A =	42.3192	in ²
c _{bottom} =	7.0000	in	r _x =	3.4653	in	c _{bottom} =	6.9799	in	r _x =	3.6083	in



Made By KMW
Checked By ADK

Date 1/31/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.5000	160.0703	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	0.8210	10.2526	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	24.1790	301.9474	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		5.2500	0.1875	0.9844	0.0615	12.3125	795.8877	795.9492
	Right Plate		5.2500	24.8125	130.2656	0.0615	12.3125	795.8877	795.9492
Total			48.28		603.52	540.38		4998.48	5538.86
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1250	22.4660	-2.8083	12.5000	-35.1031	-118.1153	0.3132	-0.2754	-118.3907
2	0.1250	11.2330	-1.4041	6.4375	-9.0391	-14.7644	5.7493	-46.4131	-61.1775
3	14.0000	0.1250	-1.7500	24.9375	-43.6406	-0.0023	12.7507	-284.5143	-284.5166
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-5.96		-87.78	-132.88		-331.20	-464.08

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.5000	in	S _{right} =	443.11	in ³	x-bar =	12.1868	in	S _{right} =	396.06	in ³
I _y =	5538.86	n ⁴	S _{left} =	443.11	in ³	I _y =	5074.78	n ⁴	S _{left} =	416.41	in ³
C _{right} =	12.5000	in	A =	48.2816	in ²	C _{right} =	12.8132	in	A =	42.3192	in ²
C _{left} =	12.5000	in	r _y =	10.7107	in	C _{left} =	12.1868	in	r _y =	10.9506	in



Made By KMW
Checked By ADK

Date 1/31/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 160

- $A_1 = t_w = 0.6650$ in
- $A_2 = t_f = 1.1240$ in
- $B_1 = d = 24.7140$ in
- $B_2 = b_f = 14.0950$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U60-L59

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	7.0475	105.2889	0.5506	0.0000	0.0000	0.5506
2	Flange Plates		31.6856	7.0475	223.3040	524.5783	0.0000	0.0000	524.5783
3	Cover Plate		0.0000	7.0475	0.0000	0.0000	0.0000	0.0000	0.0000
Total			46.63		328.59	525.13		0.00	525.13
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	6.0000	0.1250	-0.7500	7.3175	-5.4881	-0.0010	0.2805	-0.0590	-0.0600
2	6.0000	0.1875	-1.1250	7.2863	-8.1970	-0.0033	0.2493	-0.0699	-0.0732
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.88		-13.69	0.00		-0.13	-0.13

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0475	in	$S_{top} =$	74.51	in ³	y-bar =	7.0370	in	$S_{top} =$	74.49	in ³
$I_x =$	525.13	in ⁴	$S_{bott.} =$	74.51	in ³	$I_x =$	525.00	in ⁴	$S_{bott.} =$	74.61	in ³
$c_{top} =$	7.0475	in	A =	46.6255	in ²	$c_{top} =$	7.0475	in	A =	44.7505	in ²
$c_{bottom} =$	7.0475	in	$r_x =$	3.3560	in	$c_{bottom} =$	7.0370	in	$r_x =$	3.4251	in



Made By KMW
Checked By ADK

Date 1/31/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	12.3570	184.6122	628.3732	0.0000	0.0000	628.3732
2	Left Flange		15.8428	0.5620	8.9036	1.6679	11.7950	2204.0796	2205.7476
	Right Flange		15.8428	24.1520	382.6348	1.6679	11.7950	2204.0796	2205.7476
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.3570	0.0000	0.0000
	Right Plate		0.0000	24.7140	0.0000	0.0000	12.3570	0.0000	0.0000
Total			46.63		576.15	631.71		4408.16	5039.87
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1250	6.0000	-0.7500	4.1240	-3.0930	-2.2500	8.1640	-49.9883	-52.2383
2	0.1875	6.0000	-1.1250	20.5900	-23.1638	-3.3750	8.3020	-77.5384	-80.9134
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.88		-26.26	-5.63		-127.53	-133.15

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3570	in	S _{right} = 407.86 in ³	x-bar =	12.2880	in	S _{right} = 394.88 in ³
I _y =	5039.87	n ⁴	S _{left} = 407.86 in ³	I _y =	4906.72	n ⁴	S _{left} = 399.31 in ³
C _{right} =	12.3570	in	A = 46.6255 in ²	C _{right} =	12.4260	in	A = 44.7505 in ²
C _{left} =	12.3570	in	r _y = 10.3968 in	C _{left} =	12.2880	in	r _y = 10.4712 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 140

- $A_1 = t_w = 0.6010$ in
- $A_2 = t_f = 0.9700$ in
- $B_1 = d = 24.4060$ in
- $B_2 = b_f = 14.0310$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U61-L60

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		13.5021	7.0155	94.7237	0.4064	0.0000	0.0000	0.4064
2	Flange Plates		27.2201	7.0155	190.9629	446.5667	0.0000	0.0000	446.5667
3	Cover Plate		0.0000	7.0155	0.0000	0.0000	0.0000	0.0000	0.0000
Total			40.72		285.69	446.97		0.00	446.97
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0155	in	$S_{top} =$	63.71	in ³	y-bar =	7.0155	in	$S_{top} =$	63.71	in ³
$I_x =$	446.97	in ⁴	$S_{bott.} =$	63.71	in ³	$I_x =$	446.97	in ⁴	$S_{bott.} =$	63.71	in ³
$C_{top} =$	7.0155	in	A =	40.7222	in ²	$C_{top} =$	7.0155	in	A =	40.7222	in ²
$C_{bottom} =$	7.0155	in	$r_x =$	3.3130	in	$C_{bottom} =$	7.0155	in	$r_x =$	3.3130	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		13.5021	12.2030	164.7657	567.8982	0.0000	0.0000	567.8982
2	Left Flange		13.6101	0.4850	6.6009	1.0671	11.7180	1868.8195	1869.8866
	Right Flange		13.6101	23.9210	325.5665	1.0671	11.7180	1868.8195	1869.8866
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.2030	0.0000	0.0000
	Right Plate		0.0000	24.4060	0.0000	0.0000	12.2030	0.0000	0.0000
Total			40.72		496.93	570.03		3737.64	4307.67
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.2030	in	S _{right} =	353.00	in ³	x-bar =	12.2030	in	S _{right} =	353.00	in ³
I _y =	4307.67	n ⁴	S _{left} =	353.00	in ³	I _y =	4307.67	n ⁴	S _{left} =	353.00	in ³
C _{right} =	12.2030	in	A =	40.7222	in ²	C _{right} =	12.2030	in	A =	40.7222	in ²
C _{left} =	12.2030	in	r _y =	10.2850	in	C _{left} =	12.2030	in	r _y =	10.2850	in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

$A_4 = h = 20.0000$ in
 $B_4 = t = 0.3750$ in

Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 0.3750$ in

Cover Plate:

$A_6 = t = 0.3750$ in
 $B_6 = l = 23.5000$ in



Member U62-L61

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	16.1875	44.0098	0.0319	5.7821	90.8952	90.9270
	Vertical Leg	3.0000	18.0000	54.0000	4.0000	7.5946	173.0340	177.0340
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	6.5929	118.1740	118.2059
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	8.4054	211.9521	215.9521
3	Perforated Plate	6.0000	4.2500	25.5000	0.1250	6.1554	227.3335	227.4585
4	Plate	7.5000	10.0000	75.0000	250.0000	0.4054	1.2326	251.2326
5	Plate	7.5000	10.0000	75.0000	250.0000	0.4054	1.2326	251.2326
6	Cover Plate	8.8125	15.8125	139.3477	0.1033	5.4071	257.6489	257.7522
Total		41.25		429.22	508.29		1081.50	1589.79
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	10.4054 in	S _{top} =	165.70 in ³	y-bar =	10.4054 in	S _{top} =	165.70 in ³
I _x =	1589.79 in ⁴	S _{bott.} =	152.79 in ³	I _x =	1589.79 in ⁴	S _{bott.} =	152.79 in ³
C _{top} =	9.5946 in	A =	41.2500 in ²	C _{top} =	9.5946 in	A =	41.2500 in ²
C _{bottom} =	10.4054 in	r _x =	6.2081 in	C _{bottom} =	10.4054 in	r _x =	6.2081 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	2.5625	3.4834	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.5625	0.8438	0.0176	11.5625	200.5371	200.5547	
1 (Right)	Horizontal Leg	1.3594	21.6875	29.4814	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.6875	35.5313	0.0176	11.5625	200.5371	200.5547	
2 (Left)	Horizontal Leg	1.3594	2.5625	3.4834	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.5625	0.8438	0.0176	11.5625	200.5371	200.5547	
2 (Right)	Horizontal Leg	1.3594	21.6875	29.4814	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.6875	35.5313	0.0176	11.5625	200.5371	200.5547	
3 (Left)	Perforated Plate	3.0000	3.3750	10.1250	9.0000	8.7500	229.6875	238.6875	
3 (Right)	Perforated Plate	3.0000	20.8750	62.6250	9.0000	8.7500	229.6875	238.6875	
4	Plate	7.5000	0.1875	1.4063	0.0879	11.9375	1068.7793	1068.8672	
5	Plate	7.5000	24.0625	180.4688	0.0879	11.9375	1068.7793	1068.8672	
6	Cover Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
Total		41.25		500.16	429.76		3896.29	4326.05	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	356.79 in ³	x-bar =	12.1250 in	S _{right} =	356.79 in ³
I _y =	4326.05 in ⁴	S _{left} =	356.79 in ³	I _y =	4326.05 in ⁴	S _{left} =	356.79 in ³
C _{right} =	12.1250 in	A =	41.2500 in ²	C _{right} =	12.1250 in	A =	41.2500 in ²
C _{left} =	12.1250 in	r _y =	10.2408 in	C _{left} =	12.1250 in	r _y =	10.2408 in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

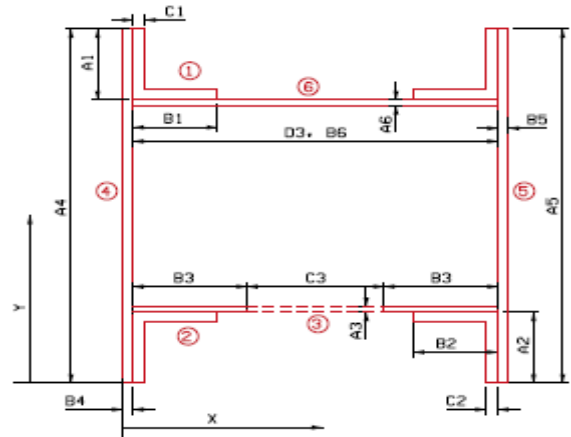
$A_4 = h = 20.0000$ in
 $B_4 = t = 0.3750$ in

Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 0.3750$ in

Cover Plate:

$A_6 = t = 0.3750$ in
 $B_6 = l = 23.5000$ in



Member U62-L63

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	16.1875	44.0098	0.0319	5.7821	90.8952	90.9270
	Vertical Leg	3.0000	18.0000	54.0000	4.0000	7.5946	173.0340	177.0340
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	6.5929	118.1740	118.2059
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	8.4054	211.9521	215.9521
3	Perforated Plate	6.0000	4.2500	25.5000	0.1250	6.1554	227.3335	227.4585
4	Plate	7.5000	10.0000	75.0000	250.0000	0.4054	1.2326	251.2326
5	Plate	7.5000	10.0000	75.0000	250.0000	0.4054	1.2326	251.2326
6	Cover Plate	8.8125	15.8125	139.3477	0.1033	5.4071	257.6489	257.7522
Total		41.25		429.22	508.29		1081.50	1589.79
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	10.4054 in	S _{top} =	165.70 in ³	y-bar =	10.4054 in	S _{top} =	165.70 in ³
I _x =	1589.79 in ⁴	S _{bott.} =	152.79 in ³	I _x =	1589.79 in ⁴	S _{bott.} =	152.79 in ³
C _{top} =	9.5946 in	A =	41.2500 in ²	C _{top} =	9.5946 in	A =	41.2500 in ²
C _{bottom} =	10.4054 in	r _x =	6.2081 in	C _{bottom} =	10.4054 in	r _x =	6.2081 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	2.5625	3.4834	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.5625	0.8438	0.0176	11.5625	200.5371	200.5547	
1 (Right)	Horizontal Leg	1.3594	21.6875	29.4814	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.6875	35.5313	0.0176	11.5625	200.5371	200.5547	
2 (Left)	Horizontal Leg	1.3594	2.5625	3.4834	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.5625	0.8438	0.0176	11.5625	200.5371	200.5547	
2 (Right)	Horizontal Leg	1.3594	21.6875	29.4814	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.6875	35.5313	0.0176	11.5625	200.5371	200.5547	
3 (Left)	Perforated Plate	3.0000	3.3750	10.1250	9.0000	8.7500	229.6875	238.6875	
3 (Right)	Perforated Plate	3.0000	20.8750	62.6250	9.0000	8.7500	229.6875	238.6875	
4	Plate	7.5000	0.1875	1.4063	0.0879	11.9375	1068.7793	1068.8672	
5	Plate	7.5000	24.0625	180.4688	0.0879	11.9375	1068.7793	1068.8672	
6	Cover Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
Total		41.25		500.16	429.76		3896.29	4326.05	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	356.79 in ³	x-bar =	12.1250 in	S _{right} =	356.79 in ³
I _y =	4326.05 in ⁴	S _{left} =	356.79 in ³	I _y =	4326.05 in ⁴	S _{left} =	356.79 in ³
C _{right} =	12.1250 in	A =	41.2500 in ²	C _{right} =	12.1250 in	A =	41.2500 in ²
C _{left} =	12.1250 in	r _y =	10.2408 in	C _{left} =	12.1250 in	r _y =	10.2408 in



Made By DMP
Checked By NRF

Date 1/24/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 110

- $A_1 = t_w = 0.5130$ in
- $A_2 = t_f = 0.8470$ in
- $B_1 = d = 24.1600$ in
- $B_2 = b_f = 12.0430$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U63-L64

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		11.5251	6.0215	69.3981	0.2528	0.0000	0.0000	0.2528
2	Flange Plates		20.4008	6.0215	122.8437	246.5677	0.0000	0.0000	246.5677
3	Cover Plate		0.0000	6.0215	0.0000	0.0000	0.0000	0.0000	0.0000
Total			31.93		192.24	246.82		0.00	246.82
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0215	in	S _{top} =	40.99	in ³	y-bar =	6.0215	in	S _{top} =	40.99	in ³
I _x =	246.82	in ⁴	S _{bott.} =	40.99	in ³	I _x =	246.82	in ⁴	S _{bott.} =	40.99	in ³
c _{top} =	6.0215	in	A =	31.9259	in ²	c _{top} =	6.0215	in	A =	31.9259	in ²
c _{bottom} =	6.0215	in	r _x =	2.7805	in	c _{bottom} =	6.0215	in	r _x =	2.7805	in



Made By DMP
Checked By NRF

Date 1/24/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		11.5251	12.0800	139.2227	484.7450	0.0000	0.0000	484.7450
2	Left Flange		10.2004	0.4235	4.3199	0.6098	11.6565	1385.9719	1386.5817
	Right Flange		10.2004	23.7365	242.1223	0.6098	11.6565	1385.9719	1386.5817
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.0800	0.0000	0.0000
	Right Plate		0.0000	24.1600	0.0000	0.0000	12.0800	0.0000	0.0000
Total			31.93		385.66	485.96		2771.94	3257.91
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.0800	in	S _{right} = 269.69 in ³	x-bar =	12.0800	in	S _{right} = 269.69 in ³
I _y =	3257.91	in ⁴	S _{left} = 269.69 in ³	I _y =	3257.91	in ⁴	S _{left} = 269.69 in ³
C _{right} =	12.0800	in	A = 31.9259 in ²	C _{right} =	12.0800	in	A = 31.9259 in ²
C _{left} =	12.0800	in	r _y = 10.1018 in	C _{left} =	12.0800	in	r _y = 10.1018 in



Made By DMP
Checked By NRF

Date 1/24/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 120

- $A_1 = t_w = 0.5590$ in
- $A_2 = t_f = 0.9220$ in
- $B_1 = d = 24.3100$ in
- $B_2 = b_f = 12.0890$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U64-L65

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.5585	6.0445	75.9098	0.3270	0.0000	0.0000	0.3270
2	Flange Plates		22.2921	6.0445	134.7447	271.4881	0.0000	0.0000	271.4881
3	Cover Plate		0.0000	6.0445	0.0000	0.0000	0.0000	0.0000	0.0000
Total			34.85		210.65	271.82		0.00	271.82
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0445	in	S _{top} =	44.97	in ³	y-bar =	6.0445	in	S _{top} =	44.97	in ³
I _x =	271.82	in ⁴	S _{bott.} =	44.97	in ³	I _x =	271.82	in ⁴	S _{bott.} =	44.97	in ³
c _{top} =	6.0445	in	A =	34.8506	in ²	c _{top} =	6.0445	in	A =	34.8506	in ²
c _{bottom} =	6.0445	in	r _x =	2.7927	in	c _{bottom} =	6.0445	in	r _x =	2.7927	in



Made By DMP
Checked By NRF

Date 1/24/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.5585	12.1550	152.6485	528.2115	0.0000	0.0000	528.2115
2	Left Flange		11.1461	0.4610	5.1383	0.7896	11.6940	1524.2194	1525.0090
	Right Flange		11.1461	23.8490	265.8223	0.7896	11.6940	1524.2194	1525.0090
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.1550	0.0000	0.0000
	Right Plate		0.0000	24.3100	0.0000	0.0000	12.1550	0.0000	0.0000
Total			34.85		423.61	529.79		3048.44	3578.23
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1550	in	S _{right} = 294.38 in ³	x-bar =	12.1550	in	S _{right} = 294.38 in ³
I _y =	3578.23	n ⁴	S _{left} = 294.38 in ³	I _y =	3578.23	n ⁴	S _{left} = 294.38 in ³
C _{right} =	12.1550	in	A = 34.8506 in ²	C _{right} =	12.1550	in	A = 34.8506 in ²
C _{left} =	12.1550	in	r _y = 10.1328 in	C _{left} =	12.1550	in	r _y = 10.1328 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U65-L66

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		0.0000	7.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			37.78		264.47	408.29		0.00	408.29
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	S _{top} =	58.33	in ³	y-bar =	7.0000	in	S _{top} =	58.33	in ³
I _x =	408.29	in ⁴	S _{bott.} =	58.33	in ³	I _x =	408.29	in ⁴	S _{bott.} =	58.33	in ³
c _{top} =	7.0000	in	A =	37.7816	in ²	c _{top} =	7.0000	in	A =	37.7816	in ²
c _{bottom} =	7.0000	in	r _x =	3.2873	in	c _{bottom} =	7.0000	in	r _x =	3.2873	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.1250	155.2681	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	0.4460	5.5696	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	23.8040	297.2644	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.1250	0.0000	0.0000
	Right Plate		0.0000	24.2500	0.0000	0.0000	12.1250	0.0000	0.0000
Total			37.78		458.10	540.26		3406.70	3946.96
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.1250	in	S _{right} =	325.52	in ³	x-bar =	12.1250	in	S _{right} =	325.52	in ³
I _y =	3946.96	in ⁴	S _{left} =	325.52	in ³	I _y =	3946.96	in ⁴	S _{left} =	325.52	in ³
C _{right} =	12.1250	in	A =	37.7816	in ²	C _{right} =	12.1250	in	A =	37.7816	in ²
C _{left} =	12.1250	in	r _y =	10.2210	in	C _{left} =	12.1250	in	r _y =	10.2210	in



Made By KMW
Checked By ADK

Date 1/20/2012
Date 2/16/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 110

- $A_1 = t_w = 0.5130$ in
- $A_2 = t_f = 0.8470$ in
- $B_1 = d = 24.1600$ in
- $B_2 = b_f = 12.0430$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U66-L67

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		11.5251	6.0215	69.3981	0.2528	0.0000	0.0000	0.2528
2	Flange Plates		20.4008	6.0215	122.8437	246.5677	0.0000	0.0000	246.5677
3	Cover Plate		0.0000	6.0215	0.0000	0.0000	0.0000	0.0000	0.0000
Total			31.93		192.24	246.82		0.00	246.82
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	3.0000	0.2500	-0.7500	6.1530	-4.6148	-0.0039	0.1347	-0.0136	-0.0175
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.75		-4.61	0.00		-0.01	-0.02

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0215	in	S _{top} =	40.99	in ³	y-bar =	6.0183	in	S _{top} =	40.99	in ³
I _x =	246.82	in ⁴	S _{bott.} =	40.99	in ³	I _x =	246.80	in ⁴	S _{bott.} =	41.01	in ³
c _{top} =	6.0215	in	A =	31.9259	in ²	c _{top} =	6.0215	in	A =	31.1759	in ²
c _{bottom} =	6.0215	in	r _x =	2.7805	in	c _{bottom} =	6.0183	in	r _x =	2.8136	in



Made By KMW
 Checked By ADK

Date 1/20/2012
 Date 2/16/2012

Job No. P402110046
 Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	11.5251	12.0800	139.2227	484.7450	0.0000	0.0000	484.7450	
2	Left Flange	10.2004	0.4235	4.3199	0.6098	11.6565	1385.9719	1386.5817	
	Right Flange	10.2004	23.7365	242.1223	0.6098	11.6565	1385.9719	1386.5817	
3	Left Plate	0.0000	0.0000	0.0000	0.0000	12.0800	0.0000	0.0000	
	Right Plate	0.0000	24.1600	0.0000	0.0000	12.0800	0.0000	0.0000	
Total		31.93		385.66	485.96		2771.94	3257.91	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.2500	3.0000	-0.7500	21.8130	-16.3598	-0.5625	9.9671	-74.5080	-75.0705
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.75		-16.36	-0.56		-74.51	-75.07

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.0800	in	S _{right} = 269.69 in ³	x-bar =	11.8459	in	S _{right} = 258.47 in ³
I _y =	3257.91	in ⁴	S _{left} = 269.69 in ³	I _y =	3182.84	in ⁴	S _{left} = 268.69 in ³
C _{right} =	12.0800	in	A = 31.9259 in ²	C _{right} =	12.3141	in	A = 31.1759 in ²
C _{left} =	12.0800	in	r _y = 10.1018 in	C _{left} =	11.8459	in	r _y = 10.1041 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam 24WF87

- $A_1 = t_w = 0.4800$ in
- $A_2 = t_f = 0.8070$ in
- $B_1 = d = 24.1600$ in
- $B_2 = b_f = 9.0250$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U67-L68

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.8221	4.5125	48.8346	0.2078	0.0000	0.0000	0.2078
2	Flange Plates		14.5664	4.5125	65.7307	98.8699	0.0000	0.0000	98.8699
3	Cover Plate		0.0000	4.5125	0.0000	0.0000	0.0000	0.0000	0.0000
Total			25.39		114.57	99.08		0.00	99.08
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	4.5125	in	S _{top} =	21.96	in ³	y-bar =	4.5125	in	S _{top} =	21.96	in ³
I _x =	99.08	in ⁴	S _{bott.} =	21.96	in ³	I _x =	99.08	in ⁴	S _{bott.} =	21.96	in ³
c _{top} =	4.5125	in	A =	25.3884	in ²	c _{top} =	4.5125	in	A =	25.3884	in ²
c _{bottom} =	4.5125	in	r _x =	1.9755	in	c _{bottom} =	4.5125	in	r _x =	1.9755	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.8221	12.0800	130.7307	458.4252	0.0000	0.0000	458.4252
2	Left Flange		7.2832	0.4035	2.9388	0.3953	11.6765	992.9928	993.3881
	Right Flange		7.2832	23.7565	173.0227	0.3953	11.6765	992.9928	993.3881
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.0800	0.0000	0.0000
	Right Plate		0.0000	24.1600	0.0000	0.0000	12.0800	0.0000	0.0000
Total			25.39		306.69	459.22		1985.99	2445.20
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.0800	in	S _{right} = 202.42 in ³	x-bar =	12.0800	in	S _{right} = 202.42 in ³
I _y =	2445.20	n ⁴	S _{left} = 202.42 in ³	I _y =	2445.20	n ⁴	S _{left} = 202.42 in ³
C _{right} =	12.0800	in	A = 25.3884 in ²	C _{right} =	12.0800	in	A = 25.3884 in ²
C _{left} =	12.0800	in	r _y = 9.8138 in	C _{left} =	12.0800	in	r _y = 9.8138 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 74

- $A_1 = t_w = 0.4120$ in
- $A_2 = t_f = 0.6800$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 9.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U69-L68

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x, gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		9.3277	4.5000	41.9746	0.1319	0.0000	0.0000	0.1319
2	Flange Plates		12.2400	4.5000	55.0800	82.6200	0.0000	0.0000	82.6200
3	Cover Plate		0.0000	4.5000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			21.57		97.05	82.75		0.00	82.75
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	4.5000	in	$S_{top} =$	18.39	in ³	y-bar =	4.5000	in	$S_{top} =$	18.39	in ³
$I_x =$	82.75	in ⁴	$S_{bott.} =$	18.39	in ³	$I_x =$	82.75	in ⁴	$S_{bott.} =$	18.39	in ³
$c_{top} =$	4.5000	in	A =	21.5677	in ²	$c_{top} =$	4.5000	in	A =	21.5677	in ²
$c_{bottom} =$	4.5000	in	$r_x =$	1.9588	in	$c_{bottom} =$	4.5000	in	$r_x =$	1.9588	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		9.3277	12.0000	111.9322	398.4238	0.0000	0.0000	398.4238
2	Left Flange		6.1200	0.3400	2.0808	0.2358	11.6600	832.0483	832.2841
	Right Flange		6.1200	23.6600	144.7992	0.2358	11.6600	832.0483	832.2841
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.0000	0.0000	0.0000
	Right Plate		0.0000	24.0000	0.0000	0.0000	12.0000	0.0000	0.0000
Total			21.57		258.81	398.90		1664.10	2062.99
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.0000	in	S _{right} =	171.92	in ³	x-bar =	12.0000	in	S _{right} =	171.92	in ³
I _y =	2062.99	in ⁴	S _{left} =	171.92	in ³	I _y =	2062.99	in ⁴	S _{left} =	171.92	in ³
C _{right} =	12.0000	in	A =	21.5677	in ²	C _{right} =	12.0000	in	A =	21.5677	in ²
C _{left} =	12.0000	in	r _y =	9.7802	in	C _{left} =	12.0000	in	r _y =	9.7802	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 110

- $A_1 = t_w = 0.5130$ in
- $A_2 = t_f = 0.8470$ in
- $B_1 = d = 24.1600$ in
- $B_2 = b_f = 12.0430$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U70-L69

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		11.5251	6.0215	69.3981	0.2528	0.0000	0.0000	0.2528
2	Flange Plates		20.4008	6.0215	122.8437	246.5677	0.0000	0.0000	246.5677
3	Cover Plate		0.0000	6.0215	0.0000	0.0000	0.0000	0.0000	0.0000
Total			31.93		192.24	246.82		0.00	246.82
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0215	in	S _{top} =	40.99	in ³	y-bar =	6.0215	in	S _{top} =	40.99	in ³
I _x =	246.82	in ⁴	S _{bott.} =	40.99	in ³	I _x =	246.82	in ⁴	S _{bott.} =	40.99	in ³
c _{top} =	6.0215	in	A =	31.9259	in ²	c _{top} =	6.0215	in	A =	31.9259	in ²
c _{bottom} =	6.0215	in	r _x =	2.7805	in	c _{bottom} =	6.0215	in	r _x =	2.7805	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		11.5251	12.0800	139.2227	484.7450	0.0000	0.0000	484.7450
2	Left Flange		10.2004	0.4235	4.3199	0.6098	11.6565	1385.9719	1386.5817
	Right Flange		10.2004	23.7365	242.1223	0.6098	11.6565	1385.9719	1386.5817
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.0800	0.0000	0.0000
	Right Plate		0.0000	24.1600	0.0000	0.0000	12.0800	0.0000	0.0000
Total			31.93		385.66	485.96		2771.94	3257.91
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.0800	in	S _{right} = 269.69 in ³	x-bar =	12.0800	in	S _{right} = 269.69 in ³
I _y =	3257.91	in ⁴	S _{left} = 269.69 in ³	I _y =	3257.91	in ⁴	S _{left} = 269.69 in ³
C _{right} =	12.0800	in	A = 31.9259 in ²	C _{right} =	12.0800	in	A = 31.9259 in ²
C _{left} =	12.0800	in	r _y = 10.1018 in	C _{left} =	12.0800	in	r _y = 10.1018 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U71-L70

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		0.0000	7.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			37.78		264.47	408.29		0.00	408.29
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	S _{top} =	58.33	in ³	y-bar =	7.0000	in	S _{top} =	58.33	in ³
I _x =	408.29	in ⁴	S _{bott.} =	58.33	in ³	I _x =	408.29	in ⁴	S _{bott.} =	58.33	in ³
c _{top} =	7.0000	in	A =	37.7816	in ²	c _{top} =	7.0000	in	A =	37.7816	in ²
c _{bottom} =	7.0000	in	r _x =	3.2873	in	c _{bottom} =	7.0000	in	r _x =	3.2873	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.1250	155.2681	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	0.4460	5.5696	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	23.8040	297.2644	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.1250	0.0000	0.0000
	Right Plate		0.0000	24.2500	0.0000	0.0000	12.1250	0.0000	0.0000
Total			37.78		458.10	540.26		3406.70	3946.96
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.1250	in	S _{right} =	325.52	in ³	x-bar =	12.1250	in	S _{right} =	325.52	in ³
I _y =	3946.96	in ⁴	S _{left} =	325.52	in ³	I _y =	3946.96	in ⁴	S _{left} =	325.52	in ³
C _{right} =	12.1250	in	A =	37.7816	in ²	C _{right} =	12.1250	in	A =	37.7816	in ²
C _{left} =	12.1250	in	r _y =	10.2210	in	C _{left} =	12.1250	in	r _y =	10.2210	in



Made By KMW
Checked By ADK

Date 1/31/2012
Date 2/16/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U72-L71

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		0.0000	7.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			37.78		264.47	408.29		0.00	408.29
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	22.4660	0.2500	-5.6165	7.1600	-40.2141	-0.0293	0.3011	-0.5091	-0.5384
2	0.2500	3.3575	-0.8394	8.9638	-7.5239	-0.7885	2.1048	-3.7187	-4.5072
3	0.2500	3.3575	-0.8394	8.9638	-7.5239	-0.7885	2.1048	-3.7187	-4.5072
4	0.2500	3.0000	-0.7500	7.0000	-5.2500	-0.5625	0.1411	-0.0149	-0.5774
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-8.05		-60.51	-2.17		-7.96	-10.13

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	S _{top} =	58.33	in ³	y-bar =	6.8589	in	S _{top} =	56.88	in ³
I _x =	408.29	in ⁴	S _{bott.} =	58.33	in ³	I _x =	398.16	in ⁴	S _{bott.} =	58.05	in ³
c _{top} =	7.0000	in	A =	37.7816	in ²	c _{top} =	7.0000	in	A =	29.7364	in ²
c _{bottom} =	7.0000	in	r _x =	3.2873	in	c _{bottom} =	6.8589	in	r _x =	3.6592	in



Made By KMW
Checked By ADK

Date 1/31/2012
Date 2/16/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.1250	155.2681	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	0.4460	5.5696	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	23.8040	297.2644	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.1250	0.0000	0.0000
	Right Plate		0.0000	24.2500	0.0000	0.0000	12.1250	0.0000	0.0000
Total			37.78		458.10	540.26		3406.70	3946.96
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.2500	22.4660	-5.6165	12.1250	-68.1001	-236.2305	0.3058	-0.5253	-236.7558
2	3.3575	0.2500	-0.8394	0.7670	-0.6438	-0.0044	11.0522	-102.5304	-102.5347
3	3.3575	0.2500	-0.8394	23.4830	-19.7110	-0.0044	11.6638	-114.1924	-114.1967
4	3.0000	0.2500	-0.7500	24.2500	-18.1875	-0.0039	12.4308	-115.8938	-115.8977
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-8.05		-106.64	-236.24		-333.14	-569.39

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250	in	S _{right} = 325.52 in ³	x-bar =	11.8192	in	S _{right} = 271.71 in ³
I _y =	3946.96	in ⁴	S _{left} = 325.52 in ³	I _y =	3377.58	in ⁴	S _{left} = 285.77 in ³
C _{right} =	12.1250	in	A = 37.7816 in ²	C _{right} =	12.4308	in	A = 29.7364 in ²
C _{left} =	12.1250	in	r _y = 10.2210 in	C _{left} =	11.8192	in	r _y = 10.6576 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 110

- $A_1 = t_w = 0.5130$ in
- $A_2 = t_f = 0.8470$ in
- $B_1 = d = 24.1600$ in
- $B_2 = b_f = 12.0430$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U73-L72

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		11.5251	6.0215	69.3981	0.2528	0.0000	0.0000	0.2528
2	Flange Plates		20.4008	6.0215	122.8437	246.5677	0.0000	0.0000	246.5677
3	Cover Plate		0.0000	6.0215	0.0000	0.0000	0.0000	0.0000	0.0000
Total			31.93		192.24	246.82		0.00	246.82
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0215	in	S _{top} =	40.99	in ³	y-bar =	6.0215	in	S _{top} =	40.99	in ³
I _x =	246.82	in ⁴	S _{bott.} =	40.99	in ³	I _x =	246.82	in ⁴	S _{bott.} =	40.99	in ³
c _{top} =	6.0215	in	A =	31.9259	in ²	c _{top} =	6.0215	in	A =	31.9259	in ²
c _{bottom} =	6.0215	in	r _x =	2.7805	in	c _{bottom} =	6.0215	in	r _x =	2.7805	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		11.5251	12.0800	139.2227	484.7450	0.0000	0.0000	484.7450
2	Left Flange		10.2004	0.4235	4.3199	0.6098	11.6565	1385.9719	1386.5817
	Right Flange		10.2004	23.7365	242.1223	0.6098	11.6565	1385.9719	1386.5817
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.0800	0.0000	0.0000
	Right Plate		0.0000	24.1600	0.0000	0.0000	12.0800	0.0000	0.0000
Total			31.93		385.66	485.96		2771.94	3257.91
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.0800	in	S _{right} = 269.69 in ³	x-bar =	12.0800	in	S _{right} = 269.69 in ³
I _y =	3257.91	in ⁴	S _{left} = 269.69 in ³	I _y =	3257.91	in ⁴	S _{left} = 269.69 in ³
C _{right} =	12.0800	in	A = 31.9259 in ²	C _{right} =	12.0800	in	A = 31.9259 in ²
C _{left} =	12.0800	in	r _y = 10.1018 in	C _{left} =	12.0800	in	r _y = 10.1018 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

$A_4 = h = 20.0000$ in
 $B_4 = t = 0.3750$ in

Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 0.3750$ in

Cover Plate:

$A_6 = t = 0.3750$ in
 $B_6 = l = 23.5000$ in



Member U74-L73

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	16.1875	44.0098	0.0319	5.7821	90.8952	90.9270
	Vertical Leg	3.0000	18.0000	54.0000	4.0000	7.5946	173.0340	177.0340
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	6.5929	118.1740	118.2059
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	8.4054	211.9521	215.9521
3	Perforated Plate	6.0000	4.2500	25.5000	0.1250	6.1554	227.3335	227.4585
4	Plate	7.5000	10.0000	75.0000	250.0000	0.4054	1.2326	251.2326
5	Plate	7.5000	10.0000	75.0000	250.0000	0.4054	1.2326	251.2326
6	Cover Plate	8.8125	15.8125	139.3477	0.1033	5.4071	257.6489	257.7522
Total		41.25		429.22	508.29		1081.50	1589.79
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	10.4054 in	S _{top} =	165.70 in ³	y-bar =	10.4054 in	S _{top} =	165.70 in ³
I _x =	1589.79 in ⁴	S _{bott.} =	152.79 in ³	I _x =	1589.79 in ⁴	S _{bott.} =	152.79 in ³
C _{top} =	9.5946 in	A =	41.2500 in ²	C _{top} =	9.5946 in	A =	41.2500 in ²
C _{bottom} =	10.4054 in	r _x =	6.2081 in	C _{bottom} =	10.4054 in	r _x =	6.2081 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	2.5625	3.4834	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.5625	0.8438	0.0176	11.5625	200.5371	200.5547	
1 (Right)	Horizontal Leg	1.3594	21.6875	29.4814	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.6875	35.5313	0.0176	11.5625	200.5371	200.5547	
2 (Left)	Horizontal Leg	1.3594	2.5625	3.4834	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.5625	0.8438	0.0176	11.5625	200.5371	200.5547	
2 (Right)	Horizontal Leg	1.3594	21.6875	29.4814	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.6875	35.5313	0.0176	11.5625	200.5371	200.5547	
3 (Left)	Perforated Plate	3.0000	3.3750	10.1250	9.0000	8.7500	229.6875	238.6875	
3 (Right)	Perforated Plate	3.0000	20.8750	62.6250	9.0000	8.7500	229.6875	238.6875	
4	Plate	7.5000	0.1875	1.4063	0.0879	11.9375	1068.7793	1068.8672	
5	Plate	7.5000	24.0625	180.4688	0.0879	11.9375	1068.7793	1068.8672	
6	Cover Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
Total		41.25		500.16	429.76		3896.29	4326.05	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	356.79 in ³	x-bar =	12.1250 in	S _{right} =	356.79 in ³
I _y =	4326.05 in ⁴	S _{left} =	356.79 in ³	I _y =	4326.05 in ⁴	S _{left} =	356.79 in ³
C _{right} =	12.1250 in	A =	41.2500 in ²	C _{right} =	12.1250 in	A =	41.2500 in ²
C _{left} =	12.1250 in	r _y =	10.2408 in	C _{left} =	12.1250 in	r _y =	10.2408 in

South Truss

Member U74-L75



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

$A_4 = h = 20.0000$ in
 $B_4 = t = 0.6875$ in

Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 0.6875$ in

Cover Plate:

$A_6 = t = 0.3750$ in
 $B_6 = l = 23.5000$ in



Member U74-L75

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	16.1875	44.0098	0.0319	5.8764	93.8835	93.9153
	Vertical Leg	3.0000	18.0000	54.0000	4.0000	7.6889	177.3567	181.3567
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	6.4986	114.8184	114.8502
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	8.3111	207.2241	211.2241
3	Perforated Plate	6.0000	4.2500	25.5000	0.1250	6.0611	220.4230	220.5480
4	Plate	13.7500	10.0000	137.5000	458.3333	0.3111	1.3309	459.6643
5	Plate	13.7500	10.0000	137.5000	458.3333	0.3111	1.3309	459.6643
6	Cover Plate	8.8125	15.8125	139.3477	0.1033	5.5014	266.7120	266.8153
Total		53.75		554.22	924.96		1083.08	2008.04
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	10.3111 in	S _{top} =	207.25 in ³	y-bar =	10.3111 in	S _{top} =	207.25 in ³
I _x =	2008.04 in ⁴	S _{bott.} =	194.74 in ³	I _x =	2008.04 in ⁴	S _{bott.} =	194.74 in ³
C _{top} =	9.6889 in	A =	53.7500 in ²	C _{top} =	9.6889 in	A =	53.7500 in ²
C _{bottom} =	10.3111 in	r _x =	6.1122 in	C _{bottom} =	10.3111 in	r _x =	6.1122 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	2.8750	3.9082	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.8750	1.3125	0.0176	11.5625	200.5371	200.5547	
1 (Right)	Horizontal Leg	1.3594	22.0000	29.9063	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	24.0000	36.0000	0.0176	11.5625	200.5371	200.5547	
2 (Left)	Horizontal Leg	1.3594	2.8750	3.9082	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.8750	1.3125	0.0176	11.5625	200.5371	200.5547	
2 (Right)	Horizontal Leg	1.3594	22.0000	29.9063	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	24.0000	36.0000	0.0176	11.5625	200.5371	200.5547	
3 (Left)	Perforated Plate	3.0000	3.6875	11.0625	9.0000	8.7500	229.6875	238.6875	
3 (Right)	Perforated Plate	3.0000	21.1875	63.5625	9.0000	8.7500	229.6875	238.6875	
4	Plate	13.7500	0.3438	4.7266	0.5416	12.0938	2011.0583	2011.5999	
5	Plate	13.7500	24.5313	337.3047	0.5416	12.0938	2011.0583	2011.5999	
6	Cover Plate	8.8125	12.4375	109.6055	405.5586	0.0000	0.0000	405.5586	
Total		53.75		668.52	430.67		5780.85	6211.52	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.4375 in	S _{right} =	499.42 in ³	x-bar =	12.4375 in	S _{right} =	499.42 in ³
I _y =	6211.52 in ⁴	S _{left} =	499.42 in ³	I _y =	6211.52 in ⁴	S _{left} =	499.42 in ³
C _{right} =	12.4375 in	A =	53.7500 in ²	C _{right} =	12.4375 in	A =	53.7500 in ²
C _{left} =	12.4375 in	r _y =	10.7500 in	C _{left} =	12.4375 in	r _y =	10.7500 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.5625$ in
- $B_3 = b = 18.0000$ in



Member U75-L76

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	9.0000	115.2506	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	9.0000	224.7840	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		20.2500	9.0000	182.2500	546.7500	0.0000	0.0000	546.7500
Total			58.03		522.28	955.04		0.00	955.04
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	9.0000	in	$S_{top} = 106.12$	in ³	y-bar =	9.0000	in	$S_{top} = 106.12$	in ³		
$I_x =$	955.04	in ⁴	$S_{bott.} = 106.12$	in ³	$I_x =$	955.04	in ⁴	$S_{bott.} = 106.12$	in ³		
$c_{top} =$	9.0000	in	A =	58.0316	in ²	$c_{top} =$	9.0000	in	A =	58.0316	in ²
$c_{bottom} =$	9.0000	in	$r_x =$	4.0567	in	$c_{bottom} =$	9.0000	in	$r_x =$	4.0567	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.6875	162.4713	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	1.0085	12.5941	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	24.3665	304.2889	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		10.1250	0.2813	2.8477	0.2670	12.4063	1558.3898	1558.6567
	Right Plate		10.1250	25.0938	254.0742	0.2670	12.4063	1558.3898	1558.6567
Total			58.03		736.28	540.80		6523.48	7064.28
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.6875	in	S _{right} = 556.79 in ³	x-bar =	12.6875	in	S _{right} = 556.79 in ³
I _y =	7064.28	in ⁴	S _{left} = 556.79 in ³	I _y =	7064.28	in ⁴	S _{left} = 556.79 in ³
C _{right} =	12.6875	in	A = 58.0316 in ²	C _{right} =	12.6875	in	A = 58.0316 in ²
C _{left} =	12.6875	in	r _y = 11.0332 in	C _{left} =	12.6875	in	r _y = 11.0332 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 160

- $A_1 = t_w = 0.6650$ in
- $A_2 = t_f = 1.1240$ in
- $B_1 = d = 24.7140$ in
- $B_2 = b_f = 14.0950$ in

Cover Plate

- $A_3 = t = 0.6875$ in
- $B_3 = b = 14.0000$ in



Member U76-L77

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	7.0475	105.2889	0.5506	0.0000	0.0000	0.5506
2	Flange Plates		31.6856	7.0475	223.3040	524.5783	0.0000	0.0000	524.5783
3	Cover Plate		19.2500	7.0475	135.6644	314.4167	0.0000	0.0000	314.4167
Total			65.88		464.26	839.55		0.00	839.55
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0475	in	S _{top} =	119.13	in ³	y-bar =	7.0475	in	S _{top} =	119.13	in ³
I _x =	839.55	in ⁴	S _{bott.} =	119.13	in ³	I _x =	839.55	in ⁴	S _{bott.} =	119.13	in ³
c _{top} =	7.0475	in	A =	65.8755	in ²	c _{top} =	7.0475	in	A =	65.8755	in ²
c _{bottom} =	7.0475	in	r _x =	3.5699	in	c _{bottom} =	7.0475	in	r _x =	3.5699	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	13.0445	194.8834	628.3732	0.0000	0.0000	628.3732
2	Left Flange		15.8428	1.2495	19.7956	1.6679	11.7950	2204.0796	2205.7476
	Right Flange		15.8428	24.8395	393.5267	1.6679	11.7950	2204.0796	2205.7476
3	Left Plate		9.6250	0.3438	3.3086	0.3791	12.7008	1552.5996	1552.9787
	Right Plate		9.6250	25.7453	247.7980	0.3791	12.7008	1552.5996	1552.9787
Total			65.88		859.31	632.47		7513.36	8145.83
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	13.0445	in	S _{right} = 624.46 in ³	x-bar =	13.0445	in	S _{right} = 624.46 in ³
I _y =	8145.83	n ⁴	S _{left} = 624.46 in ³	I _y =	8145.83	n ⁴	S _{left} = 624.46 in ³
C _{right} =	13.0445	in	A = 65.8755 in ²	C _{right} =	13.0445	in	A = 65.8755 in ²
C _{left} =	13.0445	in	r _y = 11.1200 in	C _{left} =	13.0445	in	r _y = 11.1200 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 160

- $A_1 = t_w = 0.6650$ in
- $A_2 = t_f = 1.1240$ in
- $B_1 = d = 24.7140$ in
- $B_2 = b_f = 14.0950$ in

Cover Plate

- $A_3 = t = 0.7500$ in
- $B_3 = b = 14.0000$ in



Member U77-L78

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	7.0475	105.2889	0.5506	0.0000	0.0000	0.5506
2	Flange Plates		31.6856	7.0475	223.3040	524.5783	0.0000	0.0000	524.5783
3	Cover Plate		21.0000	7.0475	147.9975	343.0000	0.0000	0.0000	343.0000
Total			67.63		476.59	868.13		0.00	868.13
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	7.0475	in	S _{top} = 123.18 in ³	y-bar =	7.0475	in	S _{top} = 123.18 in ³
I _x =	868.13	in ⁴	S _{bott.} = 123.18 in ³	I _x =	868.13	in ⁴	S _{bott.} = 123.18 in ³
c _{top} =	7.0475	in	A = 67.6255 in ²	c _{top} =	7.0475	in	A = 67.6255 in ²
c _{bottom} =	7.0475	in	r _x = 3.5829 in	c _{bottom} =	7.0475	in	r _x = 3.5829 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	13.1070	195.8171	628.3732	0.0000	0.0000	628.3732
2	Left Flange		15.8428	1.3120	20.7857	1.6679	11.7950	2204.0796	2205.7476
	Right Flange		15.8428	24.9020	394.5169	1.6679	11.7950	2204.0796	2205.7476
3	Left Plate		10.5000	0.3750	3.9375	0.4922	12.7320	1702.0902	1702.5823
	Right Plate		10.5000	25.8390	271.3095	0.4922	12.7320	1702.0902	1702.5823
Total			67.63		886.37	632.69		7812.34	8445.03
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	13.1070	in	S _{right} =	644.31	in ³	x-bar =	13.1070	in	S _{right} =	644.31	in ³
I _y =	8445.03	n ⁴	S _{left} =	644.31	in ³	I _y =	8445.03	n ⁴	S _{left} =	644.31	in ³
C _{right} =	13.1070	in	A =	67.6255	in ²	C _{right} =	13.1070	in	A =	67.6255	in ²
C _{left} =	13.1070	in	r _y =	11.1750	in	C _{left} =	13.1070	in	r _y =	11.1750	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.9375$ in
- $B_3 = b = 14.0000$ in



Member U78-L79

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		26.2500	7.0000	183.7500	428.7500	0.0000	0.0000	428.7500
Total			64.03		448.22	837.04		0.00	837.04
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	$S_{top} =$	119.58	in ³	y-bar =	7.0000	in	$S_{top} =$	119.58	in ³
$I_x =$	837.04	in ⁴	$S_{bott.} =$	119.58	in ³	$I_x =$	837.04	in ⁴	$S_{bott.} =$	119.58	in ³
$c_{top} =$	7.0000	in	A =	64.0316	in ²	$c_{top} =$	7.0000	in	A =	64.0316	in ²
$c_{bottom} =$	7.0000	in	$r_x =$	3.6156	in	$c_{bottom} =$	7.0000	in	$r_x =$	3.6156	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	13.0625	167.2734	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	1.3835	17.2771	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	24.7415	308.9719	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		13.1250	0.4688	6.1523	0.9613	12.5938	2081.6583	2082.6196
	Right Plate		13.1250	25.6563	336.7383	0.9613	12.5938	2081.6583	2082.6196
Total			64.03		836.41	542.18		7570.02	8112.20
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	13.0625	in	S _{right} = 621.03 in ³	x-bar =	13.0625	in	S _{right} = 621.03 in ³
I _y =	8112.20	n ⁴	S _{left} = 621.03 in ³	I _y =	8112.20	n ⁴	S _{left} = 621.03 in ³
C _{right} =	13.0625	in	A = 64.0316 in ²	C _{right} =	13.0625	in	A = 64.0316 in ²
C _{left} =	13.0625	in	r _y = 11.2557 in	C _{left} =	13.0625	in	r _y = 11.2557 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 150

- $A_1 = t_w = 0.6330$ in
- $A_2 = t_f = 1.0480$ in
- $B_1 = d = 24.5620$ in
- $B_2 = b_f = 14.0630$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U79-L80

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.2210	7.0315	99.9948	0.4748	0.0000	0.0000	0.4748
2	Flange Plates		29.4760	7.0315	207.2608	485.7848	0.0000	0.0000	485.7848
3	Cover Plate		0.0000	7.0315	0.0000	0.0000	0.0000	0.0000	0.0000
Total			43.70		307.26	486.26		0.00	486.26
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0315	in	$S_{top} =$	69.15	in ³	y-bar =	7.0315	in	$S_{top} =$	69.15	in ³
$I_x =$	486.26	in ⁴	$S_{bott.} =$	69.15	in ³	$I_x =$	486.26	in ⁴	$S_{bott.} =$	69.15	in ³
$c_{top} =$	7.0315	in	A =	43.6970	in ²	$c_{top} =$	7.0315	in	A =	43.6970	in ²
$c_{bottom} =$	7.0315	in	$r_x =$	3.3359	in	$c_{bottom} =$	7.0315	in	$r_x =$	3.3359	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	14.2210	12.2810	174.6478	598.1357	0.0000	0.0000	598.1357	
2	Left Flange	14.7380	0.5240	7.7227	1.3489	11.7570	2037.1936	2038.5425	
	Right Flange	14.7380	24.0380	354.2726	1.3489	11.7570	2037.1936	2038.5425	
3	Left Plate	0.0000	0.0000	0.0000	0.0000	12.2810	0.0000	0.0000	
	Right Plate	0.0000	24.5620	0.0000	0.0000	12.2810	0.0000	0.0000	
Total		43.70		536.64	600.83		4074.39	4675.22	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2810	in	S _{right} = 380.69 in ³	x-bar =	12.2810	in	S _{right} = 380.69 in ³
I _y =	4675.22	in ⁴	S _{left} = 380.69 in ³	I _y =	4675.22	in ⁴	S _{left} = 380.69 in ³
C _{right} =	12.2810	in	A = 43.6970 in ²	C _{right} =	12.2810	in	A = 43.6970 in ²
C _{left} =	12.2810	in	r _y = 10.3437 in	C _{left} =	12.2810	in	r _y = 10.3437 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 120

- $A_1 = t_w = 0.5590$ in
- $A_2 = t_f = 0.9220$ in
- $B_1 = d = 24.3100$ in
- $B_2 = b_f = 12.0890$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U80-L81

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.5585	6.0445	75.9098	0.3270	0.0000	0.0000	0.3270
2	Flange Plates		22.2921	6.0445	134.7447	271.4881	0.0000	0.0000	271.4881
3	Cover Plate		0.0000	6.0445	0.0000	0.0000	0.0000	0.0000	0.0000
Total			34.85		210.65	271.82		0.00	271.82
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0445	in	S _{top} =	44.97	in ³	y-bar =	6.0445	in	S _{top} =	44.97	in ³
I _x =	271.82	in ⁴	S _{bott.} =	44.97	in ³	I _x =	271.82	in ⁴	S _{bott.} =	44.97	in ³
c _{top} =	6.0445	in	A =	34.8506	in ²	c _{top} =	6.0445	in	A =	34.8506	in ²
c _{bottom} =	6.0445	in	r _x =	2.7927	in	c _{bottom} =	6.0445	in	r _x =	2.7927	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	12.5585	12.1550	152.6485	528.2115	0.0000	0.0000	528.2115	
2	Left Flange	11.1461	0.4610	5.1383	0.7896	11.6940	1524.2194	1525.0090	
	Right Flange	11.1461	23.8490	265.8223	0.7896	11.6940	1524.2194	1525.0090	
3	Left Plate	0.0000	0.0000	0.0000	0.0000	12.1550	0.0000	0.0000	
	Right Plate	0.0000	24.3100	0.0000	0.0000	12.1550	0.0000	0.0000	
Total		34.85		423.61	529.79		3048.44	3578.23	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1550 in	S _{right} =	294.38 in ³	x-bar =	12.1550 in	S _{right} =	294.38 in ³
I _y =	3578.23 in ⁴	S _{left} =	294.38 in ³	I _y =	3578.23 in ⁴	S _{left} =	294.38 in ³
C _{right} =	12.1550 in	A =	34.8506 in ²	C _{right} =	12.1550 in	A =	34.8506 in ²
C _{left} =	12.1550 in	r _y =	10.1328 in	C _{left} =	12.1550 in	r _y =	10.1328 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 150

- $A_1 = t_w = 0.6330$ in
- $A_2 = t_f = 1.0480$ in
- $B_1 = d = 24.5620$ in
- $B_2 = b_f = 14.0630$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U81-L82

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.2210	7.0315	99.9948	0.4748	0.0000	0.0000	0.4748
2	Flange Plates		29.4760	7.0315	207.2608	485.7848	0.0000	0.0000	485.7848
3	Cover Plate		0.0000	7.0315	0.0000	0.0000	0.0000	0.0000	0.0000
Total			43.70		307.26	486.26		0.00	486.26
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0315	in	S _{top} =	69.15	in ³	y-bar =	7.0315	in	S _{top} =	69.15	in ³
I _x =	486.26	in ⁴	S _{bott.} =	69.15	in ³	I _x =	486.26	in ⁴	S _{bott.} =	69.15	in ³
c _{top} =	7.0315	in	A =	43.6970	in ²	c _{top} =	7.0315	in	A =	43.6970	in ²
c _{bottom} =	7.0315	in	r _x =	3.3359	in	c _{bottom} =	7.0315	in	r _x =	3.3359	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	14.2210	12.2810	174.6478	598.1357	0.0000	0.0000	598.1357	
2	Left Flange	14.7380	0.5240	7.7227	1.3489	11.7570	2037.1936	2038.5425	
	Right Flange	14.7380	24.0380	354.2726	1.3489	11.7570	2037.1936	2038.5425	
3	Left Plate	0.0000	0.0000	0.0000	0.0000	12.2810	0.0000	0.0000	
	Right Plate	0.0000	24.5620	0.0000	0.0000	12.2810	0.0000	0.0000	
Total		43.70		536.64	600.83		4074.39	4675.22	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2810	in	S _{right} = 380.69 in ³	x-bar =	12.2810	in	S _{right} = 380.69 in ³
I _y =	4675.22	in ⁴	S _{left} = 380.69 in ³	I _y =	4675.22	in ⁴	S _{left} = 380.69 in ³
C _{right} =	12.2810	in	A = 43.6970 in ²	C _{right} =	12.2810	in	A = 43.6970 in ²
C _{left} =	12.2810	in	r _y = 10.3437 in	C _{left} =	12.2810	in	r _y = 10.3437 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 160

- $A_1 = t_w = 0.6650$ in
- $A_2 = t_f = 1.1240$ in
- $B_1 = d = 24.7140$ in
- $B_2 = b_f = 14.0950$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U83-L82

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	7.0475	105.2889	0.5506	0.0000	0.0000	0.5506
2	Flange Plates		31.6856	7.0475	223.3040	524.5783	0.0000	0.0000	524.5783
3	Cover Plate		0.0000	7.0475	0.0000	0.0000	0.0000	0.0000	0.0000
Total			46.63		328.59	525.13		0.00	525.13
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0475	in	S _{top} =	74.51	in ³	y-bar =	7.0475	in	S _{top} =	74.51	in ³
I _x =	525.13	in ⁴	S _{bott.} =	74.51	in ³	I _x =	525.13	in ⁴	S _{bott.} =	74.51	in ³
c _{top} =	7.0475	in	A =	46.6255	in ²	c _{top} =	7.0475	in	A =	46.6255	in ²
c _{bottom} =	7.0475	in	r _x =	3.3560	in	c _{bottom} =	7.0475	in	r _x =	3.3560	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	12.3570	184.6122	628.3732	0.0000	0.0000	628.3732
2	Left Flange		15.8428	0.5620	8.9036	1.6679	11.7950	2204.0796	2205.7476
	Right Flange		15.8428	24.1520	382.6348	1.6679	11.7950	2204.0796	2205.7476
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.3570	0.0000	0.0000
	Right Plate		0.0000	24.7140	0.0000	0.0000	12.3570	0.0000	0.0000
Total			46.63		576.15	631.71		4408.16	5039.87
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3570	in	S _{right} = 407.86 in ³	x-bar =	12.3570	in	S _{right} = 407.86 in ³
I _y =	5039.87	in ⁴	S _{left} = 407.86 in ³	I _y =	5039.87	in ⁴	S _{left} = 407.86 in ³
C _{right} =	12.3570	in	A = 46.6255 in ²	C _{right} =	12.3570	in	A = 46.6255 in ²
C _{left} =	12.3570	in	r _y = 10.3968 in	C _{left} =	12.3570	in	r _y = 10.3968 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 160

- $A_1 = t_w = 0.6650$ in
- $A_2 = t_f = 1.1240$ in
- $B_1 = d = 24.7140$ in
- $B_2 = b_f = 14.0950$ in

Cover Plate

- $A_3 = t = 0.8750$ in
- $B_3 = b = 14.0000$ in



Member U84-L83

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	7.0475	105.2889	0.5506	0.0000	0.0000	0.5506
2	Flange Plates		31.6856	7.0475	223.3040	524.5783	0.0000	0.0000	524.5783
3	Cover Plate		24.5000	7.0475	172.6638	400.1667	0.0000	0.0000	400.1667
Total			71.13		501.26	925.30		0.00	925.30
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0475	in	S _{top} =	131.29	in ³	y-bar =	7.0475	in	S _{top} =	131.29	in ³
I _x =	925.30	in ⁴	S _{bott.} =	131.29	in ³	I _x =	925.30	in ⁴	S _{bott.} =	131.29	in ³
c _{top} =	7.0475	in	A =	71.1255	in ²	c _{top} =	7.0475	in	A =	71.1255	in ²
c _{bottom} =	7.0475	in	r _x =	3.6068	in	c _{bottom} =	7.0475	in	r _x =	3.6068	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	14.9399	13.2320	197.6846	628.3732	0.0000	0.0000	628.3732	
2	Left Flange	15.8428	1.4370	22.7661	1.6679	11.7950	2204.0796	2205.7476	
	Right Flange	15.8428	25.0270	396.4973	1.6679	11.7950	2204.0796	2205.7476	
3	Left Plate	12.2500	0.4375	5.3594	0.7816	12.7945	2005.3156	2006.0971	
	Right Plate	12.2500	26.0265	318.8246	0.7816	12.7945	2005.3156	2006.0971	
Total		71.13		941.13	633.27		8418.79	9052.06	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	13.2320	in	S _{right} = 684.10 in ³	x-bar =	13.2320	in	S _{right} = 684.10 in ³
I _y =	9052.06	in ⁴	S _{left} = 684.10 in ³	I _y =	9052.06	in ⁴	S _{left} = 684.10 in ³
C _{right} =	13.2320	in	A = 71.1255 in ²	C _{right} =	13.2320	in	A = 71.1255 in ²
C _{left} =	13.2320	in	r _y = 11.2814 in	C _{left} =	13.2320	in	r _y = 11.2814 in



Made By KMW
Checked By ADK

Date 2/1/2012
Date 2/16/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 160

- $A_1 = t_w = 0.6650$ in
- $A_2 = t_f = 1.1240$ in
- $B_1 = d = 24.7140$ in
- $B_2 = b_f = 14.0950$ in

Cover Plate

- $A_3 = t = 0.7500$ in
- $B_3 = b = 14.0000$ in



Member U85-L84

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	7.0475	105.2889	0.5506	0.0000	0.0000	0.5506
2	Flange Plates		31.6856	7.0475	223.3040	524.5783	0.0000	0.0000	524.5783
3	Cover Plate		21.0000	7.0475	147.9975	343.0000	0.0000	0.0000	343.0000
Total			67.63		476.59	868.13		0.00	868.13
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	8.0000	0.2500	-2.0000	7.2550	-14.5100	-0.0104	0.2138	-0.0914	-0.1019
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.00		-14.51	-0.01		-0.09	-0.10

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	7.0475	in	$S_{top} = 123.18$ in ³	y-bar =	7.0412	in	$S_{top} = 123.17$ in ³
$I_x =$	868.13	in ⁴	$S_{bott.} = 123.18$ in ³	$I_x =$	868.03	in ⁴	$S_{bott.} = 123.28$ in ³
$c_{top} =$	7.0475	in	$A = 67.6255$ in ²	$c_{top} =$	7.0475	in	$A = 65.6255$ in ²
$c_{bottom} =$	7.0475	in	$r_x = 3.5829$ in	$c_{bottom} =$	7.0412	in	$r_x = 3.6369$ in



Made By KMW
Checked By ADK

Date 2/1/2012
Date 2/16/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	14.9399	13.1070	195.8171	628.3732	0.0000	0.0000	628.3732	
2	Left Flange	15.8428	1.3120	20.7857	1.6679	11.7950	2204.0796	2205.7476	
	Right Flange	15.8428	24.9020	394.5169	1.6679	11.7950	2204.0796	2205.7476	
3	Left Plate	10.5000	0.3750	3.9375	0.4922	12.7320	1702.0902	1702.5823	
	Right Plate	10.5000	25.8390	271.3095	0.4922	12.7320	1702.0902	1702.5823	
Total		67.63		886.37	632.69		7812.34	8445.03	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.2500	8.0000	-2.0000	13.1070	-26.2140	-10.6667	0.0000	0.0000	-10.6667
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.00		-26.21	-10.67		0.00	-10.67

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	13.1070 in	S _{right} =	644.31 in ³	x-bar =	13.1070 in	S _{right} =	643.50 in ³
I _y =	8445.03 in ⁴	S _{left} =	644.31 in ³	I _y =	8434.37 in ⁴	S _{left} =	643.50 in ³
C _{right} =	13.1070 in	A =	67.6255 in ²	C _{right} =	13.1070 in	A =	65.6255 in ²
C _{left} =	13.1070 in	r _y =	11.1750 in	C _{left} =	13.1070 in	r _y =	11.3368 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 160

- $A_1 = t_w = 0.6650$ in
- $A_2 = t_f = 1.1240$ in
- $B_1 = d = 24.7140$ in
- $B_2 = b_f = 14.0950$ in

Cover Plate

- $A_3 = t = 0.8750$ in
- $B_3 = b = 16.0000$ in



Member U86-L85

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	8.0000	119.5191	0.5506	0.0000	0.0000	0.5506
2	Flange Plates		31.6856	8.0000	253.4845	524.5783	0.0000	0.0000	524.5783
3	Cover Plate		28.0000	8.0000	224.0000	597.3333	0.0000	0.0000	597.3333
Total			74.63		597.00	1122.46		0.00	1122.46
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	8.0000	in	S _{top} = 140.31 in ³	y-bar =	8.0000	in	S _{top} = 140.31 in ³
I _x =	1122.46	in ⁴	S _{bott.} = 140.31 in ³	I _x =	1122.46	in ⁴	S _{bott.} = 140.31 in ³
c _{top} =	8.0000	in	A = 74.6255 in ²	c _{top} =	8.0000	in	A = 74.6255 in ²
c _{bottom} =	8.0000	in	r _x = 3.8783 in	c _{bottom} =	8.0000	in	r _x = 3.8783 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	14.9399	13.2320	197.6846	628.3732	0.0000	0.0000	628.3732	
2	Left Flange	15.8428	1.4370	22.7661	1.6679	11.7950	2204.0796	2205.7476	
	Right Flange	15.8428	25.0270	396.4973	1.6679	11.7950	2204.0796	2205.7476	
3	Left Plate	14.0000	0.4375	6.1250	0.8932	12.7945	2291.7892	2292.6825	
	Right Plate	14.0000	26.0265	364.3710	0.8932	12.7945	2291.7892	2292.6825	
Total		74.63		987.44	633.50		8991.74	9625.23	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	13.2320	in	S _{right} = 727.42 in ³	x-bar =	13.2320	in	S _{right} = 727.42 in ³
I _y =	9625.23	in ⁴	S _{left} = 727.42 in ³	I _y =	9625.23	in ⁴	S _{left} = 727.42 in ³
C _{right} =	13.2320	in	A = 74.6255 in ²	C _{right} =	13.2320	in	A = 74.6255 in ²
C _{left} =	13.2320	in	r _y = 11.3570 in	C _{left} =	13.2320	in	r _y = 11.3570 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 160

- $A_1 = t_w = 0.6650$ in
- $A_2 = t_f = 1.1240$ in
- $B_1 = d = 24.7140$ in
- $B_2 = b_f = 14.0950$ in

Cover Plate

- $A_3 = t = 0.8750$ in
- $B_3 = b = 14.0000$ in



Member U87-L86

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	7.0475	105.2889	0.5506	0.0000	0.0000	0.5506
2	Flange Plates		31.6856	7.0475	223.3040	524.5783	0.0000	0.0000	524.5783
3	Cover Plate		24.5000	7.0475	172.6638	400.1667	0.0000	0.0000	400.1667
Total			71.13		501.26	925.30		0.00	925.30
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0475	in	$S_{top} =$	131.29	in ³	y-bar =	7.0475	in	$S_{top} =$	131.29	in ³
$I_x =$	925.30	in ⁴	$S_{bott.} =$	131.29	in ³	$I_x =$	925.30	in ⁴	$S_{bott.} =$	131.29	in ³
$C_{top} =$	7.0475	in	A =	71.1255	in ²	$C_{top} =$	7.0475	in	A =	71.1255	in ²
$C_{bottom} =$	7.0475	in	$r_x =$	3.6068	in	$C_{bottom} =$	7.0475	in	$r_x =$	3.6068	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	13.2320	197.6846	628.3732	0.0000	0.0000	628.3732
2	Left Flange		15.8428	1.4370	22.7661	1.6679	11.7950	2204.0796	2205.7476
	Right Flange		15.8428	25.0270	396.4973	1.6679	11.7950	2204.0796	2205.7476
3	Left Plate		12.2500	0.4375	5.3594	0.7816	12.7945	2005.3156	2006.0971
	Right Plate		12.2500	26.0265	318.8246	0.7816	12.7945	2005.3156	2006.0971
Total			71.13		941.13	633.27		8418.79	9052.06
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	13.2320	in	S _{right} = 684.10 in ³	x-bar =	13.2320	in	S _{right} = 684.10 in ³
I _y =	9052.06	n ⁴	S _{left} = 684.10 in ³	I _y =	9052.06	n ⁴	S _{left} = 684.10 in ³
C _{right} =	13.2320	in	A = 71.1255 in ²	C _{right} =	13.2320	in	A = 71.1255 in ²
C _{left} =	13.2320	in	r _y = 11.2814 in	C _{left} =	13.2320	in	r _y = 11.2814 in



Made By KMW
Checked By ADK

Date 2/1/2012
Date 2/16/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.5625$ in
- $B_3 = b = 17.0000$ in



Member U88-L87

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	8.5000	108.8478	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	8.5000	212.2960	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		19.1250	8.5000	162.5625	460.5938	0.0000	0.0000	460.5938
Total			56.91		483.71	868.88		0.00	868.88
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	14.0000	0.1250	-1.7500	8.7225	-15.2644	-0.0023	0.2296	-0.0922	-0.0945
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.75		-15.26	0.00		-0.09	-0.09

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	8.5000	in	$S_{top} = 102.22$	in ³	y-bar =	8.4929	in	$S_{top} = 102.13$	in ³		
$I_x =$	868.88	in ⁴	$S_{bott.} = 102.22$	in ³	$I_x =$	868.79	in ⁴	$S_{bott.} = 102.30$	in ³		
$c_{top} =$	8.5000	in	A =	56.9066	in ²	$c_{top} =$	8.5071	in	A =	55.1566	in ²
$c_{bottom} =$	8.5000	in	$r_x =$	3.9075	in	$c_{bottom} =$	8.4929	in	$r_x =$	3.9688	in



Made By KMW
Checked By ADK

Date 2/1/2012
Date 2/16/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	12.8056	12.6875	162.4713	538.6056	0.0000	0.0000	538.6056	
2	Left Flange	12.4880	1.0085	12.5941	0.8280	11.6790	1703.3512	1704.1792	
	Right Flange	12.4880	24.3665	304.2889	0.8280	11.6790	1703.3512	1704.1792	
3	Left Plate	9.5625	0.2813	2.6895	0.2521	12.4063	1471.8126	1472.0647	
	Right Plate	9.5625	25.0938	239.9590	0.2521	12.4063	1471.8126	1472.0647	
Total		56.91		722.00	540.77		6350.33	6891.09	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1250	14.0000	-1.7500	8.4545	-14.7954	-28.5833	4.3673	-33.3784	-61.9617
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.75		-14.80	-28.58		-33.38	-61.96

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.6875	in	S _{right} = 543.14 in ³	x-bar =	12.8218	in	S _{right} = 544.02 in ³
I _y =	6891.09	in ⁴	S _{left} = 543.14 in ³	I _y =	6829.13	in ⁴	S _{left} = 532.62 in ³
C _{right} =	12.6875	in	A = 56.9066 in ²	C _{right} =	12.5532	in	A = 55.1566 in ²
C _{left} =	12.6875	in	r _y = 11.0043 in	C _{left} =	12.8218	in	r _y = 11.1271 in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

$A_4 = h = 20.0000$ in
 $B_4 = t = 0.6250$ in

Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 0.6250$ in

Cover Plate:

$A_6 = t = 0.3750$ in
 $B_6 = l = 23.5000$ in



Member U89-L88

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	16.1875	44.0098	0.0319	5.8612	93.3992	93.4310
	Vertical Leg	3.0000	18.0000	54.0000	4.0000	7.6737	176.6572	180.6572
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	6.5138	115.3553	115.3872
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	8.3263	207.9816	211.9816
3	Perforated Plate	6.0000	4.2500	25.5000	0.1250	6.0763	221.5282	221.6532
4	Plate	12.5000	10.0000	125.0000	416.6667	0.3263	1.3309	417.9975
5	Plate	12.5000	10.0000	125.0000	416.6667	0.3263	1.3309	417.9975
6	Cover Plate	8.8125	15.8125	139.3477	0.1033	5.4862	265.2425	265.3457
Total		51.25		529.22	841.63		1082.83	1924.45
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	10.3263 in	S _{top} =	198.94 in ³	y-bar =	10.3263 in	S _{top} =	198.94 in ³
I _x =	1924.45 in ⁴	S _{bott.} =	186.36 in ³	I _x =	1924.45 in ⁴	S _{bott.} =	186.36 in ³
C _{top} =	9.6737 in	A =	51.2500 in ²	C _{top} =	9.6737 in	A =	51.2500 in ²
C _{bottom} =	10.3263 in	r _x =	6.1278 in	C _{bottom} =	10.3263 in	r _x =	6.1278 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	2.8125	3.8232	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.8125	1.2188	0.0176	11.5625	200.5371	200.5547	
1 (Right)	Horizontal Leg	1.3594	21.9375	29.8213	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.9375	35.9063	0.0176	11.5625	200.5371	200.5547	
2 (Left)	Horizontal Leg	1.3594	2.8125	3.8232	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.8125	1.2188	0.0176	11.5625	200.5371	200.5547	
2 (Right)	Horizontal Leg	1.3594	21.9375	29.8213	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.9375	35.9063	0.0176	11.5625	200.5371	200.5547	
3 (Left)	Perforated Plate	3.0000	3.6250	10.8750	9.0000	8.7500	229.6875	238.6875	
3 (Right)	Perforated Plate	3.0000	21.1250	63.3750	9.0000	8.7500	229.6875	238.6875	
4	Plate	12.5000	0.3125	3.9063	0.4069	12.0625	1818.7988	1819.2057	
5	Plate	12.5000	24.4375	305.4688	0.4069	12.0625	1818.7988	1819.2057	
6	Cover Plate	8.8125	12.3750	109.0547	405.5586	0.0000	0.0000	405.5586	
Total		51.25		634.22	430.40		5396.33	5826.73	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3750 in	S _{right} =	470.85 in ³	x-bar =	12.3750 in	S _{right} =	470.85 in ³
I _y =	5826.73 in ⁴	S _{left} =	470.85 in ³	I _y =	5826.73 in ⁴	S _{left} =	470.85 in ³
C _{right} =	12.3750 in	A =	51.2500 in ²	C _{right} =	12.3750 in	A =	51.2500 in ²
C _{left} =	12.3750 in	r _y =	10.6627 in	C _{left} =	12.3750 in	r _y =	10.6627 in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.5000$ in

Perforated Plate:

$A_3 = t = 0.6250$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

$A_4 = h = 22.0000$ in
 $B_4 = t = 0.6250$ in

Right Web Plate:

$A_5 = h = 22.0000$ in
 $B_5 = t = 0.6250$ in

Cover Plate:

$A_6 = t = 0.5000$ in
 $B_6 = l = 23.5000$ in



Member U90-L89

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.5000	18.2500	63.8750	0.0729	6.7778	160.7866	160.8595
	Vertical Leg	4.0000	20.0000	80.0000	5.3333	8.5278	290.8958	296.2291
2	Horizontal Leg	3.5000	3.7500	13.1250	0.0729	7.7222	208.7115	208.7844
	Vertical Leg	4.0000	2.0000	8.0000	5.3333	9.4722	358.8877	364.2210
3	Perforated Plate	7.5000	4.3125	32.3438	0.2441	7.1597	384.4561	384.7003
4	Plate	13.7500	11.0000	151.2500	554.5833	0.4722	3.0654	557.6488
5	Plate	13.7500	11.0000	151.2500	554.5833	0.4722	3.0654	557.6488
6	Cover Plate	11.7500	17.7500	208.5625	0.2448	6.2778	463.0816	463.3264
Total		61.75		708.41	1120.47		1872.95	2993.42
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	11.4722 in	S _{top} =	284.33 in ³	y-bar =	11.4722 in	S _{top} =	284.33 in ³
I _x =	2993.42 in ⁴	S _{bott.} =	260.93 in ³	I _x =	2993.42 in ⁴	S _{bott.} =	260.93 in ³
C _{top} =	10.5278 in	A =	61.7500 in ²	C _{top} =	10.5278 in	A =	61.7500 in ²
C _{bottom} =	11.4722 in	r _x =	6.9625 in	C _{bottom} =	11.4722 in	r _x =	6.9625 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.7500	2.8750	5.0313	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	0.8750	1.7500	0.0417	11.5000	264.5000	264.5417	
1 (Right)	Horizontal Leg	1.7500	21.8750	38.2813	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	23.8750	47.7500	0.0417	11.5000	264.5000	264.5417	
2 (Left)	Horizontal Leg	1.7500	2.8750	5.0313	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	0.8750	1.7500	0.0417	11.5000	264.5000	264.5417	
2 (Right)	Horizontal Leg	1.7500	21.8750	38.2813	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	23.8750	47.7500	0.0417	11.5000	264.5000	264.5417	
3 (Left)	Perforated Plate	3.7500	3.6250	13.5938	11.2500	8.7500	287.1094	298.3594	
3 (Right)	Perforated Plate	3.7500	21.1250	79.2188	11.2500	8.7500	287.1094	298.3594	
4	Plate	13.7500	0.3125	4.2969	0.4476	12.0625	2000.6787	2001.1263	
5	Plate	13.7500	24.4375	336.0156	0.4476	12.0625	2000.6787	2001.1263	
6	Cover Plate	11.7500	12.3750	145.4063	540.7448	0.0000	0.0000	540.7448	
Total		61.75		764.16	571.45		6265.33	6836.78	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3750 in	S _{right} =	552.47 in ³	x-bar =	12.3750 in	S _{right} =	552.47 in ³
I _y =	6836.78 in ⁴	S _{left} =	552.47 in ³	I _y =	6836.78 in ⁴	S _{left} =	552.47 in ³
C _{right} =	12.3750 in	A =	61.7500 in ²	C _{right} =	12.3750 in	A =	61.7500 in ²
C _{left} =	12.3750 in	r _y =	10.5222 in	C _{left} =	12.3750 in	r _y =	10.5222 in

South Truss

Member U90-L91



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

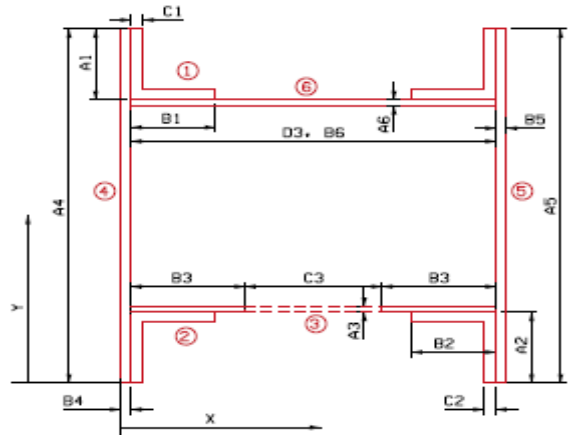
$A_4 = h = 22.0000$ in
 $B_4 = t = 0.6250$ in

Right Web Plate:

$A_5 = h = 22.0000$ in
 $B_5 = t = 0.6250$ in

Cover Plate:

$A_6 = t = 0.3750$ in
 $B_6 = l = 23.5000$ in



Member U90-L91

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	18.1875	49.4473	0.0319	6.8241	126.6060	126.6379
	Vertical Leg	3.0000	20.0000	60.0000	4.0000	8.6366	223.7703	227.7703
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	7.5509	155.0143	155.0462
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	9.3634	263.0223	267.0223
3	Perforated Plate	6.0000	4.2500	25.5000	0.1250	7.1134	303.6066	303.7316
4	Plate	13.7500	11.0000	151.2500	554.5833	0.3634	1.8163	556.3996
5	Plate	13.7500	11.0000	151.2500	554.5833	0.3634	1.8163	556.3996
6	Cover Plate	8.8125	17.8125	156.9727	0.1033	6.4491	366.5146	366.6179
Total		53.75		610.79	1117.46		1442.17	2559.63
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	11.3634 in	S _{top} =	240.64 in ³	y-bar =	11.3634 in	S _{top} =	240.64 in ³
I _x =	2559.63 in ⁴	S _{bott.} =	225.25 in ³	I _x =	2559.63 in ⁴	S _{bott.} =	225.25 in ³
C _{top} =	10.6366 in	A =	53.7500 in ²	C _{top} =	10.6366 in	A =	53.7500 in ²
C _{bottom} =	11.3634 in	r _x =	6.9008 in	C _{bottom} =	11.3634 in	r _x =	6.9008 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	2.8125	3.8232	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.8125	1.2188	0.0176	11.5625	200.5371	200.5547	
1 (Right)	Horizontal Leg	1.3594	21.9375	29.8213	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.9375	35.9063	0.0176	11.5625	200.5371	200.5547	
2 (Left)	Horizontal Leg	1.3594	2.8125	3.8232	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.8125	1.2188	0.0176	11.5625	200.5371	200.5547	
2 (Right)	Horizontal Leg	1.3594	21.9375	29.8213	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.9375	35.9063	0.0176	11.5625	200.5371	200.5547	
3 (Left)	Perforated Plate	3.0000	3.6250	10.8750	9.0000	8.7500	229.6875	238.6875	
3 (Right)	Perforated Plate	3.0000	21.1250	63.3750	9.0000	8.7500	229.6875	238.6875	
4	Plate	13.7500	0.3125	4.2969	0.4476	12.0625	2000.6787	2001.1263	
5	Plate	13.7500	24.4375	336.0156	0.4476	12.0625	2000.6787	2001.1263	
6	Cover Plate	8.8125	12.3750	109.0547	405.5586	0.0000	0.0000	405.5586	
Total		53.75		665.16	430.48		5760.09	6190.57	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3750 in	S _{right} =	500.25 in ³	x-bar =	12.3750 in	S _{right} =	500.25 in ³
I _y =	6190.57 in ⁴	S _{left} =	500.25 in ³	I _y =	6190.57 in ⁴	S _{left} =	500.25 in ³
C _{right} =	12.3750 in	A =	53.7500 in ²	C _{right} =	12.3750 in	A =	53.7500 in ²
C _{left} =	12.3750 in	r _y =	10.7319 in	C _{left} =	12.3750 in	r _y =	10.7319 in

South Truss

Member U91-L92



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

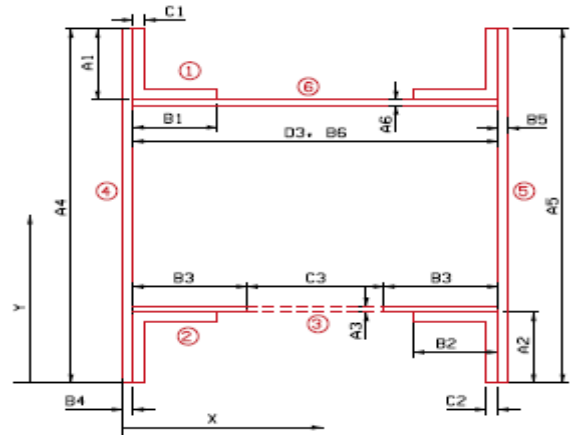
$A_4 = h = 20.0000$ in
 $B_4 = t = 0.3750$ in

Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 0.3750$ in

Cover Plate:

$A_6 = t = 0.3750$ in
 $B_6 = l = 23.5000$ in



Member U91-L92

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	16.1875	44.0098	0.0319	5.7821	90.8952	90.9270
	Vertical Leg	3.0000	18.0000	54.0000	4.0000	7.5946	173.0340	177.0340
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	6.5929	118.1740	118.2059
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	8.4054	211.9521	215.9521
3	Perforated Plate	6.0000	4.2500	25.5000	0.1250	6.1554	227.3335	227.4585
4	Plate	7.5000	10.0000	75.0000	250.0000	0.4054	1.2326	251.2326
5	Plate	7.5000	10.0000	75.0000	250.0000	0.4054	1.2326	251.2326
6	Cover Plate	8.8125	15.8125	139.3477	0.1033	5.4071	257.6489	257.7522
Total		41.25		429.22	508.29		1081.50	1589.79
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	10.4054 in	S _{top} =	165.70 in ³	y-bar =	10.4054 in	S _{top} =	165.70 in ³
I _x =	1589.79 in ⁴	S _{bott.} =	152.79 in ³	I _x =	1589.79 in ⁴	S _{bott.} =	152.79 in ³
C _{top} =	9.5946 in	A =	41.2500 in ²	C _{top} =	9.5946 in	A =	41.2500 in ²
C _{bottom} =	10.4054 in	r _x =	6.2081 in	C _{bottom} =	10.4054 in	r _x =	6.2081 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	2.5625	3.4834	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.5625	0.8438	0.0176	11.5625	200.5371	200.5547	
1 (Right)	Horizontal Leg	1.3594	21.6875	29.4814	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.6875	35.5313	0.0176	11.5625	200.5371	200.5547	
2 (Left)	Horizontal Leg	1.3594	2.5625	3.4834	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.5625	0.8438	0.0176	11.5625	200.5371	200.5547	
2 (Right)	Horizontal Leg	1.3594	21.6875	29.4814	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.6875	35.5313	0.0176	11.5625	200.5371	200.5547	
3 (Left)	Perforated Plate	3.0000	3.3750	10.1250	9.0000	8.7500	229.6875	238.6875	
3 (Right)	Perforated Plate	3.0000	20.8750	62.6250	9.0000	8.7500	229.6875	238.6875	
4	Plate	7.5000	0.1875	1.4063	0.0879	11.9375	1068.7793	1068.8672	
5	Plate	7.5000	24.0625	180.4688	0.0879	11.9375	1068.7793	1068.8672	
6	Cover Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
Total		41.25		500.16	429.76		3896.29	4326.05	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	356.79 in ³	x-bar =	12.1250 in	S _{right} =	356.79 in ³
I _y =	4326.05 in ⁴	S _{left} =	356.79 in ³	I _y =	4326.05 in ⁴	S _{left} =	356.79 in ³
C _{right} =	12.1250 in	A =	41.2500 in ²	C _{right} =	12.1250 in	A =	41.2500 in ²
C _{left} =	12.1250 in	r _y =	10.2408 in	C _{left} =	12.1250 in	r _y =	10.2408 in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U92-L93

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		0.0000	7.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			37.78		264.47	408.29		0.00	408.29
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	$S_{top} =$	58.33	in ³	y-bar =	7.0000	in	$S_{top} =$	58.33	in ³
$I_x =$	408.29	in ⁴	$S_{bott.} =$	58.33	in ³	$I_x =$	408.29	in ⁴	$S_{bott.} =$	58.33	in ³
$c_{top} =$	7.0000	in	A =	37.7816	in ²	$c_{top} =$	7.0000	in	A =	37.7816	in ²
$c_{bottom} =$	7.0000	in	$r_x =$	3.2873	in	$c_{bottom} =$	7.0000	in	$r_x =$	3.2873	in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.1250	155.2681	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	0.4460	5.5696	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	23.8040	297.2644	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.1250	0.0000	0.0000
	Right Plate		0.0000	24.2500	0.0000	0.0000	12.1250	0.0000	0.0000
Total			37.78		458.10	540.26		3406.70	3946.96
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.1250	in	S _{right} =	325.52	in ³	x-bar =	12.1250	in	S _{right} =	325.52	in ³
I _y =	3946.96	in ⁴	S _{left} =	325.52	in ³	I _y =	3946.96	in ⁴	S _{left} =	325.52	in ³
C _{right} =	12.1250	in	A =	37.7816	in ²	C _{right} =	12.1250	in	A =	37.7816	in ²
C _{left} =	12.1250	in	r _y =	10.2210	in	C _{left} =	12.1250	in	r _y =	10.2210	in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 140

- $A_1 = t_w = 0.6010$ in
- $A_2 = t_f = 0.9700$ in
- $B_1 = d = 24.4060$ in
- $B_2 = b_f = 14.0310$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U93-L94

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		13.5021	7.0155	94.7237	0.4064	0.0000	0.0000	0.4064
2	Flange Plates		27.2201	7.0155	190.9629	446.5667	0.0000	0.0000	446.5667
3	Cover Plate		0.0000	7.0155	0.0000	0.0000	0.0000	0.0000	0.0000
Total			40.72		285.69	446.97		0.00	446.97
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0155	in	$S_{top} =$	63.71	in ³	y-bar =	7.0155	in	$S_{top} =$	63.71	in ³
$I_x =$	446.97	in ⁴	$S_{bott.} =$	63.71	in ³	$I_x =$	446.97	in ⁴	$S_{bott.} =$	63.71	in ³
$C_{top} =$	7.0155	in	A =	40.7222	in ²	$C_{top} =$	7.0155	in	A =	40.7222	in ²
$C_{bottom} =$	7.0155	in	$r_x =$	3.3130	in	$C_{bottom} =$	7.0155	in	$r_x =$	3.3130	in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		13.5021	12.2030	164.7657	567.8982	0.0000	0.0000	567.8982
2	Left Flange		13.6101	0.4850	6.6009	1.0671	11.7180	1868.8195	1869.8866
	Right Flange		13.6101	23.9210	325.5665	1.0671	11.7180	1868.8195	1869.8866
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.2030	0.0000	0.0000
	Right Plate		0.0000	24.4060	0.0000	0.0000	12.2030	0.0000	0.0000
Total			40.72		496.93	570.03		3737.64	4307.67
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.2030	in	S _{right} =	353.00	in ³	x-bar =	12.2030	in	S _{right} =	353.00	in ³
I _y =	4307.67	n ⁴	S _{left} =	353.00	in ³	I _y =	4307.67	n ⁴	S _{left} =	353.00	in ³
C _{right} =	12.2030	in	A =	40.7222	in ²	C _{right} =	12.2030	in	A =	40.7222	in ²
C _{left} =	12.2030	in	r _y =	10.2850	in	C _{left} =	12.2030	in	r _y =	10.2850	in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 160

- $A_1 = t_w = 0.6650$ in
- $A_2 = t_f = 1.1240$ in
- $B_1 = d = 24.7140$ in
- $B_2 = b_f = 14.0950$ in

Cover Plate

- $A_3 = t = 0.5000$ in
- $B_3 = b = 14.0000$ in



Member U94-L95

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	7.0475	105.2889	0.5506	0.0000	0.0000	0.5506
2	Flange Plates		31.6856	7.0475	223.3040	524.5783	0.0000	0.0000	524.5783
3	Cover Plate		14.0000	7.0475	98.6650	228.6667	0.0000	0.0000	228.6667
Total			60.63		427.26	753.80		0.00	753.80
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	7.0475	in	S _{top} = 106.96 in ³	y-bar =	7.0475	in	S _{top} = 106.96 in ³
I _x =	753.80	in ⁴	S _{bott.} = 106.96 in ³	I _x =	753.80	in ⁴	S _{bott.} = 106.96 in ³
c _{top} =	7.0475	in	A = 60.6255 in ²	c _{top} =	7.0475	in	A = 60.6255 in ²
c _{bottom} =	7.0475	in	r _x = 3.5261 in	c _{bottom} =	7.0475	in	r _x = 3.5261 in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	14.9399	12.8570	192.0822	628.3732	0.0000	0.0000	628.3732	
2	Left Flange	15.8428	1.0620	16.8250	1.6679	11.7950	2204.0796	2205.7476	
	Right Flange	15.8428	24.6520	390.5562	1.6679	11.7950	2204.0796	2205.7476	
3	Left Plate	7.0000	0.2500	1.7500	0.1458	12.6070	1112.5551	1112.7010	
	Right Plate	7.0000	25.4640	178.2480	0.1458	12.6070	1112.5551	1112.7010	
Total		60.63		779.46	632.00		6633.27	7265.27	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.8570	in	S _{right} = 565.08 in ³	x-bar =	12.8570	in	S _{right} = 565.08 in ³
I _y =	7265.27	in ⁴	S _{left} = 565.08 in ³	I _y =	7265.27	in ⁴	S _{left} = 565.08 in ³
C _{right} =	12.8570	in	A = 60.6255 in ²	C _{right} =	12.8570	in	A = 60.6255 in ²
C _{left} =	12.8570	in	r _y = 10.9471 in	C _{left} =	12.8570	in	r _y = 10.9471 in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 160

- $A_1 = t_w = 0.6650$ in
- $A_2 = t_f = 1.1240$ in
- $B_1 = d = 24.7140$ in
- $B_2 = b_f = 14.0950$ in

Cover Plate

- $A_3 = t = 0.8750$ in
- $B_3 = b = 14.0000$ in



Member U95-L96

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	7.0475	105.2889	0.5506	0.0000	0.0000	0.5506
2	Flange Plates		31.6856	7.0475	223.3040	524.5783	0.0000	0.0000	524.5783
3	Cover Plate		24.5000	7.0475	172.6638	400.1667	0.0000	0.0000	400.1667
Total			71.13		501.26	925.30		0.00	925.30
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0475	in	S _{top} =	131.29	in ³	y-bar =	7.0475	in	S _{top} =	131.29	in ³
I _x =	925.30	in ⁴	S _{bott.} =	131.29	in ³	I _x =	925.30	in ⁴	S _{bott.} =	131.29	in ³
c _{top} =	7.0475	in	A =	71.1255	in ²	c _{top} =	7.0475	in	A =	71.1255	in ²
c _{bottom} =	7.0475	in	r _x =	3.6068	in	c _{bottom} =	7.0475	in	r _x =	3.6068	in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	14.9399	13.2320	197.6846	628.3732	0.0000	0.0000	628.3732	
2	Left Flange	15.8428	1.4370	22.7661	1.6679	11.7950	2204.0796	2205.7476	
	Right Flange	15.8428	25.0270	396.4973	1.6679	11.7950	2204.0796	2205.7476	
3	Left Plate	12.2500	0.4375	5.3594	0.7816	12.7945	2005.3156	2006.0971	
	Right Plate	12.2500	26.0265	318.8246	0.7816	12.7945	2005.3156	2006.0971	
Total		71.13		941.13	633.27		8418.79	9052.06	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	13.2320	in	S _{right} = 684.10 in ³	x-bar =	13.2320	in	S _{right} = 684.10 in ³
I _y =	9052.06	in ⁴	S _{left} = 684.10 in ³	I _y =	9052.06	in ⁴	S _{left} = 684.10 in ³
C _{right} =	13.2320	in	A = 71.1255 in ²	C _{right} =	13.2320	in	A = 71.1255 in ²
C _{left} =	13.2320	in	r _y = 11.2814 in	C _{left} =	13.2320	in	r _y = 11.2814 in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.9375$ in
- $B_3 = b = 14.0000$ in



Member U96-L97

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		26.2500	7.0000	183.7500	428.7500	0.0000	0.0000	428.7500
Total			64.03		448.22	837.04		0.00	837.04
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	S _{top} =	119.58	in ³	y-bar =	7.0000	in	S _{top} =	119.58	in ³
I _x =	837.04	in ⁴	S _{bott.} =	119.58	in ³	I _x =	837.04	in ⁴	S _{bott.} =	119.58	in ³
c _{top} =	7.0000	in	A =	64.0316	in ²	c _{top} =	7.0000	in	A =	64.0316	in ²
c _{bottom} =	7.0000	in	r _x =	3.6156	in	c _{bottom} =	7.0000	in	r _x =	3.6156	in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	13.0625	167.2734	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	1.3835	17.2771	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	24.7415	308.9719	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		13.1250	0.4688	6.1523	0.9613	12.5938	2081.6583	2082.6196
	Right Plate		13.1250	25.6563	336.7383	0.9613	12.5938	2081.6583	2082.6196
Total			64.03		836.41	542.18		7570.02	8112.20
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	13.0625	in	S _{right} = 621.03 in ³	x-bar =	13.0625	in	S _{right} = 621.03 in ³
I _y =	8112.20	n ⁴	S _{left} = 621.03 in ³	I _y =	8112.20	n ⁴	S _{left} = 621.03 in ³
C _{right} =	13.0625	in	A = 64.0316 in ²	C _{right} =	13.0625	in	A = 64.0316 in ²
C _{left} =	13.0625	in	r _y = 11.2557 in	C _{left} =	13.0625	in	r _y = 11.2557 in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.3750$ in
- $B_3 = b = 14.0000$ in



Member U97-L98

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		10.5000	7.0000	73.5000	171.5000	0.0000	0.0000	171.5000
Total			48.28		337.97	579.79		0.00	579.79
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	S _{top} =	82.83	in ³	y-bar =	7.0000	in	S _{top} =	82.83	in ³
I _x =	579.79	in ⁴	S _{bott.} =	82.83	in ³	I _x =	579.79	in ⁴	S _{bott.} =	82.83	in ³
c _{top} =	7.0000	in	A =	48.2816	in ²	c _{top} =	7.0000	in	A =	48.2816	in ²
c _{bottom} =	7.0000	in	r _x =	3.4653	in	c _{bottom} =	7.0000	in	r _x =	3.4653	in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	12.8056	12.5000	160.0703	538.6056	0.0000	0.0000	538.6056	
2	Left Flange	12.4880	0.8210	10.2526	0.8280	11.6790	1703.3512	1704.1792	
	Right Flange	12.4880	24.1790	301.9474	0.8280	11.6790	1703.3512	1704.1792	
3	Left Plate	5.2500	0.1875	0.9844	0.0615	12.3125	795.8877	795.9492	
	Right Plate	5.2500	24.8125	130.2656	0.0615	12.3125	795.8877	795.9492	
Total		48.28		603.52	540.38		4998.48	5538.86	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.5000	in	S _{right} = 443.11 in ³	x-bar =	12.5000	in	S _{right} = 443.11 in ³
I _y =	5538.86	in ⁴	S _{left} = 443.11 in ³	I _y =	5538.86	in ⁴	S _{left} = 443.11 in ³
C _{right} =	12.5000	in	A = 48.2816 in ²	C _{right} =	12.5000	in	A = 48.2816 in ²
C _{left} =	12.5000	in	r _y = 10.7107 in	C _{left} =	12.5000	in	r _y = 10.7107 in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 120

- $A_1 = t_w = 0.5590$ in
- $A_2 = t_f = 0.9220$ in
- $B_1 = d = 24.3100$ in
- $B_2 = b_f = 12.0890$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U98-L99

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.5585	6.0445	75.9098	0.3270	0.0000	0.0000	0.3270
2	Flange Plates		22.2921	6.0445	134.7447	271.4881	0.0000	0.0000	271.4881
3	Cover Plate		0.0000	6.0445	0.0000	0.0000	0.0000	0.0000	0.0000
Total			34.85		210.65	271.82		0.00	271.82
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0445	in	$S_{top} =$	44.97	in ³	y-bar =	6.0445	in	$S_{top} =$	44.97	in ³
$I_x =$	271.82	in ⁴	$S_{bott.} =$	44.97	in ³	$I_x =$	271.82	in ⁴	$S_{bott.} =$	44.97	in ³
$c_{top} =$	6.0445	in	A =	34.8506	in ²	$c_{top} =$	6.0445	in	A =	34.8506	in ²
$c_{bottom} =$	6.0445	in	$r_x =$	2.7927	in	$c_{bottom} =$	6.0445	in	$r_x =$	2.7927	in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y, gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	12.5585	12.1550	152.6485	528.2115	0.0000	0.0000	528.2115	
2	Left Flange	11.1461	0.4610	5.1383	0.7896	11.6940	1524.2194	1525.0090	
	Right Flange	11.1461	23.8490	265.8223	0.7896	11.6940	1524.2194	1525.0090	
3	Left Plate	0.0000	0.0000	0.0000	0.0000	12.1550	0.0000	0.0000	
	Right Plate	0.0000	24.3100	0.0000	0.0000	12.1550	0.0000	0.0000	
Total		34.85		423.61	529.79		3048.44	3578.23	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1550 in	S _{right} =	294.38 in ³	x-bar =	12.1550 in	S _{right} =	294.38 in ³
I _y =	3578.23 in ⁴	S _{left} =	294.38 in ³	I _y =	3578.23 in ⁴	S _{left} =	294.38 in ³
C _{right} =	12.1550 in	A =	34.8506 in ²	C _{right} =	12.1550 in	A =	34.8506 in ²
C _{left} =	12.1550 in	r _y =	10.1328 in	C _{left} =	12.1550 in	r _y =	10.1328 in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 100

- $A_1 = t_w = 0.4700$ in
- $A_2 = t_f = 0.7670$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 12.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U99-L100

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	6.0000	63.3541	0.1944	0.0000	0.0000	0.1944
2	Flange Plates		18.4080	6.0000	110.4480	220.8960	0.0000	0.0000	220.8960
3	Cover Plate		0.0000	6.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			28.97		173.80	221.09		0.00	221.09
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0000	in	$S_{top} =$	36.85	in ³	y-bar =	6.0000	in	$S_{top} =$	36.85	in ³
$I_x =$	221.09	in ⁴	$S_{bott.} =$	36.85	in ³	$I_x =$	221.09	in ⁴	$S_{bott.} =$	36.85	in ³
$c_{top} =$	6.0000	in	A =	28.9670	in ²	$c_{top} =$	6.0000	in	A =	28.9670	in ²
$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in	$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	10.5590	12.0000	126.7082	444.1134	0.0000	0.0000	444.1134	
2	Left Flange	9.2040	0.3835	3.5297	0.4512	11.6165	1242.0160	1242.4673	
	Right Flange	9.2040	23.6165	217.3663	0.4512	11.6165	1242.0160	1242.4673	
3	Left Plate	0.0000	0.0000	0.0000	0.0000	12.0000	0.0000	0.0000	
	Right Plate	0.0000	24.0000	0.0000	0.0000	12.0000	0.0000	0.0000	
Total		28.97		347.60	445.02		2484.03	2929.05	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.0000	in	S _{right} = 244.09 in ³	x-bar =	12.0000	in	S _{right} = 244.09 in ³
I _y =	2929.05	in ⁴	S _{left} = 244.09 in ³	I _y =	2929.05	in ⁴	S _{left} = 244.09 in ³
C _{right} =	12.0000	in	A = 28.9670 in ²	C _{right} =	12.0000	in	A = 28.9670 in ²
C _{left} =	12.0000	in	r _y = 10.0557 in	C _{left} =	12.0000	in	r _y = 10.0557 in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 100

- $A_1 = t_w = 0.4700$ in
- $A_2 = t_f = 0.7670$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 12.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U101-L100

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	6.0000	63.3541	0.1944	0.0000	0.0000	0.1944
2	Flange Plates		18.4080	6.0000	110.4480	220.8960	0.0000	0.0000	220.8960
3	Cover Plate		0.0000	6.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			28.97		173.80	221.09		0.00	221.09
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0000	in	S _{top} =	36.85	in ³	y-bar =	6.0000	in	S _{top} =	36.85	in ³
I _x =	221.09	in ⁴	S _{bott.} =	36.85	in ³	I _x =	221.09	in ⁴	S _{bott.} =	36.85	in ³
c _{top} =	6.0000	in	A =	28.9670	in ²	c _{top} =	6.0000	in	A =	28.9670	in ²
c _{bottom} =	6.0000	in	r _x =	2.7627	in	c _{bottom} =	6.0000	in	r _x =	2.7627	in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	10.5590	12.0000	126.7082	444.1134	0.0000	0.0000	444.1134	
2	Left Flange	9.2040	0.3835	3.5297	0.4512	11.6165	1242.0160	1242.4673	
	Right Flange	9.2040	23.6165	217.3663	0.4512	11.6165	1242.0160	1242.4673	
3	Left Plate	0.0000	0.0000	0.0000	0.0000	12.0000	0.0000	0.0000	
	Right Plate	0.0000	24.0000	0.0000	0.0000	12.0000	0.0000	0.0000	
Total		28.97		347.60	445.02		2484.03	2929.05	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.0000	in	S _{right} = 244.09 in ³	x-bar =	12.0000	in	S _{right} = 244.09 in ³
I _y =	2929.05	n ⁴	S _{left} = 244.09 in ³	I _y =	2929.05	n ⁴	S _{left} = 244.09 in ³
C _{right} =	12.0000	in	A = 28.9670 in ²	C _{right} =	12.0000	in	A = 28.9670 in ²
C _{left} =	12.0000	in	r _y = 10.0557 in	C _{left} =	12.0000	in	r _y = 10.0557 in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 110

- $A_1 = t_w = 0.5130$ in
- $A_2 = t_f = 0.8470$ in
- $B_1 = d = 24.1600$ in
- $B_2 = b_f = 12.0430$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U102-L101

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		11.5251	6.0215	69.3981	0.2528	0.0000	0.0000	0.2528
2	Flange Plates		20.4008	6.0215	122.8437	246.5677	0.0000	0.0000	246.5677
3	Cover Plate		0.0000	6.0215	0.0000	0.0000	0.0000	0.0000	0.0000
Total			31.93		192.24	246.82		0.00	246.82
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0215	in	S _{top} =	40.99	in ³	y-bar =	6.0215	in	S _{top} =	40.99	in ³
I _x =	246.82	in ⁴	S _{bott.} =	40.99	in ³	I _x =	246.82	in ⁴	S _{bott.} =	40.99	in ³
c _{top} =	6.0215	in	A =	31.9259	in ²	c _{top} =	6.0215	in	A =	31.9259	in ²
c _{bottom} =	6.0215	in	r _x =	2.7805	in	c _{bottom} =	6.0215	in	r _x =	2.7805	in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		11.5251	12.0800	139.2227	484.7450	0.0000	0.0000	484.7450
2	Left Flange		10.2004	0.4235	4.3199	0.6098	11.6565	1385.9719	1386.5817
	Right Flange		10.2004	23.7365	242.1223	0.6098	11.6565	1385.9719	1386.5817
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.0800	0.0000	0.0000
	Right Plate		0.0000	24.1600	0.0000	0.0000	12.0800	0.0000	0.0000
Total			31.93		385.66	485.96		2771.94	3257.91
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.0800	in	S _{right} = 269.69 in ³	x-bar =	12.0800	in	S _{right} = 269.69 in ³
I _y =	3257.91	in ⁴	S _{left} = 269.69 in ³	I _y =	3257.91	in ⁴	S _{left} = 269.69 in ³
C _{right} =	12.0800	in	A = 31.9259 in ²	C _{right} =	12.0800	in	A = 31.9259 in ²
C _{left} =	12.0800	in	r _y = 10.1018 in	C _{left} =	12.0800	in	r _y = 10.1018 in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.3750$ in
- $B_3 = b = 14.0000$ in



Member U103-L102

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		10.5000	7.0000	73.5000	171.5000	0.0000	0.0000	171.5000
Total			48.28		337.97	579.79		0.00	579.79
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	$S_{top} =$	82.83	in ³	y-bar =	7.0000	in	$S_{top} =$	82.83	in ³
$I_x =$	579.79	in ⁴	$S_{bott.} =$	82.83	in ³	$I_x =$	579.79	in ⁴	$S_{bott.} =$	82.83	in ³
$c_{top} =$	7.0000	in	A =	48.2816	in ²	$c_{top} =$	7.0000	in	A =	48.2816	in ²
$c_{bottom} =$	7.0000	in	$r_x =$	3.4653	in	$c_{bottom} =$	7.0000	in	$r_x =$	3.4653	in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	12.8056	12.5000	160.0703	538.6056	0.0000	0.0000	538.6056	
2	Left Flange	12.4880	0.8210	10.2526	0.8280	11.6790	1703.3512	1704.1792	
	Right Flange	12.4880	24.1790	301.9474	0.8280	11.6790	1703.3512	1704.1792	
3	Left Plate	5.2500	0.1875	0.9844	0.0615	12.3125	795.8877	795.9492	
	Right Plate	5.2500	24.8125	130.2656	0.0615	12.3125	795.8877	795.9492	
Total		48.28		603.52	540.38		4998.48	5538.86	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.5000 in	S _{right} =	443.11 in ³	x-bar =	12.5000 in	S _{right} =	443.11 in ³
I _y =	5538.86 in ⁴	S _{left} =	443.11 in ³	I _y =	5538.86 in ⁴	S _{left} =	443.11 in ³
C _{right} =	12.5000 in	A =	48.2816 in ²	C _{right} =	12.5000 in	A =	48.2816 in ²
C _{left} =	12.5000 in	r _y =	10.7107 in	C _{left} =	12.5000 in	r _y =	10.7107 in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.9375$ in
- $B_3 = b = 14.0000$ in



Member U104-L103

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		26.2500	7.0000	183.7500	428.7500	0.0000	0.0000	428.7500
Total			64.03		448.22	837.04		0.00	837.04
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	7.0000	in	S _{top} = 119.58 in ³	y-bar =	7.0000	in	S _{top} = 119.58 in ³
I _x =	837.04	in ⁴	S _{bott.} = 119.58 in ³	I _x =	837.04	in ⁴	S _{bott.} = 119.58 in ³
c _{top} =	7.0000	in	A = 64.0316 in ²	c _{top} =	7.0000	in	A = 64.0316 in ²
c _{bottom} =	7.0000	in	r _x = 3.6156 in	c _{bottom} =	7.0000	in	r _x = 3.6156 in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	12.8056	13.0625	167.2734	538.6056	0.0000	0.0000	538.6056	
2	Left Flange	12.4880	1.3835	17.2771	0.8280	11.6790	1703.3512	1704.1792	
	Right Flange	12.4880	24.7415	308.9719	0.8280	11.6790	1703.3512	1704.1792	
3	Left Plate	13.1250	0.4688	6.1523	0.9613	12.5938	2081.6583	2082.6196	
	Right Plate	13.1250	25.6563	336.7383	0.9613	12.5938	2081.6583	2082.6196	
Total		64.03		836.41	542.18		7570.02	8112.20	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	13.0625	in	S _{right} = 621.03 in ³	x-bar =	13.0625	in	S _{right} = 621.03 in ³
I _y =	8112.20	n ⁴	S _{left} = 621.03 in ³	I _y =	8112.20	n ⁴	S _{left} = 621.03 in ³
C _{right} =	13.0625	in	A = 64.0316 in ²	C _{right} =	13.0625	in	A = 64.0316 in ²
C _{left} =	13.0625	in	r _y = 11.2557 in	C _{left} =	13.0625	in	r _y = 11.2557 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

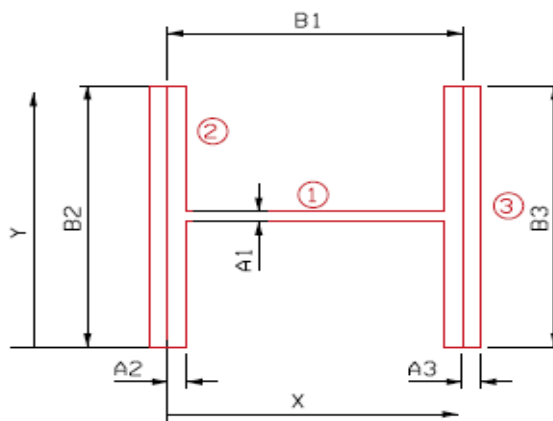
Element Dimensions (without Section Losses):

Rolled Beam CB24x 150

- $A_1 = t_w = 0.6330$ in
- $A_2 = t_f = 1.0480$ in
- $B_1 = d = 24.5620$ in
- $B_2 = b_f = 14.0630$ in

Cover Plate

- $A_3 = t = 1.0000$ in
- $B_3 = b = 14.0000$ in



Member U105-L104

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.2210	7.0315	99.9948	0.4748	0.0000	0.0000	0.4748
2	Flange Plates		29.4760	7.0315	207.2608	485.7848	0.0000	0.0000	485.7848
3	Cover Plate		28.0000	7.0315	196.8820	457.3333	0.0000	0.0000	457.3333
Total			71.70		504.14	943.59		0.00	943.59
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	7.0315	in	S _{top} = 134.20 in ³	y-bar =	7.0315	in	S _{top} = 134.20 in ³
I _x =	943.59	in ⁴	S _{bott.} = 134.20 in ³	I _x =	943.59	in ⁴	S _{bott.} = 134.20 in ³
c _{top} =	7.0315	in	A = 71.6970 in ²	c _{top} =	7.0315	in	A = 71.6970 in ²
c _{bottom} =	7.0315	in	r _x = 3.6278 in	c _{bottom} =	7.0315	in	r _x = 3.6278 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.2210	13.2810	188.8688	598.1357	0.0000	0.0000	598.1357
2	Left Flange		14.7380	1.5240	22.4607	1.3489	11.7570	2037.1936	2038.5425
	Right Flange		14.7380	25.0380	369.0106	1.3489	11.7570	2037.1936	2038.5425
3	Left Plate		14.0000	0.5000	7.0000	1.1667	12.7810	2286.9555	2288.1221
	Right Plate		14.0000	26.0620	364.8680	1.1667	12.7810	2286.9555	2288.1221
Total			71.70		952.21	603.17		8648.30	9251.46
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	13.2810	in	S _{right} = 696.59 in ³	x-bar =	13.2810	in	S _{right} = 696.59 in ³
I _y =	9251.46	n ⁴	S _{left} = 696.59 in ³	I _y =	9251.46	n ⁴	S _{left} = 696.59 in ³
C _{right} =	13.2810	in	A = 71.6970 in ²	C _{right} =	13.2810	in	A = 71.6970 in ²
C _{left} =	13.2810	in	r _y = 11.3594 in	C _{left} =	13.2810	in	r _y = 11.3594 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 160

- $A_1 = t_w = 0.6650$ in
- $A_2 = t_f = 1.1240$ in
- $B_1 = d = 24.7140$ in
- $B_2 = b_f = 14.0950$ in

Cover Plate

- $A_3 = t = 0.5000$ in
- $B_3 = b = 14.0000$ in



Member U106-L105

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	7.0475	105.2889	0.5506	0.0000	0.0000	0.5506
2	Flange Plates		31.6856	7.0475	223.3040	524.5783	0.0000	0.0000	524.5783
3	Cover Plate		14.0000	7.0475	98.6650	228.6667	0.0000	0.0000	228.6667
Total			60.63		427.26	753.80		0.00	753.80
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	7.0475	in	$S_{top} = 106.96$	in ³	y-bar =	7.0475	in	$S_{top} = 106.96$	in ³		
$I_x =$	753.80	in ⁴	$S_{bott.} = 106.96$	in ³	$I_x =$	753.80	in ⁴	$S_{bott.} = 106.96$	in ³		
$c_{top} =$	7.0475	in	A =	60.6255	in ²	$c_{top} =$	7.0475	in	A =	60.6255	in ²
$c_{bottom} =$	7.0475	in	$r_x =$	3.5261	in	$c_{bottom} =$	7.0475	in	$r_x =$	3.5261	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	12.8570	192.0822	628.3732	0.0000	0.0000	628.3732
2	Left Flange		15.8428	1.0620	16.8250	1.6679	11.7950	2204.0796	2205.7476
	Right Flange		15.8428	24.6520	390.5562	1.6679	11.7950	2204.0796	2205.7476
3	Left Plate		7.0000	0.2500	1.7500	0.1458	12.6070	1112.5551	1112.7010
	Right Plate		7.0000	25.4640	178.2480	0.1458	12.6070	1112.5551	1112.7010
Total			60.63		779.46	632.00		6633.27	7265.27
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.8570	in	S _{right} = 565.08 in ³	x-bar =	12.8570	in	S _{right} = 565.08 in ³
I _y =	7265.27	n ⁴	S _{left} = 565.08 in ³	I _y =	7265.27	n ⁴	S _{left} = 565.08 in ³
C _{right} =	12.8570	in	A = 60.6255 in ²	C _{right} =	12.8570	in	A = 60.6255 in ²
C _{left} =	12.8570	in	r _y = 10.9471 in	C _{left} =	12.8570	in	r _y = 10.9471 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 150

- $A_1 = t_w = 0.6330$ in
- $A_2 = t_f = 1.0480$ in
- $B_1 = d = 24.5620$ in
- $B_2 = b_f = 14.0630$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U107-L106

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.2210	7.0315	99.9948	0.4748	0.0000	0.0000	0.4748
2	Flange Plates		29.4760	7.0315	207.2608	485.7848	0.0000	0.0000	485.7848
3	Cover Plate		0.0000	7.0315	0.0000	0.0000	0.0000	0.0000	0.0000
Total			43.70		307.26	486.26		0.00	486.26
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0315	in	S _{top} =	69.15	in ³	y-bar =	7.0315	in	S _{top} =	69.15	in ³
I _x =	486.26	in ⁴	S _{bott.} =	69.15	in ³	I _x =	486.26	in ⁴	S _{bott.} =	69.15	in ³
c _{top} =	7.0315	in	A =	43.6970	in ²	c _{top} =	7.0315	in	A =	43.6970	in ²
c _{bottom} =	7.0315	in	r _x =	3.3359	in	c _{bottom} =	7.0315	in	r _x =	3.3359	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	14.2210	12.2810	174.6478	598.1357	0.0000	0.0000	598.1357	
2	Left Flange	14.7380	0.5240	7.7227	1.3489	11.7570	2037.1936	2038.5425	
	Right Flange	14.7380	24.0380	354.2726	1.3489	11.7570	2037.1936	2038.5425	
3	Left Plate	0.0000	0.0000	0.0000	0.0000	12.2810	0.0000	0.0000	
	Right Plate	0.0000	24.5620	0.0000	0.0000	12.2810	0.0000	0.0000	
Total		43.70		536.64	600.83		4074.39	4675.22	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2810	in	S _{right} = 380.69 in ³	x-bar =	12.2810	in	S _{right} = 380.69 in ³
I _y =	4675.22	in ⁴	S _{left} = 380.69 in ³	I _y =	4675.22	in ⁴	S _{left} = 380.69 in ³
C _{right} =	12.2810	in	A = 43.6970 in ²	C _{right} =	12.2810	in	A = 43.6970 in ²
C _{left} =	12.2810	in	r _y = 10.3437 in	C _{left} =	12.2810	in	r _y = 10.3437 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 100

- $A_1 = t_w = 0.4700$ in
- $A_2 = t_f = 0.7670$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 12.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U108-L107

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	6.0000	63.3541	0.1944	0.0000	0.0000	0.1944
2	Flange Plates		18.4080	6.0000	110.4480	220.8960	0.0000	0.0000	220.8960
3	Cover Plate		0.0000	6.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			28.97		173.80	221.09		0.00	221.09
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0000	in	S _{top} =	36.85	in ³	y-bar =	6.0000	in	S _{top} =	36.85	in ³
I _x =	221.09	in ⁴	S _{bott.} =	36.85	in ³	I _x =	221.09	in ⁴	S _{bott.} =	36.85	in ³
c _{top} =	6.0000	in	A =	28.9670	in ²	c _{top} =	6.0000	in	A =	28.9670	in ²
c _{bottom} =	6.0000	in	r _x =	2.7627	in	c _{bottom} =	6.0000	in	r _x =	2.7627	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	12.0000	126.7082	444.1134	0.0000	0.0000	444.1134
2	Left Flange		9.2040	0.3835	3.5297	0.4512	11.6165	1242.0160	1242.4673
	Right Flange		9.2040	23.6165	217.3663	0.4512	11.6165	1242.0160	1242.4673
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.0000	0.0000	0.0000
	Right Plate		0.0000	24.0000	0.0000	0.0000	12.0000	0.0000	0.0000
Total			28.97		347.60	445.02		2484.03	2929.05
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.0000	in	S _{right} =	244.09	in ³	x-bar =	12.0000	in	S _{right} =	244.09	in ³
I _y =	2929.05	n ⁴	S _{left} =	244.09	in ³	I _y =	2929.05	n ⁴	S _{left} =	244.09	in ³
C _{right} =	12.0000	in	A =	28.9670	in ²	C _{right} =	12.0000	in	A =	28.9670	in ²
C _{left} =	12.0000	in	r _y =	10.0557	in	C _{left} =	12.0000	in	r _y =	10.0557	in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

$A_4 = h = 20.0000$ in
 $B_4 = t = 0.3750$ in

Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 0.3750$ in

Cover Plate:

$A_6 = t = 0.3750$ in
 $B_6 = l = 23.5000$ in



Member U109-L108

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	16.1875	44.0098	0.0319	5.7821	90.8952	90.9270
	Vertical Leg	3.0000	18.0000	54.0000	4.0000	7.5946	173.0340	177.0340
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	6.5929	118.1740	118.2059
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	8.4054	211.9521	215.9521
3	Perforated Plate	6.0000	4.2500	25.5000	0.1250	6.1554	227.3335	227.4585
4	Plate	7.5000	10.0000	75.0000	250.0000	0.4054	1.2326	251.2326
5	Plate	7.5000	10.0000	75.0000	250.0000	0.4054	1.2326	251.2326
6	Cover Plate	8.8125	15.8125	139.3477	0.1033	5.4071	257.6489	257.7522
Total		41.25		429.22	508.29		1081.50	1589.79
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties					
y-bar =	10.4054	in	$S_{top} = 165.70$	in ³	y-bar =	10.4054	in	$S_{top} = 165.70$	in ³
$I_x =$	1589.79	in ⁴	$S_{bott.} = 152.79$	in ³	$I_x =$	1589.79	in ⁴	$S_{bott.} = 152.79$	in ³
$C_{top} =$	9.5946	in	$A = 41.2500$	in ²	$C_{top} =$	9.5946	in	$A = 41.2500$	in ²
$C_{bottom} =$	10.4054	in	$r_x = 6.2081$	in	$C_{bottom} =$	10.4054	in	$r_x = 6.2081$	in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I_o	d	Ad^2	$I_{y,gross}$	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	2.5625	3.4834	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.5625	0.8438	0.0176	11.5625	200.5371	200.5547	
1 (Right)	Horizontal Leg	1.3594	21.6875	29.4814	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.6875	35.5313	0.0176	11.5625	200.5371	200.5547	
2 (Left)	Horizontal Leg	1.3594	2.5625	3.4834	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.5625	0.8438	0.0176	11.5625	200.5371	200.5547	
2 (Right)	Horizontal Leg	1.3594	21.6875	29.4814	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.6875	35.5313	0.0176	11.5625	200.5371	200.5547	
3 (Left)	Perforated Plate	3.0000	3.3750	10.1250	9.0000	8.7500	229.6875	238.6875	
3 (Right)	Perforated Plate	3.0000	20.8750	62.6250	9.0000	8.7500	229.6875	238.6875	
4	Plate	7.5000	0.1875	1.4063	0.0879	11.9375	1068.7793	1068.8672	
5	Plate	7.5000	24.0625	180.4688	0.0879	11.9375	1068.7793	1068.8672	
6	Cover Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
Total		41.25		500.16	429.76		3896.29	4326.05	
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties					
x-bar =	12.1250	in	$S_{right} = 356.79$	in ³	x-bar =	12.1250	in	$S_{right} = 356.79$	in ³
$I_y =$	4326.05	in ⁴	$S_{left} = 356.79$	in ³	$I_y =$	4326.05	in ⁴	$S_{left} = 356.79$	in ³
$C_{right} =$	12.1250	in	$A = 41.2500$	in ²	$C_{right} =$	12.1250	in	$A = 41.2500$	in ²
$C_{left} =$	12.1250	in	$r_y = 10.2408$	in	$C_{left} =$	12.1250	in	$r_y = 10.2408$	in



Made By KMW
Checked By ADK

Date 2/1/2012
Date 2/16/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

$A_4 = h = 24.0000$ in
 $B_4 = t = 0.5625$ in

Right Web Plate:

$A_5 = h = 24.0000$ in
 $B_5 = t = 0.5625$ in

Cover Plate:

$A_6 = t = 0.3750$ in
 $B_6 = l = 23.5000$ in



Member U110-L109

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	20.1875	54.8848	0.0319	7.7678	164.0470	164.0788
	Vertical Leg	3.0000	22.0000	66.0000	4.0000	9.5803	275.3479	279.3479
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	8.6072	201.4144	201.4462
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	10.4197	325.7088	329.7088
3	Perforated Plate	6.0000	4.2500	25.5000	0.1250	8.1697	400.4615	400.5865
4	Plate	13.5000	12.0000	162.0000	648.0000	0.4197	2.3777	650.3777
5	Plate	13.5000	12.0000	162.0000	648.0000	0.4197	2.3777	650.3777
6	Cover Plate	8.8125	19.8125	174.5977	0.1033	7.3928	481.6372	481.7405
Total		53.25		661.35	1304.29		1853.37	3157.66
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	2.0000	0.1875	-0.3750	19.9063	-7.4648	-0.0011	7.6119	-21.7282
2	4.0000	0.1250	-0.5000	19.9375	-9.9688	-0.0007	7.6432	-29.2092
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.88	-17.43	0.00		-50.94	-50.94



Made By KMW
Checked By ADK

Date 2/1/2012
Date 2/16/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	12.4197 in	S _{top} =	272.67 in ³	y-bar =	12.2943 in	S _{top} =	265.40 in ³
I _x =	3157.66 in ⁴	S _{bott.} =	254.25 in ³	I _x =	3106.73 in ⁴	S _{bott.} =	252.70 in ³
C _{top} =	11.5803 in	A =	53.2500 in ²	C _{top} =	11.7057 in	A =	52.3750 in ²
C _{bottom} =	12.4197 in	r _x =	7.7006 in	C _{bottom} =	12.2943 in	r _x =	7.7017 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	2.7500	3.7383	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.7500	1.1250	0.0176	11.5625	200.5371	200.5547	
1 (Right)	Horizontal Leg	1.3594	21.8750	29.7363	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.8750	35.8125	0.0176	11.5625	200.5371	200.5547	
2 (Left)	Horizontal Leg	1.3594	2.7500	3.7383	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.7500	1.1250	0.0176	11.5625	200.5371	200.5547	
2 (Right)	Horizontal Leg	1.3594	21.8750	29.7363	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.8750	35.8125	0.0176	11.5625	200.5371	200.5547	
3 (Left)	Perforated Plate	3.0000	3.5625	10.6875	9.0000	8.7500	229.6875	238.6875	
3 (Right)	Perforated Plate	3.0000	21.0625	63.1875	9.0000	8.7500	229.6875	238.6875	
4	Plate	13.5000	0.2813	3.7969	0.3560	12.0313	1954.1382	1954.4941	
5	Plate	13.5000	24.3438	328.6406	0.3560	12.0313	1954.1382	1954.4941	
6	Cover Plate	8.8125	12.3125	108.5039	405.5586	0.0000	0.0000	405.5586	
Total		53.25		655.64	430.30		5667.01	6097.31	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1875	2.0000	-0.3750	5.5625	-2.0859	-0.1250	6.7434	-17.0527	-17.1777
2	0.1250	4.0000	-0.5000	18.0625	-9.0313	-0.6667	5.7566	-16.5690	-17.2357
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.88		-11.12	-0.79		-33.62	-34.41

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3125 in	S _{right} =	495.21 in ³	x-bar =	12.3059 in	S _{right} =	492.16 in ³
I _y =	6097.31 in ⁴	S _{left} =	495.21 in ³	I _y =	6062.89 in ⁴	S _{left} =	492.68 in ³
C _{right} =	12.3125 in	A =	53.2500 in ²	C _{right} =	12.3191 in	A =	52.3750 in ²
C _{left} =	12.3125 in	r _y =	10.7006 in	C _{left} =	12.3059 in	r _y =	10.7592 in

South Truss

Member U110-L111



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.6250$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

$A_4 = h = 24.0000$ in
 $B_4 = t = 0.5000$ in

Right Web Plate:

$A_5 = h = 24.0000$ in
 $B_5 = t = 0.5000$ in

Cover Plate:

$A_6 = t = 0.5000$ in
 $B_6 = l = 23.5000$ in



Member U110-L111

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	20.1875	54.8848	0.0319	7.5766	156.0712	156.1031
	Vertical Leg	3.0000	22.0000	66.0000	4.0000	9.3891	264.4680	268.4680
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	8.7984	210.4614	210.4933
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	10.6109	337.7709	341.7709
3	Perforated Plate	7.5000	4.3125	32.3438	0.2441	8.2984	516.4705	516.7146
4	Plate	12.0000	12.0000	144.0000	576.0000	0.6109	4.4778	580.4778
5	Plate	12.0000	12.0000	144.0000	576.0000	0.6109	4.4778	580.4778
6	Cover Plate	11.7500	19.7500	232.0625	0.2448	7.1391	598.8665	599.1113
Total		54.69		689.66	1160.55		2093.06	3253.62
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	12.6109	in	S _{top} =	285.68	in ³	y-bar =	12.6109	in	S _{top} =	285.68	in ³
I _x =	3253.62	in ⁴	S _{bott.} =	258.00	in ³	I _x =	3253.62	in ⁴	S _{bott.} =	258.00	in ³
C _{top} =	11.3891	in	A =	54.6875	in ²	C _{top} =	11.3891	in	A =	54.6875	in ²
C _{bottom} =	12.6109	in	r _x =	7.7133	in	C _{bottom} =	12.6109	in	r _x =	7.7133	in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	2.6875	3.6533	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.6875	1.0313	0.0176	11.5625	200.5371	200.5547	
1 (Right)	Horizontal Leg	1.3594	21.8125	29.6514	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.8125	35.7188	0.0176	11.5625	200.5371	200.5547	
2 (Left)	Horizontal Leg	1.3594	2.6875	3.6533	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.6875	1.0313	0.0176	11.5625	200.5371	200.5547	
2 (Right)	Horizontal Leg	1.3594	21.8125	29.6514	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.8125	35.7188	0.0176	11.5625	200.5371	200.5547	
3 (Left)	Perforated Plate	3.7500	3.5000	13.1250	11.2500	8.7500	287.1094	298.3594	
3 (Right)	Perforated Plate	3.7500	21.0000	78.7500	11.2500	8.7500	287.1094	298.3594	
4	Plate	12.0000	0.2500	3.0000	0.2500	12.0000	1728.0000	1728.2500	
5	Plate	12.0000	24.2500	291.0000	0.2500	12.0000	1728.0000	1728.2500	
6	Cover Plate	11.7500	12.2500	143.9375	540.7448	0.0000	0.0000	540.7448	
Total		54.69		669.92	569.77		5329.58	5899.35	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
x-bar =	12.2500	in	S _{right} =	481.58	in ³	x-bar =	12.2500	in	S _{right} =	481.58	in ³
I _y =	5899.35	in ⁴	S _{left} =	481.58	in ³	I _y =	5899.35	in ⁴	S _{left} =	481.58	in ³
C _{right} =	12.2500	in	A =	54.6875	in ²	C _{right} =	12.2500	in	A =	54.6875	in ²
C _{left} =	12.2500	in	r _y =	10.3862	in	C _{left} =	12.2500	in	r _y =	10.3862	in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

$A_4 = h = 20.0000$ in
 $B_4 = t = 0.5625$ in

Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 0.5625$ in

Cover Plate:

$A_6 = t = 0.3750$ in
 $B_6 = l = 23.5000$ in



Member U111-L112

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	16.1875	44.0098	0.0319	5.8445	92.8666	92.8985
	Vertical Leg	3.0000	18.0000	54.0000	4.0000	7.6570	175.8876	179.8876
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	6.5305	115.9487	115.9806
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	8.3430	208.8184	212.8184
3	Perforated Plate	6.0000	4.2500	25.5000	0.1250	6.0930	222.7500	222.8750
4	Plate	11.2500	10.0000	112.5000	375.0000	0.3430	1.3238	376.3238
5	Plate	11.2500	10.0000	112.5000	375.0000	0.3430	1.3238	376.3238
6	Cover Plate	8.8125	15.8125	139.3477	0.1033	5.4695	263.6269	263.7302
Total		48.75		504.22	758.29		1082.55	1840.84
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00	0.00	0.00	0.00



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	10.3430 in	S _{top} =	190.62 in ³	y-bar =	10.3430 in	S _{top} =	190.62 in ³
I _x =	1840.84 in ⁴	S _{bott.} =	177.98 in ³	I _x =	1840.84 in ⁴	S _{bott.} =	177.98 in ³
C _{top} =	9.6570 in	A =	48.7500 in ²	C _{top} =	9.6570 in	A =	48.7500 in ²
C _{bottom} =	10.3430 in	r _x =	6.1450 in	C _{bottom} =	10.3430 in	r _x =	6.1450 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	2.7500	3.7383	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.7500	1.1250	0.0176	11.5625	200.5371	200.5547	
1 (Right)	Horizontal Leg	1.3594	21.8750	29.7363	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.8750	35.8125	0.0176	11.5625	200.5371	200.5547	
2 (Left)	Horizontal Leg	1.3594	2.7500	3.7383	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.7500	1.1250	0.0176	11.5625	200.5371	200.5547	
2 (Right)	Horizontal Leg	1.3594	21.8750	29.7363	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.8750	35.8125	0.0176	11.5625	200.5371	200.5547	
3 (Left)	Perforated Plate	3.0000	3.5625	10.6875	9.0000	8.7500	229.6875	238.6875	
3 (Right)	Perforated Plate	3.0000	21.0625	63.1875	9.0000	8.7500	229.6875	238.6875	
4	Plate	11.2500	0.2813	3.1641	0.2966	12.0313	1628.4485	1628.7451	
5	Plate	11.2500	24.3438	273.8672	0.2966	12.0313	1628.4485	1628.7451	
6	Cover Plate	8.8125	12.3125	108.5039	405.5586	0.0000	0.0000	405.5586	
Total		48.75		600.23	430.18		5015.63	5445.81	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3125 in	S _{right} =	442.30 in ³	x-bar =	12.3125 in	S _{right} =	442.30 in ³
I _y =	5445.81 in ⁴	S _{left} =	442.30 in ³	I _y =	5445.81 in ⁴	S _{left} =	442.30 in ³
C _{right} =	12.3125 in	A =	48.7500 in ²	C _{right} =	12.3125 in	A =	48.7500 in ²
C _{left} =	12.3125 in	r _y =	10.5692 in	C _{left} =	12.3125 in	r _y =	10.5692 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.3750$ in
- $B_3 = b = 14.0000$ in



Member U112-L113

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		10.5000	7.0000	73.5000	171.5000	0.0000	0.0000	171.5000
Total			48.28		337.97	579.79		0.00	579.79
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	$S_{top} =$	82.83	in ³	y-bar =	7.0000	in	$S_{top} =$	82.83	in ³
$I_x =$	579.79	in ⁴	$S_{bott.} =$	82.83	in ³	$I_x =$	579.79	in ⁴	$S_{bott.} =$	82.83	in ³
$c_{top} =$	7.0000	in	A =	48.2816	in ²	$c_{top} =$	7.0000	in	A =	48.2816	in ²
$c_{bottom} =$	7.0000	in	$r_x =$	3.4653	in	$c_{bottom} =$	7.0000	in	$r_x =$	3.4653	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	12.8056	12.5000	160.0703	538.6056	0.0000	0.0000	538.6056	
2	Left Flange	12.4880	0.8210	10.2526	0.8280	11.6790	1703.3512	1704.1792	
	Right Flange	12.4880	24.1790	301.9474	0.8280	11.6790	1703.3512	1704.1792	
3	Left Plate	5.2500	0.1875	0.9844	0.0615	12.3125	795.8877	795.9492	
	Right Plate	5.2500	24.8125	130.2656	0.0615	12.3125	795.8877	795.9492	
Total		48.28		603.52	540.38		4998.48	5538.86	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.5000	in	S _{right} = 443.11 in ³	x-bar =	12.5000	in	S _{right} = 443.11 in ³
I _y =	5538.86	in ⁴	S _{left} = 443.11 in ³	I _y =	5538.86	in ⁴	S _{left} = 443.11 in ³
C _{right} =	12.5000	in	A = 48.2816 in ²	C _{right} =	12.5000	in	A = 48.2816 in ²
C _{left} =	12.5000	in	r _y = 10.7107 in	C _{left} =	12.5000	in	r _y = 10.7107 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 160

- $A_1 = t_w = 0.6650$ in
- $A_2 = t_f = 1.1240$ in
- $B_1 = d = 24.7140$ in
- $B_2 = b_f = 14.0950$ in

Cover Plate

- $A_3 = t = 0.4375$ in
- $B_3 = b = 14.0000$ in



Member U113-L114

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	7.0475	105.2889	0.5506	0.0000	0.0000	0.5506
2	Flange Plates		31.6856	7.0475	223.3040	524.5783	0.0000	0.0000	524.5783
3	Cover Plate		12.2500	7.0475	86.3319	200.0833	0.0000	0.0000	200.0833
Total			58.88		414.92	725.21		0.00	725.21
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0475	in	S _{top} =	102.90	in ³	y-bar =	7.0475	in	S _{top} =	102.90	in ³
I _x =	725.21	in ⁴	S _{bott.} =	102.90	in ³	I _x =	725.21	in ⁴	S _{bott.} =	102.90	in ³
c _{top} =	7.0475	in	A =	58.8755	in ²	c _{top} =	7.0475	in	A =	58.8755	in ²
c _{bottom} =	7.0475	in	r _x =	3.5097	in	c _{bottom} =	7.0475	in	r _x =	3.5097	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	12.7945	191.1484	628.3732	0.0000	0.0000	628.3732
2	Left Flange		15.8428	0.9995	15.8349	1.6679	11.7950	2204.0796	2205.7476
	Right Flange		15.8428	24.5895	389.5660	1.6679	11.7950	2204.0796	2205.7476
3	Left Plate		6.1250	0.2188	1.3398	0.0977	12.5758	968.6656	968.7633
	Right Plate		6.1250	25.3703	155.3928	0.0977	12.5758	968.6656	968.7633
Total			58.88		753.28	631.90		6345.49	6977.40
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.7945	in	S _{right} = 545.34 in ³	x-bar =	12.7945	in	S _{right} = 545.34 in ³
I _y =	6977.40	n ⁴	S _{left} = 545.34 in ³	I _y =	6977.40	n ⁴	S _{left} = 545.34 in ³
C _{right} =	12.7945	in	A = 58.8755 in ²	C _{right} =	12.7945	in	A = 58.8755 in ²
C _{left} =	12.7945	in	r _y = 10.8863 in	C _{left} =	12.7945	in	r _y = 10.8863 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 160

- $A_1 = t_w = 0.6650$ in
- $A_2 = t_f = 1.1240$ in
- $B_1 = d = 24.7140$ in
- $B_2 = b_f = 14.0950$ in

Cover Plate

- $A_3 = t = 0.6875$ in
- $B_3 = b = 14.0000$ in



Member U114-L115

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	7.0475	105.2889	0.5506	0.0000	0.0000	0.5506
2	Flange Plates		31.6856	7.0475	223.3040	524.5783	0.0000	0.0000	524.5783
3	Cover Plate		19.2500	7.0475	135.6644	314.4167	0.0000	0.0000	314.4167
Total			65.88		464.26	839.55		0.00	839.55
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	7.0475	in	$S_{top} = 119.13$	in ³	y-bar =	7.0475	in	$S_{top} = 119.13$	in ³		
$I_x =$	839.55	in ⁴	$S_{bott.} = 119.13$	in ³	$I_x =$	839.55	in ⁴	$S_{bott.} = 119.13$	in ³		
$c_{top} =$	7.0475	in	A =	65.8755	in ²	$c_{top} =$	7.0475	in	A =	65.8755	in ²
$c_{bottom} =$	7.0475	in	$r_x =$	3.5699	in	$c_{bottom} =$	7.0475	in	$r_x =$	3.5699	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	13.0445	194.8834	628.3732	0.0000	0.0000	628.3732
2	Left Flange		15.8428	1.2495	19.7956	1.6679	11.7950	2204.0796	2205.7476
	Right Flange		15.8428	24.8395	393.5267	1.6679	11.7950	2204.0796	2205.7476
3	Left Plate		9.6250	0.3438	3.3086	0.3791	12.7008	1552.5996	1552.9787
	Right Plate		9.6250	25.7453	247.7980	0.3791	12.7008	1552.5996	1552.9787
Total			65.88		859.31	632.47		7513.36	8145.83
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	13.0445	in	S _{right} = 624.46 in ³	x-bar =	13.0445	in	S _{right} = 624.46 in ³
I _y =	8145.83	n ⁴	S _{left} = 624.46 in ³	I _y =	8145.83	n ⁴	S _{left} = 624.46 in ³
C _{right} =	13.0445	in	A = 65.8755 in ²	C _{right} =	13.0445	in	A = 65.8755 in ²
C _{left} =	13.0445	in	r _y = 11.1200 in	C _{left} =	13.0445	in	r _y = 11.1200 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 160

- $A_1 = t_w = 0.6650$ in
- $A_2 = t_f = 1.1240$ in
- $B_1 = d = 24.7140$ in
- $B_2 = b_f = 14.0950$ in

Cover Plate

- $A_3 = t = 0.4375$ in
- $B_3 = b = 14.0000$ in



Member U115-L116

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x, gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	7.0475	105.2889	0.5506	0.0000	0.0000	0.5506
2	Flange Plates		31.6856	7.0475	223.3040	524.5783	0.0000	0.0000	524.5783
3	Cover Plate		12.2500	7.0475	86.3319	200.0833	0.0000	0.0000	200.0833
Total			58.88		414.92	725.21		0.00	725.21
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0475	in	$S_{top} =$	102.90	in ³	y-bar =	7.0475	in	$S_{top} =$	102.90	in ³
$I_x =$	725.21	in ⁴	$S_{bott.} =$	102.90	in ³	$I_x =$	725.21	in ⁴	$S_{bott.} =$	102.90	in ³
$c_{top} =$	7.0475	in	A =	58.8755	in ²	$c_{top} =$	7.0475	in	A =	58.8755	in ²
$c_{bottom} =$	7.0475	in	$r_x =$	3.5097	in	$c_{bottom} =$	7.0475	in	$r_x =$	3.5097	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	12.7945	191.1484	628.3732	0.0000	0.0000	628.3732
2	Left Flange		15.8428	0.9995	15.8349	1.6679	11.7950	2204.0796	2205.7476
	Right Flange		15.8428	24.5895	389.5660	1.6679	11.7950	2204.0796	2205.7476
3	Left Plate		6.1250	0.2188	1.3398	0.0977	12.5758	968.6656	968.7633
	Right Plate		6.1250	25.3703	155.3928	0.0977	12.5758	968.6656	968.7633
Total			58.88		753.28	631.90		6345.49	6977.40
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.7945	in	S _{right} = 545.34 in ³	x-bar =	12.7945	in	S _{right} = 545.34 in ³
I _y =	6977.40	n ⁴	S _{left} = 545.34 in ³	I _y =	6977.40	n ⁴	S _{left} = 545.34 in ³
C _{right} =	12.7945	in	A = 58.8755 in ²	C _{right} =	12.7945	in	A = 58.8755 in ²
C _{left} =	12.7945	in	r _y = 10.8863 in	C _{left} =	12.7945	in	r _y = 10.8863 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 160

- $A_1 = t_w = 0.6650$ in
- $A_2 = t_f = 1.1240$ in
- $B_1 = d = 24.7140$ in
- $B_2 = b_f = 14.0950$ in

Cover Plate

- $A_3 = t = 0.5000$ in
- $B_3 = b = 14.0000$ in



Member U116-L117

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x, gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	7.0475	105.2889	0.5506	0.0000	0.0000	0.5506
2	Flange Plates		31.6856	7.0475	223.3040	524.5783	0.0000	0.0000	524.5783
3	Cover Plate		14.0000	7.0475	98.6650	228.6667	0.0000	0.0000	228.6667
Total			60.63		427.26	753.80		0.00	753.80
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	7.0475	in	$S_{top} = 106.96$ in ³	y-bar =	7.0475	in	$S_{top} = 106.96$ in ³
$I_x =$	753.80	in ⁴	$S_{bott.} = 106.96$ in ³	$I_x =$	753.80	in ⁴	$S_{bott.} = 106.96$ in ³
$c_{top} =$	7.0475	in	$A = 60.6255$ in ²	$c_{top} =$	7.0475	in	$A = 60.6255$ in ²
$c_{bottom} =$	7.0475	in	$r_x = 3.5261$ in	$c_{bottom} =$	7.0475	in	$r_x = 3.5261$ in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	14.9399	12.8570	192.0822	628.3732	0.0000	0.0000	628.3732	
2	Left Flange	15.8428	1.0620	16.8250	1.6679	11.7950	2204.0796	2205.7476	
	Right Flange	15.8428	24.6520	390.5562	1.6679	11.7950	2204.0796	2205.7476	
3	Left Plate	7.0000	0.2500	1.7500	0.1458	12.6070	1112.5551	1112.7010	
	Right Plate	7.0000	25.4640	178.2480	0.1458	12.6070	1112.5551	1112.7010	
Total		60.63		779.46	632.00		6633.27	7265.27	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.8570	in	S _{right} = 565.08 in ³	x-bar =	12.8570	in	S _{right} = 565.08 in ³
I _y =	7265.27	n ⁴	S _{left} = 565.08 in ³	I _y =	7265.27	n ⁴	S _{left} = 565.08 in ³
C _{right} =	12.8570	in	A = 60.6255 in ²	C _{right} =	12.8570	in	A = 60.6255 in ²
C _{left} =	12.8570	in	r _y = 10.9471 in	C _{left} =	12.8570	in	r _y = 10.9471 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.4375$ in
- $B_3 = b = 14.0000$ in



Member U117-L118

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		12.2500	7.0000	85.7500	200.0833	0.0000	0.0000	200.0833
Total			50.03		350.22	608.37		0.00	608.37
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	$S_{top} =$	86.91	in ³	y-bar =	7.0000	in	$S_{top} =$	86.91	in ³
$I_x =$	608.37	in ⁴	$S_{bott.} =$	86.91	in ³	$I_x =$	608.37	in ⁴	$S_{bott.} =$	86.91	in ³
$c_{top} =$	7.0000	in	A =	50.0316	in ²	$c_{top} =$	7.0000	in	A =	50.0316	in ²
$c_{bottom} =$	7.0000	in	$r_x =$	3.4871	in	$c_{bottom} =$	7.0000	in	$r_x =$	3.4871	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.5625	160.8706	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	0.8835	11.0331	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	24.2415	302.7279	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		6.1250	0.2188	1.3398	0.0977	12.3438	933.2550	933.3527
	Right Plate		6.1250	24.9063	152.5508	0.0977	12.3438	933.2550	933.3527
Total			50.03		628.52	540.46		5273.21	5813.67
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.5625	in	S _{right} = 462.78 in ³	x-bar =	12.5625	in	S _{right} = 462.78 in ³
I _y =	5813.67	n ⁴	S _{left} = 462.78 in ³	I _y =	5813.67	n ⁴	S _{left} = 462.78 in ³
C _{right} =	12.5625	in	A = 50.0316 in ²	C _{right} =	12.5625	in	A = 50.0316 in ²
C _{left} =	12.5625	in	r _y = 10.7796 in	C _{left} =	12.5625	in	r _y = 10.7796 in



Made By KMW
Checked By ADK

Date 2/2/2012
Date 2/16/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.5625$ in
- $B_3 = b = 14.0000$ in



Member U119-L118

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		15.7500	7.0000	110.2500	257.2500	0.0000	0.0000	257.2500
Total			53.53		374.72	665.54		0.00	665.54
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1875	14.0000	-2.6250	7.0000	-18.3750	-42.8750	0.0000	0.0000	-42.8750
2	0.1875	14.0000	-2.6250	7.0000	-18.3750	-42.8750	0.0000	0.0000	-42.8750
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-5.25		-36.75	-85.75		0.00	-85.75

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	$S_{top} =$	95.08	in ³	y-bar =	7.0000	in	$S_{top} =$	82.83	in ³
$I_x =$	665.54	in ⁴	$S_{bott.} =$	95.08	in ³	$I_x =$	579.79	in ⁴	$S_{bott.} =$	82.83	in ³
$c_{top} =$	7.0000	in	A =	53.5316	in ²	$c_{top} =$	7.0000	in	A =	48.2816	in ²
$c_{bottom} =$	7.0000	in	$r_x =$	3.5260	in	$c_{bottom} =$	7.0000	in	$r_x =$	3.4653	in



Made By KMW
Checked By ADK

Date 2/2/2012
Date 2/16/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.6875	162.4713	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	1.0085	12.5941	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	24.3665	304.2889	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		7.8750	0.2813	2.2148	0.2076	12.4063	1212.0809	1212.2886
	Right Plate		7.8750	25.0938	197.6133	0.2076	12.4063	1212.0809	1212.2886
Total			53.53		679.18	540.68		5830.86	6371.54
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	14.0000	0.1875	-2.6250	0.0938	-0.2461	-0.0077	12.5938	-416.3317	-416.3394
2	14.0000	0.1875	-2.6250	25.2813	-66.3633	-0.0077	12.5938	-416.3317	-416.3394
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-5.25		-66.61	-0.02		-832.66	-832.68

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.6875	in	S _{right} =	502.19	in ³	x-bar =	12.6875	in	S _{right} =	436.56	in ³
I _y =	6371.54	n ⁴	S _{left} =	502.19	in ³	I _y =	5538.86	n ⁴	S _{left} =	436.56	in ³
C _{right} =	12.6875	in	A =	53.5316	in ²	C _{right} =	12.6875	in	A =	48.2816	in ²
C _{left} =	12.6875	in	r _y =	10.9098	in	C _{left} =	12.6875	in	r _y =	10.7107	in



Made By KMW
Checked By ADK

Date 2/2/2012
Date 2/16/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 140

- $A_1 = t_w = 0.6010$ in
- $A_2 = t_f = 0.9700$ in
- $B_1 = d = 24.4060$ in
- $B_2 = b_f = 14.0310$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U120-L119

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		13.5021	7.0155	94.7237	0.4064	0.0000	0.0000	0.4064
2	Flange Plates		27.2201	7.0155	190.9629	446.5667	0.0000	0.0000	446.5667
3	Cover Plate		0.0000	7.0155	0.0000	0.0000	0.0000	0.0000	0.0000
Total			40.72		285.69	446.97		0.00	446.97
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1250	2.0000	-0.2500	8.3160	-2.0790	-0.0833	1.3293	-0.4418	-0.5251
2	0.1250	2.0000	-0.2500	8.3160	-2.0790	-0.0833	1.3293	-0.4418	-0.5251
3	8.0000	0.2500	-2.0000	7.1910	-14.3820	-0.0104	0.2043	-0.0835	-0.0939
4	3.0000	0.1250	-0.3750	7.2535	-2.7201	-0.0005	0.2668	-0.0267	-0.0272
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.88		-21.26	-0.18		-0.99	-1.17

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0155	in	S _{top} =	63.71	in ³	y-bar =	6.9867	in	S _{top} =	63.55	in ³
I _x =	446.97	in ⁴	S _{bott.} =	63.71	in ³	I _x =	445.80	in ⁴	S _{bott.} =	63.81	in ³
c _{top} =	7.0155	in	A =	40.7222	in ²	c _{top} =	7.0155	in	A =	37.8472	in ²
c _{bottom} =	7.0155	in	r _x =	3.3130	in	c _{bottom} =	6.9867	in	r _x =	3.4321	in



Made By KMW
Checked By ADK

Date 2/2/2012
Date 2/16/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		13.5021	12.2030	164.7657	567.8982	0.0000	0.0000	567.8982
2	Left Flange		13.6101	0.4850	6.6009	1.0671	11.7180	1868.8195	1869.8866
	Right Flange		13.6101	23.9210	325.5665	1.0671	11.7180	1868.8195	1869.8866
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.2030	0.0000	0.0000
	Right Plate		0.0000	24.4060	0.0000	0.0000	12.2030	0.0000	0.0000
Total			40.72		496.93	570.03		3737.64	4307.67
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	2.0000	0.1250	-0.2500	0.9075	-0.2269	-0.0003	11.5813	-33.5315	-33.5319
2	2.0000	0.1250	-0.2500	23.4985	-5.8746	-0.0003	11.0097	-30.3035	-30.3038
3	0.2500	8.0000	-2.0000	4.9700	-9.9400	-10.6667	7.5188	-113.0642	-123.7309
4	0.1250	3.0000	-0.3750	21.9360	-8.2260	-0.2813	9.4472	-33.4687	-33.7500
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.88		-24.27	-10.95		-210.37	-221.32

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.2030	in	S _{right} =	353.00	in ³	x-bar =	12.4888	in	S _{right} =	342.90	in ³
I _y =	4307.67	n ⁴	S _{left} =	353.00	in ³	I _y =	4086.35	n ⁴	S _{left} =	327.20	in ³
C _{right} =	12.2030	in	A =	40.7222	in ²	C _{right} =	11.9172	in	A =	37.8472	in ²
C _{left} =	12.2030	in	r _y =	10.2850	in	C _{left} =	12.4888	in	r _y =	10.3909	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 100

- $A_1 = t_w = 0.4700$ in
- $A_2 = t_f = 0.7670$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 12.0000$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U121-L120

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	6.0000	63.3541	0.1944	0.0000	0.0000	0.1944
2	Flange Plates		18.4080	6.0000	110.4480	220.8960	0.0000	0.0000	220.8960
3	Cover Plate		0.0000	6.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			28.97		173.80	221.09		0.00	221.09
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0000	in	S _{top} =	36.85	in ³	y-bar =	6.0000	in	S _{top} =	36.85	in ³
I _x =	221.09	in ⁴	S _{bott.} =	36.85	in ³	I _x =	221.09	in ⁴	S _{bott.} =	36.85	in ³
c _{top} =	6.0000	in	A =	28.9670	in ²	c _{top} =	6.0000	in	A =	28.9670	in ²
c _{bottom} =	6.0000	in	r _x =	2.7627	in	c _{bottom} =	6.0000	in	r _x =	2.7627	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	12.0000	126.7082	444.1134	0.0000	0.0000	444.1134
2	Left Flange		9.2040	0.3835	3.5297	0.4512	11.6165	1242.0160	1242.4673
	Right Flange		9.2040	23.6165	217.3663	0.4512	11.6165	1242.0160	1242.4673
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.0000	0.0000	0.0000
	Right Plate		0.0000	24.0000	0.0000	0.0000	12.0000	0.0000	0.0000
Total			28.97		347.60	445.02		2484.03	2929.05
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties				
x-bar =	12.0000	in	S _{right} =	244.09 in ³	x-bar =	12.0000	in	S _{right} =	244.09 in ³
I _y =	2929.05	n ⁴	S _{left} =	244.09 in ³	I _y =	2929.05	n ⁴	S _{left} =	244.09 in ³
C _{right} =	12.0000	in	A =	28.9670 in ²	C _{right} =	12.0000	in	A =	28.9670 in ²
C _{left} =	12.0000	in	r _y =	10.0557 in	C _{left} =	12.0000	in	r _y =	10.0557 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 150

- $A_1 = t_w = 0.6330$ in
- $A_2 = t_f = 1.0480$ in
- $B_1 = d = 24.5620$ in
- $B_2 = b_f = 14.0630$ in

Cover Plate

- $A_3 = t = 0.0000$ in
- $B_3 = b = 0.0000$ in



Member U122-L121

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.2210	7.0315	99.9948	0.4748	0.0000	0.0000	0.4748
2	Flange Plates		29.4760	7.0315	207.2608	485.7848	0.0000	0.0000	485.7848
3	Cover Plate		0.0000	7.0315	0.0000	0.0000	0.0000	0.0000	0.0000
Total			43.70		307.26	486.26		0.00	486.26
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0315	in	S _{top} =	69.15	in ³	y-bar =	7.0315	in	S _{top} =	69.15	in ³
I _x =	486.26	in ⁴	S _{bott.} =	69.15	in ³	I _x =	486.26	in ⁴	S _{bott.} =	69.15	in ³
c _{top} =	7.0315	in	A =	43.6970	in ²	c _{top} =	7.0315	in	A =	43.6970	in ²
c _{bottom} =	7.0315	in	r _x =	3.3359	in	c _{bottom} =	7.0315	in	r _x =	3.3359	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.2210	12.2810	174.6478	598.1357	0.0000	0.0000	598.1357
2	Left Flange		14.7380	0.5240	7.7227	1.3489	11.7570	2037.1936	2038.5425
	Right Flange		14.7380	24.0380	354.2726	1.3489	11.7570	2037.1936	2038.5425
3	Left Plate		0.0000	0.0000	0.0000	0.0000	12.2810	0.0000	0.0000
	Right Plate		0.0000	24.5620	0.0000	0.0000	12.2810	0.0000	0.0000
Total			43.70		536.64	600.83		4074.39	4675.22
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.2810	in	S _{right} =	380.69	in ³	x-bar =	12.2810	in	S _{right} =	380.69	in ³
I _y =	4675.22	n ⁴	S _{left} =	380.69	in ³	I _y =	4675.22	n ⁴	S _{left} =	380.69	in ³
C _{right} =	12.2810	in	A =	43.6970	in ²	C _{right} =	12.2810	in	A =	43.6970	in ²
C _{left} =	12.2810	in	r _y =	10.3437	in	C _{left} =	12.2810	in	r _y =	10.3437	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.5625$ in
- $B_3 = b = 16.0000$ in



Member U123-L122

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	8.0000	102.4450	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	8.0000	199.8080	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		18.0000	8.0000	144.0000	384.0000	0.0000	0.0000	384.0000
Total			55.78		446.25	792.29		0.00	792.29
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	8.0000	in	S _{top} =	99.04	in ³	y-bar =	8.0000	in	S _{top} =	99.04	in ³
I _x =	792.29	in ⁴	S _{bott.} =	99.04	in ³	I _x =	792.29	in ⁴	S _{bott.} =	99.04	in ³
c _{top} =	8.0000	in	A =	55.7816	in ²	c _{top} =	8.0000	in	A =	55.7816	in ²
c _{bottom} =	8.0000	in	r _x =	3.7687	in	c _{bottom} =	8.0000	in	r _x =	3.7687	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.6875	162.4713	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	1.0085	12.5941	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	24.3665	304.2889	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		9.0000	0.2813	2.5313	0.2373	12.4063	1385.2354	1385.4727
	Right Plate		9.0000	25.0938	225.8438	0.2373	12.4063	1385.2354	1385.4727
Total			55.78		707.73	540.74		6177.17	6717.91
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.6875	in	S _{right} = 529.49 in ³	x-bar =	12.6875	in	S _{right} = 529.49 in ³
I _y =	6717.91	n ⁴	S _{left} = 529.49 in ³	I _y =	6717.91	n ⁴	S _{left} = 529.49 in ³
C _{right} =	12.6875	in	A = 55.7816 in ²	C _{right} =	12.6875	in	A = 55.7816 in ²
C _{left} =	12.6875	in	r _y = 10.9742 in	C _{left} =	12.6875	in	r _y = 10.9742 in



Made By KMW
Checked By ADK

Date 2/2/2012
Date 2/16/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.9375$ in
- $B_3 = b = 16.0000$ in



Member U124-L123

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	8.0000	102.4450	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	8.0000	199.8080	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		30.0000	8.0000	240.0000	640.0000	0.0000	0.0000	640.0000
Total			67.78		542.25	1048.29		0.00	1048.29
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	6.0000	0.1250	-0.7500	7.2225	-5.4169	-0.0010	0.7951	-0.4741	-0.4751
2	6.0000	0.1250	-0.7500	7.2225	-5.4169	-0.0010	0.7951	-0.4741	-0.4751
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.50		-10.83	0.00		-0.95	-0.95

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	8.0000	in	S _{top} = 131.04 in ³	y-bar =	8.0176	in	S _{top} = 131.21 in ³
I _x =	1048.29	in ⁴	S _{bott.} = 131.04 in ³	I _x =	1047.34	in ⁴	S _{bott.} = 130.63 in ³
c _{top} =	8.0000	in	A = 67.7816 in ²	c _{top} =	7.9824	in	A = 66.2816 in ²
c _{bottom} =	8.0000	in	r _x = 3.9326 in	c _{bottom} =	8.0176	in	r _x = 3.9751 in



Made By KMW
Checked By ADK

Date 2/2/2012
Date 2/16/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y, gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	12.8056	13.0625	167.2734	538.6056	0.0000	0.0000	538.6056	
2	Left Flange	12.4880	1.3835	17.2771	0.8280	11.6790	1703.3512	1704.1792	
	Right Flange	12.4880	24.7415	308.9719	0.8280	11.6790	1703.3512	1704.1792	
3	Left Plate	15.0000	0.4688	7.0313	1.0986	12.5938	2379.0381	2380.1367	
	Right Plate	15.0000	25.6563	384.8438	1.0986	12.5938	2379.0381	2380.1367	
Total		67.78		885.40	542.46		8164.78	8707.24	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1250	6.0000	-0.7500	4.8295	-3.6221	-2.2500	8.2330	-50.8367	-53.0867
2	0.1250	6.0000	-0.7500	21.2955	-15.9716	-2.2500	8.2330	-50.8367	-53.0867
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.50		-19.59	-4.50		-101.67	-106.17

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	13.0625	in	S _{right} = 666.58 in ³	x-bar =	13.0625	in	S _{right} = 658.45 in ³
I _y =	8707.24	n ⁴	S _{left} = 666.58 in ³	I _y =	8601.06	n ⁴	S _{left} = 658.45 in ³
C _{right} =	13.0625	in	A = 67.7816 in ²	C _{right} =	13.0625	in	A = 66.2816 in ²
C _{left} =	13.0625	in	r _y = 11.3340 in	C _{left} =	13.0625	in	r _y = 11.3915 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 160

- $A_1 = t_w = 0.6650$ in
- $A_2 = t_f = 1.1240$ in
- $B_1 = d = 24.7140$ in
- $B_2 = b_f = 14.0950$ in

Cover Plate

- $A_3 = t = 0.5625$ in
- $B_3 = b = 16.0000$ in



Member U125-L124

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	8.0000	119.5191	0.5506	0.0000	0.0000	0.5506
2	Flange Plates		31.6856	8.0000	253.4845	524.5783	0.0000	0.0000	524.5783
3	Cover Plate		18.0000	8.0000	144.0000	384.0000	0.0000	0.0000	384.0000
Total			64.63		517.00	909.13		0.00	909.13
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	8.0000	in	S _{top} = 113.64 in ³	y-bar =	8.0000	in	S _{top} = 113.64 in ³
I _x =	909.13	in ⁴	S _{bott.} = 113.64 in ³	I _x =	909.13	in ⁴	S _{bott.} = 113.64 in ³
c _{top} =	8.0000	in	A = 64.6255 in ²	c _{top} =	8.0000	in	A = 64.6255 in ²
c _{bottom} =	8.0000	in	r _x = 3.7507 in	c _{bottom} =	8.0000	in	r _x = 3.7507 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	12.9195	193.0159	628.3732	0.0000	0.0000	628.3732
2	Left Flange		15.8428	1.1245	17.8152	1.6679	11.7950	2204.0796	2205.7476
	Right Flange		15.8428	24.7145	391.5464	1.6679	11.7950	2204.0796	2205.7476
3	Left Plate		9.0000	0.2813	2.5313	0.2373	12.6383	1437.5283	1437.7656
	Right Plate		9.0000	25.5578	230.0198	0.2373	12.6383	1437.5283	1437.7656
Total			64.63		834.93	632.18		7283.22	7915.40
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.9195	in	S _{right} =	612.67	in ³	x-bar =	12.9195	in	S _{right} =	612.67	in ³
I _y =	7915.40	n ⁴	S _{left} =	612.67	in ³	I _y =	7915.40	n ⁴	S _{left} =	612.67	in ³
C _{right} =	12.9195	in	A =	64.6255	in ²	C _{right} =	12.9195	in	A =	64.6255	in ²
C _{left} =	12.9195	in	r _y =	11.0671	in	C _{left} =	12.9195	in	r _y =	11.0671	in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 160

- $A_1 = t_w = 0.6650$ in
- $A_2 = t_f = 1.1240$ in
- $B_1 = d = 24.7140$ in
- $B_2 = b_f = 14.0950$ in

Cover Plate

- $A_3 = t = 0.5625$ in
- $B_3 = b = 16.0000$ in



Member U126-L125

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	8.0000	119.5191	0.5506	0.0000	0.0000	0.5506
2	Flange Plates		31.6856	8.0000	253.4845	524.5783	0.0000	0.0000	524.5783
3	Cover Plate		18.0000	8.0000	144.0000	384.0000	0.0000	0.0000	384.0000
Total			64.63		517.00	909.13		0.00	909.13
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	8.0000	in	S _{top} = 113.64 in ³	y-bar =	8.0000	in	S _{top} = 113.64 in ³
I _x =	909.13	in ⁴	S _{bott.} = 113.64 in ³	I _x =	909.13	in ⁴	S _{bott.} = 113.64 in ³
c _{top} =	8.0000	in	A = 64.6255 in ²	c _{top} =	8.0000	in	A = 64.6255 in ²
c _{bottom} =	8.0000	in	r _x = 3.7507 in	c _{bottom} =	8.0000	in	r _x = 3.7507 in



Made By DMP
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	12.9195	193.0159	628.3732	0.0000	0.0000	628.3732
2	Left Flange		15.8428	1.1245	17.8152	1.6679	11.7950	2204.0796	2205.7476
	Right Flange		15.8428	24.7145	391.5464	1.6679	11.7950	2204.0796	2205.7476
3	Left Plate		9.0000	0.2813	2.5313	0.2373	12.6383	1437.5283	1437.7656
	Right Plate		9.0000	25.5578	230.0198	0.2373	12.6383	1437.5283	1437.7656
Total			64.63		834.93	632.18		7283.22	7915.40
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.9195	in	S _{right} = 612.67 in ³	x-bar =	12.9195	in	S _{right} = 612.67 in ³
I _y =	7915.40	n ⁴	S _{left} = 612.67 in ³	I _y =	7915.40	n ⁴	S _{left} = 612.67 in ³
C _{right} =	12.9195	in	A = 64.6255 in ²	C _{right} =	12.9195	in	A = 64.6255 in ²
C _{left} =	12.9195	in	r _y = 11.0671 in	C _{left} =	12.9195	in	r _y = 11.0671 in



Made By KMW
Checked By ADK

Date 2/2/2012
Date 2/16/2012

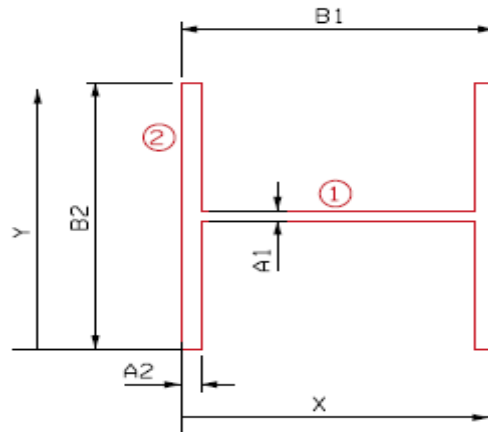
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam 14WF167

- $A_1 = t_w = 0.7800$ in
- $A_2 = t_f = 1.2480$ in
- $B_1 = d = 15.1200$ in
- $B_2 = b_f = 15.6000$ in



Member U127-L128

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		9.8467	7.8000	76.8044	0.4992	0.0000	0.0000	0.4992
2	Flange Plates		38.9376	7.8000	303.7133	789.6545	0.0000	0.0000	789.6545
Total			48.78		380.52	790.15		0.00	790.15
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1250	15.6000	-1.9500	7.8000	-15.2100	-39.5460	0.0000	0.0000	-39.5460
2	0.1250	15.6000	-1.9500	7.8000	-15.2100	-39.5460	0.0000	0.0000	-39.5460
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-3.90		-30.42	-79.09		0.00	-79.09

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	7.8000	in	$S_{top} = 101.30$	in ³	y-bar =	7.8000	in	$S_{top} = 91.16$	in ³		
$I_x =$	790.15	in ⁴	$S_{bott.} = 101.30$	in ³	$I_x =$	711.06	in ⁴	$S_{bott.} = 91.16$	in ³		
$c_{top} =$	7.8000	in	A =	48.7843	in ²	$c_{top} =$	7.8000	in	A =	44.8843	in ²
$c_{bottom} =$	7.8000	in	$r_x =$	4.0245	in	$c_{bottom} =$	7.8000	in	$r_x =$	3.9802	in



Made By KMW
Checked By ADK

Date 2/2/2012
Date 2/16/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		9.8467	7.5600	74.4412	130.7689	0.0000	0.0000	130.7689
2	Left Flange		19.4688	0.6240	12.1485	2.5269	6.9360	936.6069	939.1338
	Right Flange		19.4688	14.4960	282.2197	2.5269	6.9360	936.6069	939.1338
Total			48.78		368.81	135.82		1873.21	2009.04
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	15.6000	0.1250	-1.9500	0.0625	-0.1219	-0.0025	7.4975	-109.6144	-109.6169
2	15.6000	0.1250	-1.9500	15.0575	-29.3621	-0.0025	7.4975	-109.6144	-109.6169
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-3.90		-29.48	-0.01		-219.23	-219.23

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	7.5600	in	S _{right} =	265.75	in ³	x-bar =	7.5600	in	S _{right} =	236.75	in ³
I _y =	2009.04	n ⁴	S _{left} =	265.75	in ³	I _y =	1789.80	n ⁴	S _{left} =	236.75	in ³
C _{right} =	7.5600	in	A =	48.7843	in ²	C _{right} =	7.5600	in	A =	44.8843	in ²
C _{left} =	7.5600	in	r _y =	6.4173	in	C _{left} =	7.5600	in	r _y =	6.3147	in



Made By SFH
Checked By DMP

Date 2/1/2012
Date 2/1/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam 14WF136

- $A_1 = t_w = 0.6600$ in
- $A_2 = t_f = 1.0630$ in
- $B_1 = d = 14.7500$ in
- $B_2 = b_f = 14.7400$ in



Member U128-L129

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		8.3318	7.3700	61.4057	0.3024	0.0000	0.0000	0.3024
2	Flange Plates		31.3372	7.3700	230.9555	567.3806	0.0000	0.0000	567.3806
Total			39.67		292.36	567.68		0.00	567.68
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	7.3700	in	$S_{top} = 77.03$	in^3	y-bar =	7.3700	in	$S_{top} = 77.03$	in^3		
$I_x =$	567.68	in^4	$S_{bott.} = 77.03$	in^3	$I_x =$	567.68	in^4	$S_{bott.} = 77.03$	in^3		
$c_{top} =$	7.3700	in	A =	39.6691	in^2	$c_{top} =$	7.3700	in	A =	39.6691	in^2
$c_{bottom} =$	7.3700	in	$r_x =$	3.7829	in	$c_{bottom} =$	7.3700	in	$r_x =$	3.7829	in



Made By SFH
Checked By DMP

Date 2/1/2012
Date 2/1/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		8.3318	7.3750	61.4473	110.6506	0.0000	0.0000	110.6506
2	Left Flange		15.6686	0.5315	8.3279	1.4754	6.8435	733.8162	735.2916
	Right Flange		15.6686	14.2185	222.7843	1.4754	6.8435	733.8162	735.2916
Total			39.67		292.56	113.60		1467.63	1581.23
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	7.3750	in	S _{right} =	214.40	in ³	x-bar =	7.3750	in	S _{right} =	214.40	in ³
I _y =	1581.23	in ⁴	S _{left} =	214.40	in ³	I _y =	1581.23	in ⁴	S _{left} =	214.40	in ³
C _{right} =	7.3750	in	A =	39.6691	in ²	C _{right} =	7.3750	in	A =	39.6691	in ²
C _{left} =	7.3750	in	r _y =	6.3135	in	C _{left} =	7.3750	in	r _y =	6.3135	in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam 14WF87

- $A_1 = t_w = 0.4200$ in
- $A_2 = t_f = 0.6880$ in
- $B_1 = d = 14.0000$ in
- $B_2 = b_f = 14.5000$ in



Member U129-L130

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		5.3021	7.2500	38.4401	0.0779	0.0000	0.0000	0.0779
2	Flange Plates		19.9520	7.2500	144.6520	349.5757	0.0000	0.0000	349.5757
Total			25.25		183.09	349.65		0.00	349.65
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.2500	in	$S_{top} =$	48.23	in ³	y-bar =	7.2500	in	$S_{top} =$	48.23	in ³
$I_x =$	349.65	in ⁴	$S_{bott.} =$	48.23	in ³	$I_x =$	349.65	in ⁴	$S_{bott.} =$	48.23	in ³
$c_{top} =$	7.2500	in	A =	25.2541	in ²	$c_{top} =$	7.2500	in	A =	25.2541	in ²
$c_{bottom} =$	7.2500	in	$r_x =$	3.7209	in	$c_{bottom} =$	7.2500	in	$r_x =$	3.7209	in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		5.3021	7.0000	37.1146	70.4140	0.0000	0.0000	70.4140
2	Left Flange		9.9760	0.3440	3.4317	0.3935	6.6560	441.9601	442.3536
	Right Flange		9.9760	13.6560	136.2323	0.3935	6.6560	441.9601	442.3536
Total			25.25		176.78	71.20		883.92	955.12
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	7.0000	in	S _{right} =	136.45	in ³	x-bar =	7.0000	in	S _{right} =	136.45	in ³
I _y =	955.12	in ⁴	S _{left} =	136.45	in ³	I _y =	955.12	in ⁴	S _{left} =	136.45	in ³
C _{right} =	7.0000	in	A =	25.2541	in ²	C _{right} =	7.0000	in	A =	25.2541	in ²
C _{left} =	7.0000	in	r _y =	6.1498	in	C _{left} =	7.0000	in	r _y =	6.1498	in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

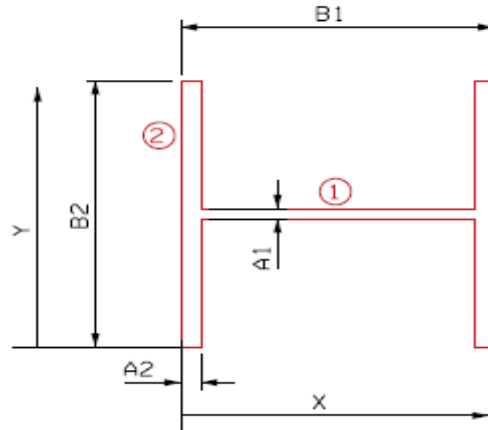
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam 14WF78

- $A_1 = t_w = 0.4280$ in
- $A_2 = t_f = 0.7180$ in
- $B_1 = d = 14.0600$ in
- $B_2 = b_f = 12.0000$ in



Member U130-L131

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		5.4031	6.0000	32.4184	0.0825	0.0000	0.0000	0.0825
2	Flange Plates		17.2320	6.0000	103.3920	206.7840	0.0000	0.0000	206.7840
Total			22.64		135.81	206.87		0.00	206.87
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0000	in	S _{top} =	34.48	in ³	y-bar =	6.0000	in	S _{top} =	34.48	in ³
I _x =	206.87	in ⁴	S _{bottom} =	34.48	in ³	I _x =	206.87	in ⁴	S _{bottom} =	34.48	in ³
c _{top} =	6.0000	in	A =	22.6351	in ²	c _{top} =	6.0000	in	A =	22.6351	in ²
c _{bottom} =	6.0000	in	r _x =	3.0231	in	c _{bottom} =	6.0000	in	r _x =	3.0231	in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		5.4031	7.0300	37.9836	71.7552	0.0000	0.0000	71.7552
2	Left Flange		8.6160	0.3590	3.0931	0.3701	6.6710	383.4313	383.8015
	Right Flange		8.6160	13.7010	118.0478	0.3701	6.6710	383.4313	383.8015
Total			22.64		159.12	72.50		766.86	839.36
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties				
x-bar =	7.0300	in	S _{right} =	119.40 in ³	x-bar =	7.0300	in	S _{right} =	119.40 in ³
I _y =	839.36	in ⁴	S _{left} =	119.40 in ³	I _y =	839.36	in ⁴	S _{left} =	119.40 in ³
C _{right} =	7.0300	in	A =	22.6351 in ²	C _{right} =	7.0300	in	A =	22.6351 in ²
C _{left} =	7.0300	in	r _y =	6.0895 in	C _{left} =	7.0300	in	r _y =	6.0895 in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

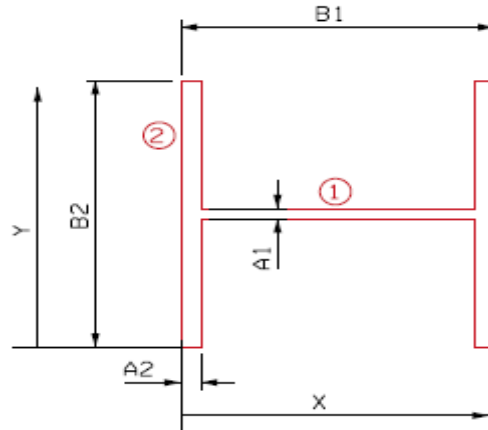
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam **14WF78**

- $A_1 = t_w = 0.4280$ in
- $A_2 = t_f = 0.7180$ in
- $B_1 = d = 14.0600$ in
- $B_2 = b_f = 12.0000$ in



Member U132-L131

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		5.4031	6.0000	32.4184	0.0825	0.0000	0.0000	0.0825
2	Flange Plates		17.2320	6.0000	103.3920	206.7840	0.0000	0.0000	206.7840
Total			22.64		135.81	206.87		0.00	206.87
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0000	in	$S_{top} =$	34.48	in ³	y-bar =	6.0000	in	$S_{top} =$	34.48	in ³
$I_x =$	206.87	in ⁴	$S_{bott.} =$	34.48	in ³	$I_x =$	206.87	in ⁴	$S_{bott.} =$	34.48	in ³
$c_{top} =$	6.0000	in	A =	22.6351	in ²	$c_{top} =$	6.0000	in	A =	22.6351	in ²
$c_{bottom} =$	6.0000	in	$r_x =$	3.0231	in	$c_{bottom} =$	6.0000	in	$r_x =$	3.0231	in



Made By DMP
Checked By NRF

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		5.4031	7.0300	37.9836	71.7552	0.0000	0.0000	71.7552
2	Left Flange		8.6160	0.3590	3.0931	0.3701	6.6710	383.4313	383.8015
	Right Flange		8.6160	13.7010	118.0478	0.3701	6.6710	383.4313	383.8015
Total			22.64		159.12	72.50		766.86	839.36
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties				
x-bar =	7.0300	in	S _{right} =	119.40 in ³	x-bar =	7.0300	in	S _{right} =	119.40 in ³
I _y =	839.36	in ⁴	S _{left} =	119.40 in ³	I _y =	839.36	in ⁴	S _{left} =	119.40 in ³
C _{right} =	7.0300	in	A =	22.6351 in ²	C _{right} =	7.0300	in	A =	22.6351 in ²
C _{left} =	7.0300	in	r _y =	6.0895 in	C _{left} =	7.0300	in	r _y =	6.0895 in



Made By SFH
Checked By DMP

Date 2/1/2012
Date 2/1/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam 14WF87

- $A_1 = t_w = 0.4200$ in
- $A_2 = t_f = 0.6880$ in
- $B_1 = d = 14.0000$ in
- $B_2 = b_f = 14.5000$ in



Member U133-L132

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		5.3021	7.2500	38.4401	0.0779	0.0000	0.0000	0.0779
2	Flange Plates		19.9520	7.2500	144.6520	349.5757	0.0000	0.0000	349.5757
Total			25.25		183.09	349.65		0.00	349.65
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	7.2500	in	$S_{top} = 48.23$	in^3	y-bar =	7.2500	in	$S_{top} = 48.23$	in^3		
$I_x =$	349.65	in^4	$S_{bott.} = 48.23$	in^3	$I_x =$	349.65	in^4	$S_{bott.} = 48.23$	in^3		
$c_{top} =$	7.2500	in	A =	25.2541	in^2	$c_{top} =$	7.2500	in	A =	25.2541	in^2
$c_{bottom} =$	7.2500	in	$r_x =$	3.7209	in	$c_{bottom} =$	7.2500	in	$r_x =$	3.7209	in



Made By SFH
Checked By DMP

Date 2/1/2012
Date 2/1/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate	5.3021	7.0000	37.1146	70.4140	0.0000	0.0000	70.4140
2	Left Flange	9.9760	0.3440	3.4317	0.3935	6.6560	441.9601	442.3536
	Right Flange	9.9760	13.6560	136.2323	0.3935	6.6560	441.9601	442.3536
Total		25.25		176.78	71.20		883.92	955.12
Section Losses		A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	7.0000	in	S _{right} = 136.45 in ³	x-bar =	7.0000	in	S _{right} = 136.45 in ³
I _y =	955.12	in ⁴	S _{left} = 136.45 in ³	I _y =	955.12	in ⁴	S _{left} = 136.45 in ³
C _{right} =	7.0000	in	A = 25.2541 in ²	C _{right} =	7.0000	in	A = 25.2541 in ²
C _{left} =	7.0000	in	r _y = 6.1498 in	C _{left} =	7.0000	in	r _y = 6.1498 in



Made By SFH
Checked By DMP

Date 2/1/2012
Date 2/1/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam 14WF136

- $A_1 = t_w = 0.6600$ in
- $A_2 = t_f = 1.0630$ in
- $B_1 = d = 14.7500$ in
- $B_2 = b_f = 14.7400$ in



Member U134-L133

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		8.3318	7.3700	61.4057	0.3024	0.0000	0.0000	0.3024
2	Flange Plates		31.3372	7.3700	230.9555	567.3806	0.0000	0.0000	567.3806
Total			39.67		292.36	567.68		0.00	567.68
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	7.3700	in	S _{top} = 77.03 in ³	y-bar =	7.3700	in	S _{top} = 77.03 in ³
I _x =	567.68	in ⁴	S _{bottom} = 77.03 in ³	I _x =	567.68	in ⁴	S _{bottom} = 77.03 in ³
c _{top} =	7.3700	in	A = 39.6691 in ²	c _{top} =	7.3700	in	A = 39.6691 in ²
c _{bottom} =	7.3700	in	r _x = 3.7829 in	c _{bottom} =	7.3700	in	r _x = 3.7829 in



Made By SFH
Checked By DMP

Date 2/1/2012
Date 2/1/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		8.3318	7.3750	61.4473	110.6506	0.0000	0.0000	110.6506
2	Left Flange		15.6686	0.5315	8.3279	1.4754	6.8435	733.8162	735.2916
	Right Flange		15.6686	14.2185	222.7843	1.4754	6.8435	733.8162	735.2916
Total			39.67		292.56	113.60		1467.63	1581.23
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	7.3750	in	S _{right} =	214.40	in ³	x-bar =	7.3750	in	S _{right} =	214.40	in ³
I _y =	1581.23	in ⁴	S _{left} =	214.40	in ³	I _y =	1581.23	in ⁴	S _{left} =	214.40	in ³
C _{right} =	7.3750	in	A =	39.6691	in ²	C _{right} =	7.3750	in	A =	39.6691	in ²
C _{left} =	7.3750	in	r _y =	6.3135	in	C _{left} =	7.3750	in	r _y =	6.3135	in



Made By SFH
Checked By DMP

Date 2/1/2012
Date 2/1/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam 14WF158

- $A_1 = t_w = 0.7300$ in
- $A_2 = t_f = 1.1880$ in
- $B_1 = d = 15.0000$ in
- $B_2 = b_f = 15.5500$ in



Member U135-L134

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		9.2155	7.7750	71.6507	0.4092	0.0000	0.0000	0.4092
2	Flange Plates		36.9468	7.7750	287.2614	744.4857	0.0000	0.0000	744.4857
Total			46.16		358.91	744.89		0.00	744.89
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	7.7750	in	S _{top} = 95.81 in ³	y-bar =	7.7750	in	S _{top} = 95.81 in ³
I _x =	744.89	in ⁴	S _{bottom} = 95.81 in ³	I _x =	744.89	in ⁴	S _{bottom} = 95.81 in ³
c _{top} =	7.7750	in	A = 46.1623 in ²	c _{top} =	7.7750	in	A = 46.1623 in ²
c _{bottom} =	7.7750	in	r _x = 4.0170 in	c _{bottom} =	7.7750	in	r _x = 4.0170 in



Made By SFH
Checked By DMP

Date 2/1/2012
Date 2/1/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		9.2155	7.5000	69.1164	122.3862	0.0000	0.0000	122.3862
2	Left Flange		18.4734	0.5940	10.9732	2.1727	6.9060	881.0488	883.2215
	Right Flange		18.4734	14.4060	266.1278	2.1727	6.9060	881.0488	883.2215
Total			46.16		346.22	126.73		1762.10	1888.83
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	7.5000	in	S _{right} = 251.84 in ³	x-bar =	7.5000	in	S _{right} = 251.84 in ³
I _y =	1888.83	in ⁴	S _{left} = 251.84 in ³	I _y =	1888.83	in ⁴	S _{left} = 251.84 in ³
C _{right} =	7.5000	in	A = 46.1623 in ²	C _{right} =	7.5000	in	A = 46.1623 in ²
C _{left} =	7.5000	in	r _y = 6.3966 in	C _{left} =	7.5000	in	r _y = 6.3966 in



Made By KMW
Checked By ADK

Date 1/30/2012
Date 2/14/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

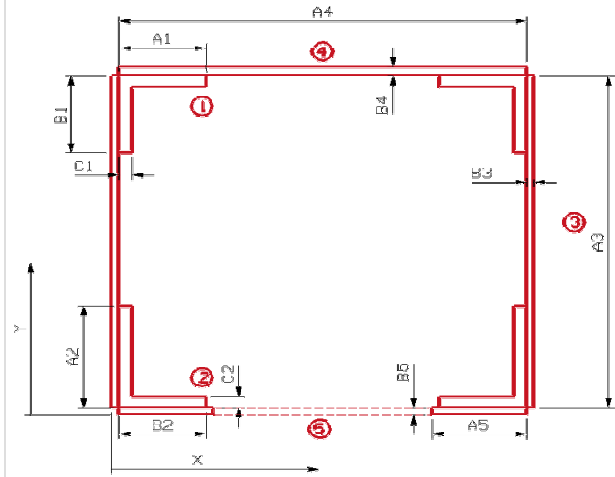
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L0-L1

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5031	330.8057	330.8260	
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5031	208.1357	210.7472	
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.1844	502.9900	503.0104	
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.1844	342.1506	344.7621	
3	Plate	19.5000	13.3750	260.8125	1098.5000	1.3406	35.0460	1133.5460	
4	Plate	8.8125	26.5625	234.0820	0.1033	11.8469	1236.8243	1236.9276	
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.5281	949.7966	949.8493	
Total		42.42		624.26	1103.92		3605.75	4709.67	
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	
1	0.0625	3.6875	-0.2305	2.5313	-0.5834	-0.2612	12.2509	-34.5899	-34.8510
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.23	-0.58	-0.26		-34.59	-34.85	



Made By KMW
Checked By ADK

Date 1/30/2012
Date 2/14/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.7156 in	S _{top} =	391.35 in ³	y-bar =	14.7822 in	S _{top} =	390.62 in ³
I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³	I _x =	4674.82 in ⁴	S _{bott.} =	316.25 in ³
C _{top} =	12.0344 in	A =	42.4219 in ²	C _{top} =	11.9678 in	A =	42.1914 in ²
C _{bottom} =	14.7156 in	r _x =	10.5366 in	C _{bottom} =	14.7822 in	r _x =	10.5262 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	9.7500	0.1875	1.8281	0.1143	11.9375	1389.4131	1389.5273	
3 (Right)	Plate	9.7500	24.0625	234.6094	0.1143	11.9375	1389.4131	1389.5273	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.3750	7.5938	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.8750	46.9688	6.7500	8.7500	172.2656	179.0156	
Total		42.42		514.37	425.99		4218.24	4644.23	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	3.6875	0.0625	-0.2305	0.6563	-0.1512	-0.0001	11.5314	-30.6462	-30.6462
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.23		-0.15	0.00		-30.65	-30.65

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	383.03 in ³	x-bar =	12.1876 in	S _{right} =	382.48 in ³
I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³	I _y =	4613.58 in ⁴	S _{left} =	378.55 in ³
C _{right} =	12.1250 in	A =	42.4219 in ²	C _{right} =	12.0624 in	A =	42.1914 in ²
C _{left} =	12.1250 in	r _y =	10.4631 in	C _{left} =	12.1876 in	r _y =	10.4570 in



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L1-L2

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5031	330.8057	330.8260
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5031	208.1357	210.7472
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.1844	502.9900	503.0104
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.1844	342.1506	344.7621
3	Plate	19.5000	13.3750	260.8125	1098.5000	1.3406	35.0460	1133.5460
4	Plate	8.8125	26.5625	234.0820	0.1033	11.8469	1236.8243	1236.9276
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.5281	949.7966	949.8493
Total		42.42		624.26	1103.92		3605.75	4709.67
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.7156 in	S _{top} =	391.35 in ³	y-bar =	14.7156 in	S _{top} =	391.35 in ³
I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³	I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³
C _{top} =	12.0344 in	A =	42.4219 in ²	C _{top} =	12.0344 in	A =	42.4219 in ²
C _{bottom} =	14.7156 in	r _x =	10.5366 in	C _{bottom} =	14.7156 in	r _x =	10.5366 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	9.7500	0.1875	1.8281	0.1143	11.9375	1389.4131	1389.5273	
3 (Right)	Plate	9.7500	24.0625	234.6094	0.1143	11.9375	1389.4131	1389.5273	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.3750	7.5938	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.8750	46.9688	6.7500	8.7500	172.2656	179.0156	
Total		42.42		514.37	425.99		4218.24	4644.23	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	383.03 in ³	x-bar =	12.1250 in	S _{right} =	383.03 in ³
I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³	I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³
C _{right} =	12.1250 in	A =	42.4219 in ²	C _{right} =	12.1250 in	A =	42.4219 in ²
C _{left} =	12.1250 in	r _y =	10.4631 in	C _{left} =	12.1250 in	r _y =	10.4631 in

South Truss

Member L2-L3



Made By KMW
Checked By ADK

Date 1/30/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.4375$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_f = 0.4375$ in

Top Cover Plate:

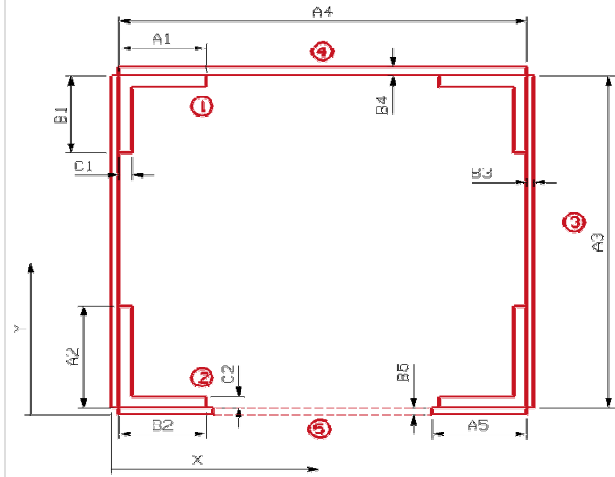
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member L2-L3

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.2500	26.2813	137.9766	0.0837	12.1823	779.1420	779.2258
	Vertical Leg	6.6172	22.2813	147.4392	31.5372	8.1823	443.0190	474.5562
2	Horizontal Leg	5.2500	0.7188	3.7734	0.0837	13.3802	939.9087	939.9924
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	9.3802	582.2363	613.7735
3	Plate	22.7500	13.5000	307.1250	1281.5833	0.5990	8.1618	1289.7452
4	Plate	8.8125	26.6875	235.1836	0.1033	12.5885	1396.5270	1396.6303
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	13.8490	1150.7634	1150.8884
Total		61.30		864.22	1345.05		5299.76	6644.81
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	2.5000	0.1250	-0.3125	26.5000	-8.2813	-0.0004	12.6979	-50.3868
2	2.5000	0.1250	-0.3125	26.5000	-8.2813	-0.0004	12.6979	-50.3868
3	0.1875	2.5000	-0.4688	24.7500	-11.6016	-0.2441	10.9479	-56.1832
4	0.1875	2.5000	-0.4688	24.7500	-11.6016	-0.2441	10.9479	-56.1832
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.56	-39.77	-0.49		-213.14	-213.63



Made By KMW
Checked By ADK

Date 1/30/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.0990 in	S _{top} =	520.10 in ³	y-bar =	13.8021 in	S _{top} =	491.95 in ³
I _x =	6644.81 in ⁴	S _{bott.} =	471.30 in ³	I _x =	6431.18 in ⁴	S _{bott.} =	465.96 in ³
C _{top} =	12.7760 in	A =	61.2969 in ²	C _{top} =	13.0729 in	A =	59.7344 in ²
C _{bottom} =	14.0990 in	r _x =	10.4117 in	C _{bottom} =	13.8021 in	r _x =	10.3761 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.4375	9.0234	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	20.9375	54.9609	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.4375	9.0234	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	20.9375	54.9609	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.4375	10.3125	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.9375	62.8125	9.0000	8.7500	229.6875	238.6875	
Total		61.30		747.06	455.63		6282.01	6737.64	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1250	2.5000	-0.3125	1.6875	-0.5273	-0.1628	10.5000	-34.4531	-34.6159
2	0.1250	2.5000	-0.3125	22.6875	-7.0898	-0.1628	10.5000	-34.4531	-34.6159
3	2.5000	0.1875	-0.4688	0.4375	-0.2051	-0.0014	11.7500	-64.7168	-64.7182
4	2.5000	0.1875	-0.4688	23.9375	-11.2207	-0.0014	11.7500	-64.7168	-64.7182
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.56		-19.04	-0.33		-198.34	-198.67

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	552.83 in ³	x-bar =	12.1875 in	S _{right} =	536.53 in ³
I _y =	6737.64 in ⁴	S _{left} =	552.83 in ³	I _y =	6538.98 in ⁴	S _{left} =	536.53 in ³
C _{right} =	12.1875 in	A =	61.2969 in ²	C _{right} =	12.1875 in	A =	59.7344 in ²
C _{left} =	12.1875 in	r _y =	10.4842 in	C _{left} =	12.1875 in	r _y =	10.4627 in



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.5000$ in

Top Cover Plate:

$A_4 = b = 22.0000$ in
 $B_4 = t = 0.4375$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.8125$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.5625$ in



Member L3-L4

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	6.0000	26.3125	157.8750	0.1250	12.1745	889.3168	889.4418
	Vertical Leg	7.5000	22.3125	167.3438	35.1563	8.1745	501.1735	536.3297
2	Horizontal Leg	6.0000	0.8125	4.8750	0.1250	13.3255	1065.4071	1065.5321
	Vertical Leg	7.5000	4.8125	36.0938	35.1563	9.3255	652.2313	687.3876
3	Plate	42.2500	13.5625	573.0156	2380.0833	0.5755	13.9912	2394.0745
4	Plate	9.6250	26.7813	257.7695	0.1535	12.6433	1538.5834	1538.7369
5	Perforated Plate	5.9063	0.2813	1.6611	0.1557	13.8567	1134.0494	1134.2052
Total		84.78		1198.63	2450.96		5794.75	8245.71
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.1380 in	S _{top} =	641.09 in ³	y-bar =	14.1380 in	S _{top} =	641.09 in ³
I _x =	8245.71 in ⁴	S _{bott.} =	583.23 in ³	I _x =	8245.71 in ⁴	S _{bott.} =	583.23 in ³
C _{top} =	12.8620 in	A =	84.7813 in ²	C _{top} =	12.8620 in	A =	84.7813 in ²
C _{bottom} =	14.1380 in	r _x =	9.8620 in	C _{bottom} =	14.1380 in	r _x =	9.8620 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.0000	3.8125	11.4375	9.0000	8.0000	192.0000	201.0000	
	Vertical Leg	3.7500	1.0625	3.9844	0.0781	10.7500	433.3594	433.4375	
1 (Right)	Horizontal Leg	3.0000	19.8125	59.4375	9.0000	8.0000	192.0000	201.0000	
	Vertical Leg	3.7500	22.5625	84.6094	0.0781	10.7500	433.3594	433.4375	
2 (Left)	Horizontal Leg	3.0000	3.8125	11.4375	9.0000	8.0000	192.0000	201.0000	
	Vertical Leg	3.7500	1.0625	3.9844	0.0781	10.7500	433.3594	433.4375	
2 (Right)	Horizontal Leg	3.0000	19.8125	59.4375	9.0000	8.0000	192.0000	201.0000	
	Vertical Leg	3.7500	22.5625	84.6094	0.0781	10.7500	433.3594	433.4375	
3 (Left)	Plate	21.1250	0.4063	8.5820	1.1622	11.4063	2748.4161	2749.5783	
3 (Right)	Plate	21.1250	23.2188	490.4961	1.1622	11.4063	2748.4161	2749.5783	
4	Plate	9.6250	11.8125	113.6953	388.2083	0.0000	0.0000	388.2083	
5 (Left)	Perforated Plate	2.9531	3.4375	10.1514	6.7830	8.3750	207.1340	213.9170	
5 (Right)	Perforated Plate	2.9531	20.1875	59.6162	6.7830	8.3750	207.1340	213.9170	
Total		84.78		1001.48	440.41		8412.54	8852.95	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	11.8125 in	S _{right} =	749.46 in ³	x-bar =	11.8125 in	S _{right} =	749.46 in ³
I _y =	8852.95 in ⁴	S _{left} =	749.46 in ³	I _y =	8852.95 in ⁴	S _{left} =	749.46 in ³
C _{right} =	11.8125 in	A =	84.7813 in ²	C _{right} =	11.8125 in	A =	84.7813 in ²
C _{left} =	11.8125 in	r _y =	10.2187 in	C _{left} =	11.8125 in	r _y =	10.2187 in



Made By KMW
Checked By ADK

Date 1/30/2012
Date 2/16/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

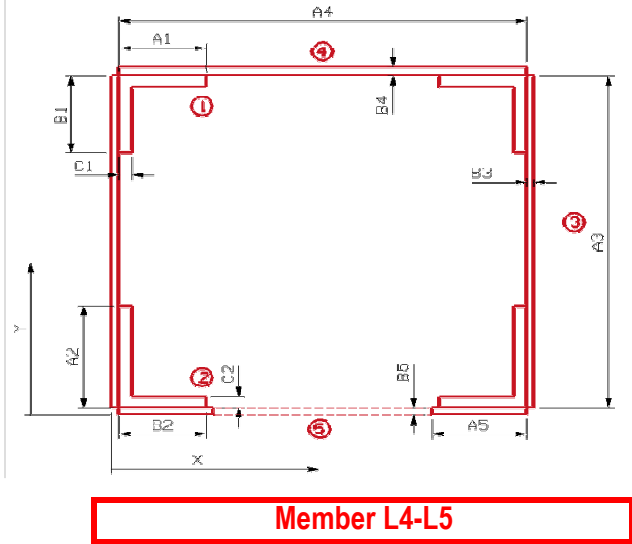
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6250$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6250$ in

Top Cover Plate:
 $A_4 = b = 22.0000$ in
 $B_4 = t = 0.5000$ in

Web Plate:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.8750$ in

Perforated Cover Plate
 $A_5 = b = 5.2500$ in
 $B_5 = t = 0.6250$ in



X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	7.5000	26.3125	197.3438	0.2441	12.0825	1094.8931	1095.1373
	Vertical Leg	9.2188	22.3125	205.6934	41.7845	8.0825	602.2250	644.0094
2	Horizontal Leg	7.5000	0.9375	7.0313	0.2441	13.2925	1325.1879	1325.4320
	Vertical Leg	9.2188	4.9375	45.5176	41.7845	9.2925	796.0517	837.8361
3	Plate	45.5000	13.6250	619.9375	2563.1667	0.6050	16.6565	2579.8232
4	Plate	11.0000	26.8750	295.6250	0.2292	12.6450	1758.8441	1759.0733
5	Perforated Plate	6.5625	0.3125	2.0508	0.2136	13.9175	1271.1433	1271.3569
Total		96.50		1373.20	2647.67		6865.00	9512.67
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00	0.00	0.00	0.00



Made By KMW
Checked By ADK

Date 1/30/2012
Date 2/16/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.2300 in	S _{top} =	737.70 in ³	y-bar =	14.2300 in	S _{top} =	737.70 in ³
I _x =	9512.67 in ⁴	S _{bott.} =	668.49 in ³	I _x =	9512.67 in ⁴	S _{bott.} =	668.49 in ³
C _{top} =	12.8950 in	A =	96.5000 in ²	C _{top} =	12.8950 in	A =	96.5000 in ²
C _{bottom} =	14.2300 in	r _x =	9.9286 in	C _{bottom} =	14.2300 in	r _x =	9.9286 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.7500	3.8750	14.5313	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.1875	5.4736	0.1500	10.6875	526.4951	526.6451	
1 (Right)	Horizontal Leg	3.7500	19.8750	74.5313	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	22.5625	103.9990	0.1500	10.6875	526.4951	526.6451	
2 (Left)	Horizontal Leg	3.7500	3.8750	14.5313	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.1875	5.4736	0.1500	10.6875	526.4951	526.6451	
2 (Right)	Horizontal Leg	3.7500	19.8750	74.5313	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	22.5625	103.9990	0.1500	10.6875	526.4951	526.6451	
3 (Left)	Plate	22.7500	0.4375	9.9531	1.4515	11.4375	2976.0732	2977.5247	
3 (Right)	Plate	22.7500	23.3125	530.3594	1.4515	11.4375	2976.0732	2977.5247	
4	Plate	11.0000	11.8750	130.6250	443.6667	0.0000	0.0000	443.6667	
5 (Left)	Perforated Plate	3.2813	3.5000	11.4844	7.5366	8.3750	230.1489	237.6855	
5 (Right)	Perforated Plate	3.2813	20.2500	66.4453	7.5366	8.3750	230.1489	237.6855	
Total		96.50		1145.94	507.24		9478.42	9985.67	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	11.8750 in	S _{right} =	840.90 in ³	x-bar =	11.8750 in	S _{right} =	840.90 in ³
I _y =	9985.67 in ⁴	S _{left} =	840.90 in ³	I _y =	9985.67 in ⁴	S _{left} =	840.90 in ³
C _{right} =	11.8750 in	A =	96.5000 in ²	C _{right} =	11.8750 in	A =	96.5000 in ²
C _{left} =	11.8750 in	r _y =	10.1724 in	C _{left} =	11.8750 in	r _y =	10.1724 in



Made By KMW
Checked By ADK

Date 2/3/2012
Date 2/14/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

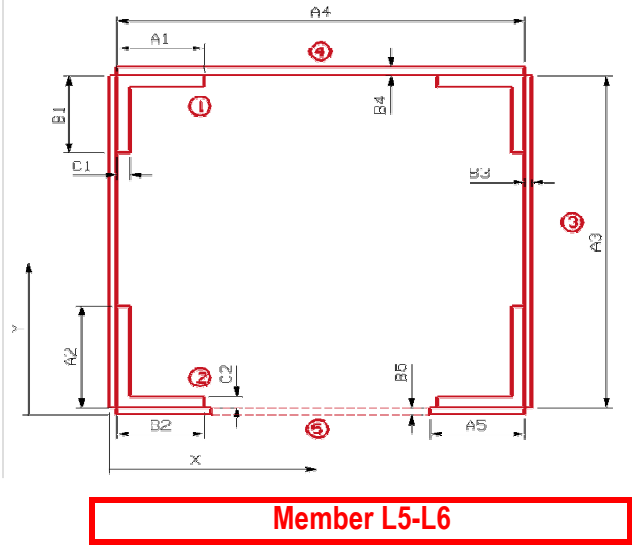
Top Angles: $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3750$ in

Bottom Angles: $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3750$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate: $A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member L5-L6

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	3.0000	26.3125	78.9375	0.0352	12.0632	436.5636	436.5988	
	Vertical Leg	2.7188	24.3125	66.0996	2.9772	10.0632	275.3233	278.3005	
2	Horizontal Leg	3.0000	0.6875	2.0625	0.0352	13.5618	551.7658	551.8010	
	Vertical Leg	2.7188	2.6875	7.3066	2.9772	11.5618	363.4284	366.4056	
3	Plate	22.7500	13.5000	307.1250	1281.5833	0.7493	12.7724	1294.3557	
4	Plate	8.8125	26.6875	235.1836	0.1033	12.4382	1363.3753	1363.4786	
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	13.9993	1175.8795	1176.0045	
Total		49.00		698.21	1287.84		4179.11	5466.94	
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	
1	0.0625	26.0000	-1.6250	13.5000	-21.9375	-91.5417	0.1748	-0.0496	-91.5913
2	9.5000	0.1875	-1.7813	26.7813	-47.7041	-0.0052	13.4560	-322.5221	-322.5273
3	6.5000	0.1250	-0.8125	26.8125	-21.7852	-0.0011	13.4873	-147.7995	-147.8005
4	3.0000	0.2500	-0.7500	26.7500	-20.0625	-0.0039	13.4248	-135.1688	-135.1727
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-4.97	-111.49	-91.55		-605.54	-697.09	



Made By KMW
Checked By ADK

Date 2/3/2012
Date 2/14/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.2493 in	S _{top} =	433.00 in ³	y-bar =	13.3252 in	S _{top} =	352.02 in ³
I _x =	5466.94 in ⁴	S _{bott.} =	383.66 in ³	I _x =	4769.85 in ⁴	S _{bott.} =	357.96 in ³
C _{top} =	12.6257 in	A =	49.0000 in ²	C _{top} =	13.5498 in	A =	44.0313 in ²
C _{bottom} =	14.2493 in	r _x =	10.5627 in	C _{bottom} =	13.3252 in	r _x =	10.4081 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.5000	2.4375	3.6563	2.0000	9.7500	142.5938	144.5938	
	Vertical Leg	1.3594	0.6250	0.8496	0.0159	11.5625	181.7368	181.7527	
1 (Right)	Horizontal Leg	1.5000	21.9375	32.9063	2.0000	9.7500	142.5938	144.5938	
	Vertical Leg	1.3594	23.7500	32.2852	0.0159	11.5625	181.7368	181.7527	
2 (Left)	Horizontal Leg	1.5000	2.4375	3.6563	2.0000	9.7500	142.5938	144.5938	
	Vertical Leg	1.3594	0.6250	0.8496	0.0159	11.5625	181.7368	181.7527	
2 (Right)	Horizontal Leg	1.5000	21.9375	32.9063	2.0000	9.7500	142.5938	144.5938	
	Vertical Leg	1.3594	23.7500	32.2852	0.0159	11.5625	181.7368	181.7527	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.4375	10.3125	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.9375	62.8125	9.0000	8.7500	229.6875	238.6875	
Total		49.00		597.19	431.99		5015.66	5447.64	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	26.0000	0.0625	-1.6250	0.0313	-0.0508	-0.0005	12.5978	-257.8944	-257.8949
2	0.1875	9.5000	-1.7813	19.1875	-34.1777	-13.3965	6.5585	-76.6177	-90.0142
3	0.1250	6.5000	-0.8125	6.6875	-5.4336	-2.8607	5.9415	-28.6828	-31.5434
4	0.2500	3.0000	-0.7500	1.9375	-1.4531	-0.5625	10.6915	-85.7317	-86.2942
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-4.97		-41.12	-16.82		-448.93	-465.75

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	446.99 in ³	x-bar =	12.6290 in	S _{right} =	424.14 in ³
I _y =	5447.64 in ⁴	S _{left} =	446.99 in ³	I _y =	4981.90 in ⁴	S _{left} =	394.48 in ³
C _{right} =	12.1875 in	A =	49.0000 in ²	C _{right} =	11.7460 in	A =	44.0313 in ²
C _{left} =	12.1875 in	r _y =	10.5440 in	C _{left} =	12.6290 in	r _y =	10.6369 in



Made By KMW
Checked By ADK

Date 1/30/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

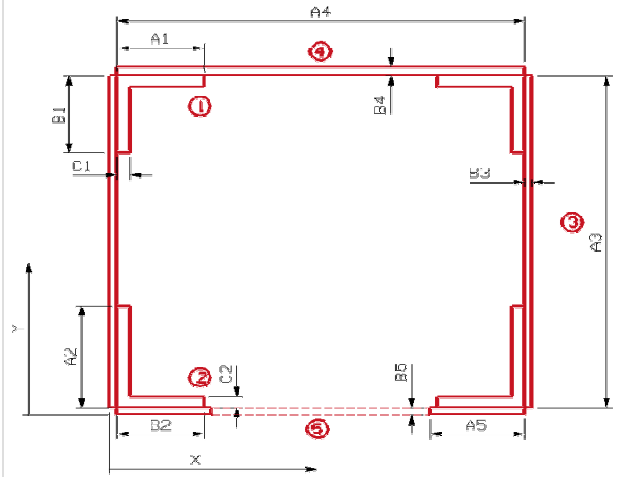
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L6-L7

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5031	330.8057	330.8260
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5031	208.1357	210.7472
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.1844	502.9900	503.0104
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.1844	342.1506	344.7621
3	Plate	19.5000	13.3750	260.8125	1098.5000	1.3406	35.0460	1133.5460
4	Plate	8.8125	26.5625	234.0820	0.1033	11.8469	1236.8243	1236.9276
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.5281	949.7966	949.8493
Total		42.42		624.26	1103.92		3605.75	4709.67
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	2.5000	0.0625	-0.1563	26.3750	-4.1211	-0.0001	11.7459	-21.5573
2	2.5000	0.0625	-0.1563	26.3750	-4.1211	-0.0001	11.7459	-21.5573
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.31	-8.24	0.00		-43.11	-43.11



Made By KMW
Checked By ADK

Date 1/30/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.7156 in	S _{top} =	391.35 in ³	y-bar =	14.6291 in	S _{top} =	385.00 in ³
I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³	I _x =	4666.55 in ⁴	S _{bott.} =	318.99 in ³
C _{top} =	12.0344 in	A =	42.4219 in ²	C _{top} =	12.1209 in	A =	42.1094 in ²
C _{bottom} =	14.7156 in	r _x =	10.5366 in	C _{bottom} =	14.6291 in	r _x =	10.5271 in

0.999099

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	9.7500	0.1875	1.8281	0.1143	11.9375	1389.4131	1389.5273	
3 (Right)	Plate	9.7500	24.0625	234.6094	0.1143	11.9375	1389.4131	1389.5273	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.3750	7.5938	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.8750	46.9688	6.7500	8.7500	172.2656	179.0156	
Total		42.42		514.37	425.99		4218.24	4644.23	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0625	2.5000	-0.1563	1.6250	-0.2539	-0.0814	10.5000	-17.2266	-17.3079
2	0.0625	2.5000	-0.1563	22.6250	-3.5352	-0.0814	10.5000	-17.2266	-17.3079
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.31		-3.79	-0.16		-34.45	-34.62

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	383.03 in ³	x-bar =	12.1250 in	S _{right} =	380.17 in ³
I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³	I _y =	4609.61 in ⁴	S _{left} =	380.17 in ³
C _{right} =	12.1250 in	A =	42.4219 in ²	C _{right} =	12.1250 in	A =	42.1094 in ²
C _{left} =	12.1250 in	r _y =	10.4631 in	C _{left} =	12.1250 in	r _y =	10.4627 in



Made By KMW
Checked By ADK

Date 1/30/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

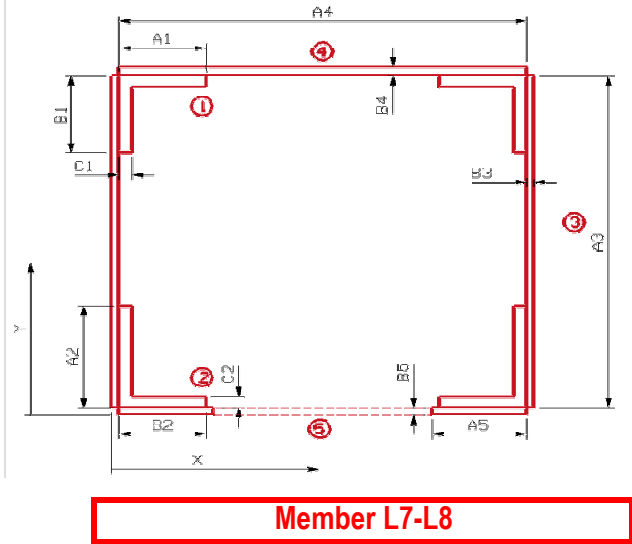
Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3750$ in

Bottom Angles:
 $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3750$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.5000$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	3.0000	26.3125	78.9375	0.0352	12.1098	439.9435	439.9786	
	Vertical Leg	2.7188	24.3125	66.0996	2.9772	10.1098	277.8794	280.8566	
2	Horizontal Leg	3.0000	0.6875	2.0625	0.0352	13.5152	547.9800	548.0151	
	Vertical Leg	2.7188	2.6875	7.3066	2.9772	11.5152	360.5043	363.4815	
3	Plate	26.0000	13.5000	351.0000	1464.6667	0.7027	12.8376	1477.5043	
4	Plate	8.8125	26.6875	235.1836	0.1033	12.4848	1373.6116	1373.7149	
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	13.9527	1168.0631	1168.1881	
Total		52.25		742.09	1470.92		4180.82	5651.74	
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	
1	0.0625	26.0000	-1.6250	13.5000	-21.9375	-91.5417	1.1123	-2.0105	-93.5522
2	0.3125	4.0000	-1.2500	2.5000	-3.1250	-1.6667	12.1123	-183.3853	-185.0520
3	23.5000	0.0313	-0.7344	26.8594	-19.7249	-0.0001	12.2471	-110.1492	-110.1492
4	0.0625	26.0000	-1.6250	13.5000	-21.9375	-91.5417	1.1123	-2.0105	-93.5522
5	3.6250	0.0625	-0.2266	0.8438	-0.1912	-0.0001	13.7686	-42.9502	-42.9503
6	3.6250	0.0625	-0.2266	0.8438	-0.1912	-0.0001	13.7686	-42.9502	-42.9503
7	0.0625	3.6250	-0.2266	2.6875	-0.6089	-0.2481	11.9248	-32.2175	-32.4656
8	0.0625	3.6250	-0.2266	2.6875	-0.6089	-0.2481	11.9248	-32.2175	-32.4656
Total			-6.14		-68.32	-185.25		-447.89	-633.14



Made By KMW
Checked By ADK

Date 1/30/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.2027 in	S _{top} =	445.99 in ³	y-bar =	14.6123 in	S _{top} =	409.26 in ³
I _x =	5651.74 in ⁴	S _{bott.} =	397.93 in ³	I _x =	5018.60 in ⁴	S _{bott.} =	343.45 in ³
C _{top} =	12.6723 in	A =	52.2500 in ²	C _{top} =	12.2627 in	A =	46.1094 in ²
C _{bottom} =	14.2027 in	r _x =	10.4003 in	C _{bottom} =	14.6123 in	r _x =	10.4327 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.5000	2.5000	3.7500	2.0000	9.7500	142.5938	144.5938	
	Vertical Leg	1.3594	0.6875	0.9346	0.0159	11.5625	181.7368	181.7527	
1 (Right)	Horizontal Leg	1.5000	22.0000	33.0000	2.0000	9.7500	142.5938	144.5938	
	Vertical Leg	1.3594	23.8125	32.3701	0.0159	11.5625	181.7368	181.7527	
2 (Left)	Horizontal Leg	1.5000	2.5000	3.7500	2.0000	9.7500	142.5938	144.5938	
	Vertical Leg	1.3594	0.6875	0.9346	0.0159	11.5625	181.7368	181.7527	
2 (Right)	Horizontal Leg	1.5000	22.0000	33.0000	2.0000	9.7500	142.5938	144.5938	
	Vertical Leg	1.3594	23.8125	32.3701	0.0159	11.5625	181.7368	181.7527	
3 (Left)	Plate	13.0000	0.2500	3.2500	0.2708	12.0000	1872.0000	1872.2708	
3 (Right)	Plate	13.0000	24.2500	315.2500	0.2708	12.0000	1872.0000	1872.2708	
4	Plate	8.8125	12.2500	107.9531	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.5000	10.5000	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	21.0000	63.0000	9.0000	8.7500	229.6875	238.6875	
Total		52.25		640.06	432.16		5500.70	5932.86	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	26.0000	0.0625	-1.6250	0.0313	-0.0508	-0.0005	12.5458	-255.7686	-255.7691
2	4.0000	0.3125	-1.2500	0.1875	-0.2344	-0.0102	12.3895	-191.8749	-191.8851
3	0.0313	23.5000	-0.7344	12.2500	-8.9961	-33.7965	0.3270	-0.0785	-33.8751
4	26.0000	0.0625	-1.6250	24.4688	-39.7617	-0.0005	11.8917	-229.7970	-229.7975
5	0.0625	3.6250	-0.2266	2.6875	-0.6089	-0.2481	9.8895	-22.1583	-22.4064
6	0.0625	3.6250	-0.2266	21.8125	-4.9419	-0.2481	9.2355	-19.3245	-19.5726
7	3.6250	0.0625	-0.2266	0.8438	-0.1912	-0.0001	11.7333	-31.1907	-31.1908
8	3.6250	0.0625	-0.2266	23.6563	-5.3596	-0.0001	11.0792	-27.8105	-27.8105
Total			-6.14		-60.14	-34.30		-778.00	-812.31

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2500 in	S _{right} =	484.32 in ³	x-bar =	12.5770 in	S _{right} =	429.47 in ³
I _y =	5932.86 in ⁴	S _{left} =	484.32 in ³	I _y =	5120.55 in ⁴	S _{left} =	407.14 in ³
C _{right} =	12.2500 in	A =	52.2500 in ²	C _{right} =	11.9230 in	A =	46.1094 in ²
C _{left} =	12.2500 in	r _y =	10.6559 in	C _{left} =	12.5770 in	r _y =	10.5381 in



Made By KMW
Checked By ADK

Date 1/30/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

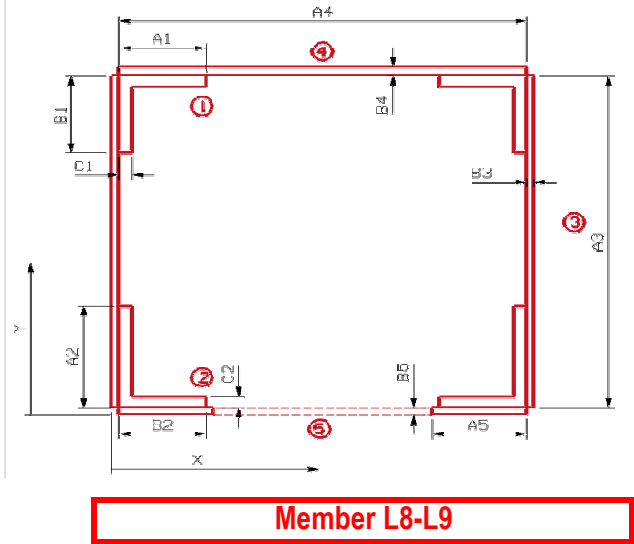
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.4375$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_f = 0.4375$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.7500$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	5.2500	26.2813	137.9766	0.0837	12.3078	795.2797	795.3635	
	Vertical Leg	6.6172	22.2813	147.4392	31.5372	8.3078	456.7149	488.2520	
2	Horizontal Leg	5.2500	0.7188	3.7734	0.0837	13.2547	922.3576	922.4414	
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	9.2547	566.7591	598.2962	
3	Plate	39.0000	13.5000	526.5000	2197.0000	0.4735	8.7422	2205.7422	
4	Plate	8.8125	26.6875	235.1836	0.1033	12.7140	1424.5140	1424.6173	
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	13.7235	1129.9991	1130.1241	
Total		77.55		1083.60	2260.47		5304.37	7564.84	
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	
1	0.1250	14.0000	-1.7500	19.5000	-34.1250	-28.5833	5.6541	-55.9463	-84.5297
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.75	-34.13	-28.58		-55.95	-84.53	



Made By KMW
Checked By ADK

Date 1/30/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	13.9735 in	S _{top} =	586.35 in ³	y-bar =	13.8459 in	S _{top} =	574.12 in ³
I _x =	7564.84 in ⁴	S _{bott.} =	541.37 in ³	I _x =	7480.31 in ⁴	S _{bott.} =	540.26 in ³
C _{top} =	12.9015 in	A =	77.5469 in ²	C _{top} =	13.0291 in	A =	75.7969 in ²
C _{bottom} =	13.9735 in	r _x =	9.8768 in	C _{bottom} =	13.8459 in	r _x =	9.9342 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.7500	9.8438	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.9688	3.2052	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	21.2500	55.7813	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	24.0313	79.5096	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.7500	9.8438	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.9688	3.2052	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	21.2500	55.7813	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	24.0313	79.5096	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	19.5000	0.3750	7.3125	0.9141	12.1250	2866.8047	2867.7188	
3 (Right)	Plate	19.5000	24.6250	480.1875	0.9141	12.1250	2866.8047	2867.7188	
4	Plate	8.8125	12.5000	110.1563	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.7500	11.2500	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	21.2500	63.7500	9.0000	8.7500	229.6875	238.6875	
Total		77.55		969.34	457.10		8756.66	9213.76	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	14.0000	0.1250	-1.7500	24.9375	-43.6406	-0.0023	12.7247	-283.3546	-283.3569
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.75		-43.64	0.00		-283.35	-283.36

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.5000 in	S _{right} =	737.10 in ³	x-bar =	12.2128 in	S _{right} =	698.39 in ³
I _y =	9213.76 in ⁴	S _{left} =	737.10 in ³	I _y =	8930.40 in ⁴	S _{left} =	731.23 in ³
C _{right} =	12.5000 in	A =	77.5469 in ²	C _{right} =	12.7872 in	A =	75.7969 in ²
C _{left} =	12.5000 in	r _y =	10.9002 in	C _{left} =	12.2128 in	r _y =	10.8545 in

South Truss

Member L9-L10



Made By KMW
Checked By ADK

Date 1/31/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.6250$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_f = 0.6250$ in

Top Cover Plate:

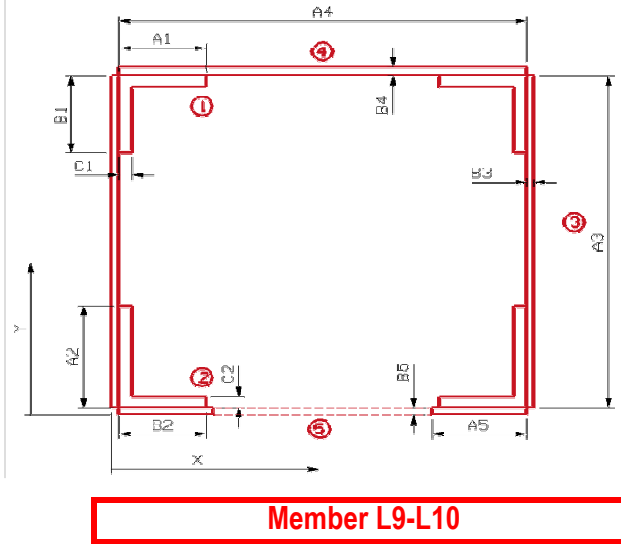
$A_4 = b = 22.0000$ in
 $B_4 = t = 0.5000$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.9375$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.6250$ in



X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	7.5000	26.3125	197.3438	0.2441	12.1022	1098.4688	1098.7129
	Vertical Leg	9.2188	22.3125	205.6934	41.7845	8.1022	605.1662	646.9507
2	Horizontal Leg	7.5000	0.9375	7.0313	0.2441	13.2728	1321.2602	1321.5044
	Vertical Leg	9.2188	4.9375	45.5176	41.7845	9.2728	792.6778	834.4622
3	Plate	48.7500	13.6250	664.2188	2746.2500	0.5853	16.7023	2762.9523
4	Plate	11.0000	26.8750	295.6250	0.2292	12.6647	1764.3324	1764.5616
5	Perforated Plate	6.5625	0.3125	2.0508	0.2136	13.8978	1267.5449	1267.7585
Total		99.75		1417.48	2830.75		6866.15	9696.90
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	2.5000	0.0625	-0.1563	26.6250	-4.1602	-0.0001	12.4537	-24.2335
2	2.5000	0.0625	-0.1563	26.6250	-4.1602	-0.0001	12.4537	-24.2335
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.31	-8.32	0.00		-48.47	-48.47



Made By KMW
Checked By ADK

Date 1/31/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.2103 in	S _{top} =	750.84 in ³	y-bar =	14.1713 in	S _{top} =	744.84 in ³
I _x =	9696.90 in ⁴	S _{bott.} =	682.38 in ³	I _x =	9648.44 in ⁴	S _{bott.} =	680.84 in ³
C _{top} =	12.9147 in	A =	99.7500 in ²	C _{top} =	12.9537 in	A =	99.4375 in ²
C _{bottom} =	14.2103 in	r _x =	9.8596 in	C _{bottom} =	14.1713 in	r _x =	9.8504 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.7500	3.9375	14.7656	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.2500	5.7617	0.1500	10.6875	526.4951	526.6451	
1 (Right)	Horizontal Leg	3.7500	19.9375	74.7656	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	22.6250	104.2871	0.1500	10.6875	526.4951	526.6451	
2 (Left)	Horizontal Leg	3.7500	3.9375	14.7656	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.2500	5.7617	0.1500	10.6875	526.4951	526.6451	
2 (Right)	Horizontal Leg	3.7500	19.9375	74.7656	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	22.6250	104.2871	0.1500	10.6875	526.4951	526.6451	
3 (Left)	Plate	24.3750	0.4688	11.4258	1.7853	11.4688	3206.0980	3207.8833	
3 (Right)	Plate	24.3750	23.4063	570.5273	1.7853	11.4688	3206.0980	3207.8833	
4	Plate	11.0000	11.9375	131.3125	443.6667	0.0000	0.0000	443.6667	
5 (Left)	Perforated Plate	3.2813	3.5625	11.6895	7.5366	8.3750	230.1489	237.6855	
5 (Right)	Perforated Plate	3.2813	20.3125	66.6504	7.5366	8.3750	230.1489	237.6855	
Total		99.75		1190.77	507.91		9938.47	10446.38	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0625	2.5000	-0.1563	2.1875	-0.3418	-0.0814	9.7500	-14.8535	-14.9349
2	0.0625	2.5000	-0.1563	21.6875	-3.3887	-0.0814	9.7500	-14.8535	-14.9349
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.31		-3.73	-0.16		-29.71	-29.87

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	11.9375 in	S _{right} =	875.09 in ³	x-bar =	11.9375 in	S _{right} =	872.59 in ³
I _y =	10446.38 in ⁴	S _{left} =	875.09 in ³	I _y =	10416.51 in ⁴	S _{left} =	872.59 in ³
C _{right} =	11.9375 in	A =	99.7500 in ²	C _{right} =	11.9375 in	A =	99.4375 in ²
C _{left} =	11.9375 in	r _y =	10.2336 in	C _{left} =	11.9375 in	r _y =	10.2350 in



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6250$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6250$ in

Top Cover Plate:

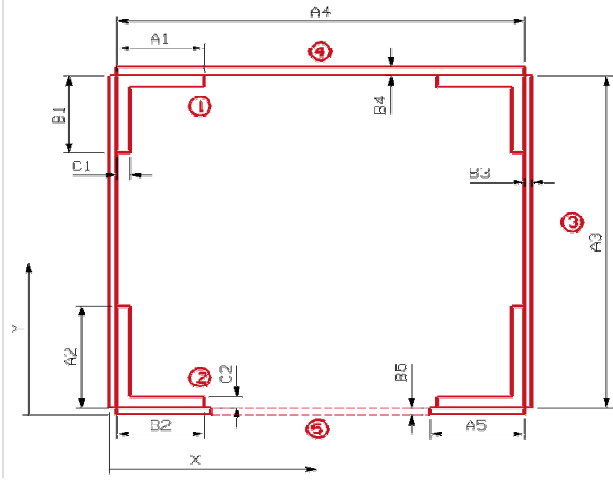
$A_4 = b = 22.0000$ in
 $B_4 = t = 0.5000$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.9375$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.6250$ in



X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	7.5000	26.3125	197.3438	0.2441	12.1022	1098.4688	1098.7129
	Vertical Leg	9.2188	22.3125	205.6934	41.7845	8.1022	605.1662	646.9507
2	Horizontal Leg	7.5000	0.9375	7.0313	0.2441	13.2728	1321.2602	1321.5044
	Vertical Leg	9.2188	4.9375	45.5176	41.7845	9.2728	792.6778	834.4622
3	Plate	48.7500	13.6250	664.2188	2746.2500	0.5853	16.7023	2762.9523
4	Plate	11.0000	26.8750	295.6250	0.2292	12.6647	1764.3324	1764.5616
5	Perforated Plate	6.5625	0.3125	2.0508	0.2136	13.8978	1267.5449	1267.7585
Total		99.75		1417.48	2830.75		6866.15	9696.90
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.2103 in	S _{top} =	750.84 in ³	y-bar =	14.2103 in	S _{top} =	750.84 in ³
I _x =	9696.90 in ⁴	S _{bott.} =	682.38 in ³	I _x =	9696.90 in ⁴	S _{bott.} =	682.38 in ³
C _{top} =	12.9147 in	A =	99.7500 in ²	C _{top} =	12.9147 in	A =	99.7500 in ²
C _{bottom} =	14.2103 in	r _x =	9.8596 in	C _{bottom} =	14.2103 in	r _x =	9.8596 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.7500	3.9375	14.7656	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.2500	5.7617	0.1500	10.6875	526.4951	526.6451	
1 (Right)	Horizontal Leg	3.7500	19.9375	74.7656	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	22.6250	104.2871	0.1500	10.6875	526.4951	526.6451	
2 (Left)	Horizontal Leg	3.7500	3.9375	14.7656	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.2500	5.7617	0.1500	10.6875	526.4951	526.6451	
2 (Right)	Horizontal Leg	3.7500	19.9375	74.7656	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	22.6250	104.2871	0.1500	10.6875	526.4951	526.6451	
3 (Left)	Plate	24.3750	0.4688	11.4258	1.7853	11.4688	3206.0980	3207.8833	
3 (Right)	Plate	24.3750	23.4063	570.5273	1.7853	11.4688	3206.0980	3207.8833	
4	Plate	11.0000	11.9375	131.3125	443.6667	0.0000	0.0000	443.6667	
5 (Left)	Perforated Plate	3.2813	3.5625	11.6895	7.5366	8.3750	230.1489	237.6855	
5 (Right)	Perforated Plate	3.2813	20.3125	66.6504	7.5366	8.3750	230.1489	237.6855	
Total		99.75		1190.77	507.91		9938.47	10446.38	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	11.9375 in	S _{right} =	875.09 in ³	x-bar =	11.9375 in	S _{right} =	875.09 in ³
I _y =	10446.38 in ⁴	S _{left} =	875.09 in ³	I _y =	10446.38 in ⁴	S _{left} =	875.09 in ³
C _{right} =	11.9375 in	A =	99.7500 in ²	C _{right} =	11.9375 in	A =	99.7500 in ²
C _{left} =	11.9375 in	r _y =	10.2336 in	C _{left} =	11.9375 in	r _y =	10.2336 in



Made By CTG
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.6250$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_f = 0.6250$ in

Top Cover Plate:

$A_4 = b = 22.0000$ in
 $B_4 = t = 0.5000$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.8750$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.6250$ in



Member L11-L12

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	7.5000	26.3125	197.3438	0.2441	12.0825	1094.8931	1095.1373
	Vertical Leg	9.2188	22.3125	205.6934	41.7845	8.0825	602.2250	644.0094
2	Horizontal Leg	7.5000	0.9375	7.0313	0.2441	13.2925	1325.1879	1325.4320
	Vertical Leg	9.2188	4.9375	45.5176	41.7845	9.2925	796.0517	837.8361
3	Plate	45.5000	13.6250	619.9375	2563.1667	0.6050	16.6565	2579.8232
4	Plate	11.0000	26.8750	295.6250	0.2292	12.6450	1758.8441	1759.0733
5	Perforated Plate	6.5625	0.3125	2.0508	0.2136	13.9175	1271.1433	1271.3569
Total		96.50		1373.20	2647.67		6865.00	9512.67
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/20/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.2300 in	S _{top} =	737.70 in ³	y-bar =	14.2300 in	S _{top} =	737.70 in ³
I _x =	9512.67 in ⁴	S _{bott.} =	668.49 in ³	I _x =	9512.67 in ⁴	S _{bott.} =	668.49 in ³
C _{top} =	12.8950 in	A =	96.5000 in ²	C _{top} =	12.8950 in	A =	96.5000 in ²
C _{bottom} =	14.2300 in	r _x =	9.9286 in	C _{bottom} =	14.2300 in	r _x =	9.9286 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.7500	3.8750	14.5313	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.1875	5.4736	0.1500	10.6875	526.4951	526.6451	
1 (Right)	Horizontal Leg	3.7500	19.8750	74.5313	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	22.5625	103.9990	0.1500	10.6875	526.4951	526.6451	
2 (Left)	Horizontal Leg	3.7500	3.8750	14.5313	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.1875	5.4736	0.1500	10.6875	526.4951	526.6451	
2 (Right)	Horizontal Leg	3.7500	19.8750	74.5313	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	22.5625	103.9990	0.1500	10.6875	526.4951	526.6451	
3 (Left)	Plate	22.7500	0.4375	9.9531	1.4515	11.4375	2976.0732	2977.5247	
3 (Right)	Plate	22.7500	23.3125	530.3594	1.4515	11.4375	2976.0732	2977.5247	
4	Plate	11.0000	11.8750	130.6250	443.6667	0.0000	0.0000	443.6667	
5 (Left)	Perforated Plate	3.2813	3.5000	11.4844	7.5366	8.3750	230.1489	237.6855	
5 (Right)	Perforated Plate	3.2813	20.2500	66.4453	7.5366	8.3750	230.1489	237.6855	
Total		96.50		1145.94	507.24		9478.42	9985.67	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	11.8750 in	S _{right} =	840.90 in ³	x-bar =	11.8750 in	S _{right} =	840.90 in ³
I _y =	9985.67 in ⁴	S _{left} =	840.90 in ³	I _y =	9985.67 in ⁴	S _{left} =	840.90 in ³
C _{right} =	11.8750 in	A =	96.5000 in ²	C _{right} =	11.8750 in	A =	96.5000 in ²
C _{left} =	11.8750 in	r _y =	10.1724 in	C _{left} =	11.8750 in	r _y =	10.1724 in



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.5625$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.5625$ in

Top Cover Plate:

$A_4 = b = 22.0000$ in
 $B_4 = t = 0.5000$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.8125$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.6250$ in



Member L12-L13

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	6.7500	26.3438	177.8203	0.1780	12.0703	983.4295	983.6075
	Vertical Leg	8.3672	22.3438	186.9543	38.5702	8.0703	544.9590	583.5293
2	Horizontal Leg	6.7500	0.9063	6.1172	0.1780	13.3672	1206.0954	1206.2733
	Vertical Leg	8.3672	4.9063	41.0515	38.5702	9.3672	734.1669	772.7371
3	Plate	42.2500	13.6250	575.6563	2380.0833	0.6484	17.7631	2397.8464
4	Plate	11.0000	26.8750	295.6250	0.2292	12.6016	1746.8025	1747.0317
5	Perforated Plate	6.5625	0.3125	2.0508	0.2136	13.9609	1279.0761	1279.2897
Total		90.05		1285.28	2458.02		6512.29	8970.31
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	14.2734	in	S _{top} =	697.99	in ³	y-bar =	14.2734	in	S _{top} =	697.99	in ³
I _x =	8970.31	in ⁴	S _{bott.} =	628.46	in ³	I _x =	8970.31	in ⁴	S _{bott.} =	628.46	in ³
C _{top} =	12.8516	in	A =	90.0469	in ²	C _{top} =	12.8516	in	A =	90.0469	in ²
C _{bottom} =	14.2734	in	r _x =	9.9809	in	C _{bottom} =	14.2734	in	r _x =	9.9809	in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.3750	3.8125	12.8672	10.1250	8.0000	216.0000	226.1250	
	Vertical Leg	4.1836	1.0938	4.5758	0.1103	10.7188	480.6598	480.7701	
1 (Right)	Horizontal Leg	3.3750	19.8125	66.8672	10.1250	8.0000	216.0000	226.1250	
	Vertical Leg	4.1836	22.5313	94.2616	0.1103	10.7188	480.6598	480.7701	
2 (Left)	Horizontal Leg	3.3750	3.8125	12.8672	10.1250	8.0000	216.0000	226.1250	
	Vertical Leg	4.1836	1.0938	4.5758	0.1103	10.7188	480.6598	480.7701	
2 (Right)	Horizontal Leg	3.3750	19.8125	66.8672	10.1250	8.0000	216.0000	226.1250	
	Vertical Leg	4.1836	22.5313	94.2616	0.1103	10.7188	480.6598	480.7701	
3 (Left)	Plate	21.1250	0.4063	8.5820	1.1622	11.4063	2748.4161	2749.5783	
3 (Right)	Plate	21.1250	23.2188	490.4961	1.1622	11.4063	2748.4161	2749.5783	
4	Plate	11.0000	11.8125	129.9375	443.6667	0.0000	0.0000	443.6667	
5 (Left)	Perforated Plate	3.2813	3.4375	11.2793	7.5366	8.3750	230.1489	237.6855	
5 (Right)	Perforated Plate	3.2813	20.1875	66.2402	7.5366	8.3750	230.1489	237.6855	
Total		90.05		1063.68	502.01		8743.77	9245.77	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
x-bar =	11.8125	in	S _{right} =	782.71	in ³	x-bar =	11.8125	in	S _{right} =	782.71	in ³
I _y =	9245.77	in ⁴	S _{left} =	782.71	in ³	I _y =	9245.77	in ⁴	S _{left} =	782.71	in ³
C _{right} =	11.8125	in	A =	90.0469	in ²	C _{right} =	11.8125	in	A =	90.0469	in ²
C _{left} =	11.8125	in	r _y =	10.1330	in	C _{left} =	11.8125	in	r _y =	10.1330	in



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.5625$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.5625$ in

Top Cover Plate:

$A_4 = b = 22.0000$ in
 $B_4 = t = 0.5000$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.8125$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.6250$ in



Member L13-L14

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	6.7500	26.3438	177.8203	0.1780	12.0703	983.4295	983.6075
	Vertical Leg	8.3672	22.3438	186.9543	38.5702	8.0703	544.9590	583.5293
2	Horizontal Leg	6.7500	0.9063	6.1172	0.1780	13.3672	1206.0954	1206.2733
	Vertical Leg	8.3672	4.9063	41.0515	38.5702	9.3672	734.1669	772.7371
3	Plate	42.2500	13.6250	575.6563	2380.0833	0.6484	17.7631	2397.8464
4	Plate	11.0000	26.8750	295.6250	0.2292	12.6016	1746.8025	1747.0317
5	Perforated Plate	6.5625	0.3125	2.0508	0.2136	13.9609	1279.0761	1279.2897
Total		90.05		1285.28	2458.02		6512.29	8970.31
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.2734	in	$S_{top} = 697.99 \text{ in}^3$	y-bar =	14.2734	in	$S_{top} = 697.99 \text{ in}^3$
$I_x =$	8970.31	in^4	$S_{bott.} = 628.46 \text{ in}^3$	$I_x =$	8970.31	in^4	$S_{bott.} = 628.46 \text{ in}^3$
$C_{top} =$	12.8516	in	$A = 90.0469 \text{ in}^2$	$C_{top} =$	12.8516	in	$A = 90.0469 \text{ in}^2$
$C_{bottom} =$	14.2734	in	$r_x = 9.9809 \text{ in}$	$C_{bottom} =$	14.2734	in	$r_x = 9.9809 \text{ in}$

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I_o	d	Ad^2	$I_{y,gross}$	
Element	Description	(in^2)	(in)	(in^3)	(in^4)	(in)	(in^4)	(in^4)	
1 (Left)	Horizontal Leg	3.3750	3.8125	12.8672	10.1250	8.0000	216.0000	226.1250	
	Vertical Leg	4.1836	1.0938	4.5758	0.1103	10.7188	480.6598	480.7701	
1 (Right)	Horizontal Leg	3.3750	19.8125	66.8672	10.1250	8.0000	216.0000	226.1250	
	Vertical Leg	4.1836	22.5313	94.2616	0.1103	10.7188	480.6598	480.7701	
2 (Left)	Horizontal Leg	3.3750	3.8125	12.8672	10.1250	8.0000	216.0000	226.1250	
	Vertical Leg	4.1836	1.0938	4.5758	0.1103	10.7188	480.6598	480.7701	
2 (Right)	Horizontal Leg	3.3750	19.8125	66.8672	10.1250	8.0000	216.0000	226.1250	
	Vertical Leg	4.1836	22.5313	94.2616	0.1103	10.7188	480.6598	480.7701	
3 (Left)	Plate	21.1250	0.4063	8.5820	1.1622	11.4063	2748.4161	2749.5783	
3 (Right)	Plate	21.1250	23.2188	490.4961	1.1622	11.4063	2748.4161	2749.5783	
4	Plate	11.0000	11.8125	129.9375	443.6667	0.0000	0.0000	443.6667	
5 (Left)	Perforated Plate	3.2813	3.4375	11.2793	7.5366	8.3750	230.1489	237.6855	
5 (Right)	Perforated Plate	3.2813	20.1875	66.2402	7.5366	8.3750	230.1489	237.6855	
Total		90.05		1063.68	502.01		8743.77	9245.77	
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y,loss}$
Loss #	b (in)	h (in)	(in^2)	(in)	(in^3)	(in^4)	(in)	(in^4)	(in^4)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	11.8125	in	$S_{right} = 782.71 \text{ in}^3$	x-bar =	11.8125	in	$S_{right} = 782.71 \text{ in}^3$
$I_y =$	9245.77	in^4	$S_{left} = 782.71 \text{ in}^3$	$I_y =$	9245.77	in^4	$S_{left} = 782.71 \text{ in}^3$
$C_{right} =$	11.8125	in	$A = 90.0469 \text{ in}^2$	$C_{right} =$	11.8125	in	$A = 90.0469 \text{ in}^2$
$C_{left} =$	11.8125	in	$r_y = 10.1330 \text{ in}$	$C_{left} =$	11.8125	in	$r_y = 10.1330 \text{ in}$



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.6250$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_f = 0.6250$ in

Top Cover Plate:

$A_4 = b = 22.0000$ in
 $B_4 = t = 0.5000$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.8125$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.6250$ in



Member L14-L15

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	7.5000	26.3125	197.3438	0.2441	12.0614	1091.0747	1091.3188
	Vertical Leg	9.2188	22.3125	205.6934	41.7845	8.0614	599.0866	640.8711
2	Horizontal Leg	7.5000	0.9375	7.0313	0.2441	13.3136	1329.3958	1329.6399
	Vertical Leg	9.2188	4.9375	45.5176	41.7845	9.3136	799.6687	841.4532
3	Plate	42.2500	13.6250	575.6563	2380.0833	0.6261	16.5637	2396.6470
4	Plate	11.0000	26.8750	295.6250	0.2292	12.6239	1752.9827	1753.2119
5	Perforated Plate	6.5625	0.3125	2.0508	0.2136	13.9386	1274.9982	1275.2118
Total		93.25		1328.92	2464.58		6863.77	9328.35
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.2511 in	S _{top} =	724.60 in ³	y-bar =	14.2511 in	S _{top} =	724.60 in ³
I _x =	9328.35 in ⁴	S _{bott.} =	654.57 in ³	I _x =	9328.35 in ⁴	S _{bott.} =	654.57 in ³
C _{top} =	12.8739 in	A =	93.2500 in ²	C _{top} =	12.8739 in	A =	93.2500 in ²
C _{bottom} =	14.2511 in	r _x =	10.0018 in	C _{bottom} =	14.2511 in	r _x =	10.0018 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.7500	3.8125	14.2969	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.1250	5.1855	0.1500	10.6875	526.4951	526.6451	
1 (Right)	Horizontal Leg	3.7500	19.8125	74.2969	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	22.5000	103.7109	0.1500	10.6875	526.4951	526.6451	
2 (Left)	Horizontal Leg	3.7500	3.8125	14.2969	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.1250	5.1855	0.1500	10.6875	526.4951	526.6451	
2 (Right)	Horizontal Leg	3.7500	19.8125	74.2969	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	22.5000	103.7109	0.1500	10.6875	526.4951	526.6451	
3 (Left)	Plate	21.1250	0.4063	8.5820	1.1622	11.4063	2748.4161	2749.5783	
3 (Right)	Plate	21.1250	23.2188	490.4961	1.1622	11.4063	2748.4161	2749.5783	
4	Plate	11.0000	11.8125	129.9375	443.6667	0.0000	0.0000	443.6667	
5 (Left)	Perforated Plate	3.2813	3.4375	11.2793	7.5366	8.3750	230.1489	237.6855	
5 (Right)	Perforated Plate	3.2813	20.1875	66.2402	7.5366	8.3750	230.1489	237.6855	
Total		93.25		1101.52	506.66		9023.11	9529.77	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	11.8125 in	S _{right} =	806.75 in ³	x-bar =	11.8125 in	S _{right} =	806.75 in ³
I _y =	9529.77 in ⁴	S _{left} =	806.75 in ³	I _y =	9529.77 in ⁴	S _{left} =	806.75 in ³
C _{right} =	11.8125 in	A =	93.2500 in ²	C _{right} =	11.8125 in	A =	93.2500 in ²
C _{left} =	11.8125 in	r _y =	10.1092 in	C _{left} =	11.8125 in	r _y =	10.1092 in



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

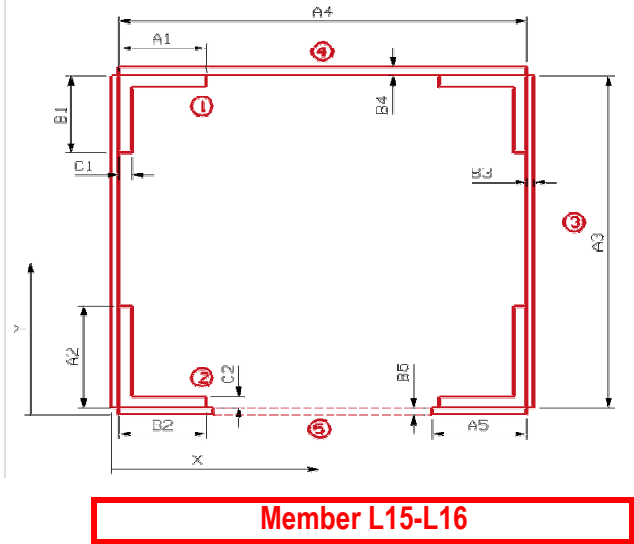
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.6250$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_f = 0.6250$ in

Top Cover Plate:
 $A_4 = b = 22.0000$ in
 $B_4 = t = 0.5000$ in

Web Plate:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.7500$ in

Perforated Cover Plate
 $A_5 = b = 5.2500$ in
 $B_5 = t = 0.6250$ in



X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	7.5000	26.3125	197.3438	0.2441	12.0388	1086.9878	1087.2320
	Vertical Leg	9.2188	22.3125	205.6934	41.7845	8.0388	595.7308	637.5152
2	Horizontal Leg	7.5000	0.9375	7.0313	0.2441	13.3362	1333.9150	1334.1591
	Vertical Leg	9.2188	4.9375	45.5176	41.7845	9.3362	803.5560	845.3405
3	Plate	39.0000	13.6250	531.3750	2197.0000	0.6487	16.4137	2213.4137
4	Plate	11.0000	26.8750	295.6250	0.2292	12.6013	1746.7089	1746.9381
5	Perforated Plate	6.5625	0.3125	2.0508	0.2136	13.9612	1279.1380	1279.3516
Total		90.00		1284.64	2281.50		6862.45	9143.95
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.2737 in	S _{top} =	711.52 in ³	y-bar =	14.2737 in	S _{top} =	711.52 in ³
I _x =	9143.95 in ⁴	S _{bott.} =	640.61 in ³	I _x =	9143.95 in ⁴	S _{bott.} =	640.61 in ³
C _{top} =	12.8513 in	A =	90.0000 in ²	C _{top} =	12.8513 in	A =	90.0000 in ²
C _{bottom} =	14.2737 in	r _x =	10.0797 in	C _{bottom} =	14.2737 in	r _x =	10.0797 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.7500	3.7500	14.0625	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.0625	4.8975	0.1500	10.6875	526.4951	526.6451	
1 (Right)	Horizontal Leg	3.7500	19.7500	74.0625	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	22.4375	103.4229	0.1500	10.6875	526.4951	526.6451	
2 (Left)	Horizontal Leg	3.7500	3.7500	14.0625	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.0625	4.8975	0.1500	10.6875	526.4951	526.6451	
2 (Right)	Horizontal Leg	3.7500	19.7500	74.0625	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	22.4375	103.4229	0.1500	10.6875	526.4951	526.6451	
3 (Left)	Plate	19.5000	0.3750	7.3125	0.9141	11.3750	2523.1172	2524.0313	
3 (Right)	Plate	19.5000	23.1250	450.9375	0.9141	11.3750	2523.1172	2524.0313	
4	Plate	11.0000	11.7500	129.2500	443.6667	0.0000	0.0000	443.6667	
5 (Left)	Perforated Plate	3.2813	3.3750	11.0742	7.5366	8.3750	230.1489	237.6855	
5 (Right)	Perforated Plate	3.2813	20.1250	66.0352	7.5366	8.3750	230.1489	237.6855	
Total		90.00		1057.50	506.17		8572.51	9078.68	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	11.7500 in	S _{right} =	772.65 in ³	x-bar =	11.7500 in	S _{right} =	772.65 in ³
I _y =	9078.68 in ⁴	S _{left} =	772.65 in ³	I _y =	9078.68 in ⁴	S _{left} =	772.65 in ³
C _{right} =	11.7500 in	A =	90.0000 in ²	C _{right} =	11.7500 in	A =	90.0000 in ²
C _{left} =	11.7500 in	r _y =	10.0436 in	C _{left} =	11.7500 in	r _y =	10.0436 in



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.5000$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.4375$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.5625$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5625$ in



Member L16-L17

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	6.0000	26.3125	157.8750	0.1250	12.1188	881.1885	881.3135
	Vertical Leg	7.5000	22.3125	167.3438	35.1563	8.1188	494.3590	529.5153
2	Horizontal Leg	6.0000	0.8125	4.8750	0.1250	13.3812	1074.3428	1074.4678
	Vertical Leg	7.5000	4.8125	36.0938	35.1563	9.3812	660.0551	695.2114
3	Plate	29.2500	13.5625	396.7031	1647.7500	0.6312	11.6545	1659.4045
4	Plate	10.2813	26.7813	275.3447	0.1640	12.5875	1629.0212	1629.1852
5	Perforated Plate	6.7500	0.2813	1.8984	0.1780	13.9125	1306.5092	1306.6872
Total		73.28		1040.13	1718.65		6057.13	7775.78
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.1937 in	S _{top} =	607.19 in ³	y-bar =	14.1937 in	S _{top} =	607.19 in ³
I _x =	7775.78 in ⁴	S _{bott.} =	547.83 in ³	I _x =	7775.78 in ⁴	S _{bott.} =	547.83 in ³
C _{top} =	12.8063 in	A =	73.2813 in ²	C _{top} =	12.8063 in	A =	73.2813 in ²
C _{bottom} =	14.1937 in	r _x =	10.3009 in	C _{bottom} =	14.1937 in	r _x =	10.3009 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.0000	3.5625	10.6875	9.0000	8.7500	229.6875	238.6875	
	Vertical Leg	3.7500	0.8125	3.0469	0.0781	11.5000	495.9375	496.0156	
1 (Right)	Horizontal Leg	3.0000	21.0625	63.1875	9.0000	8.7500	229.6875	238.6875	
	Vertical Leg	3.7500	23.8125	89.2969	0.0781	11.5000	495.9375	496.0156	
2 (Left)	Horizontal Leg	3.0000	3.5625	10.6875	9.0000	8.7500	229.6875	238.6875	
	Vertical Leg	3.7500	0.8125	3.0469	0.0781	11.5000	495.9375	496.0156	
2 (Right)	Horizontal Leg	3.0000	21.0625	63.1875	9.0000	8.7500	229.6875	238.6875	
	Vertical Leg	3.7500	23.8125	89.2969	0.0781	11.5000	495.9375	496.0156	
3 (Left)	Plate	14.6250	0.2813	4.1133	0.3856	12.0313	2116.9830	2117.3687	
3 (Right)	Plate	14.6250	24.3438	356.0273	0.3856	12.0313	2116.9830	2117.3687	
4	Plate	10.2813	12.3125	126.5879	473.1517	0.0000	0.0000	473.1517	
5 (Left)	Perforated Plate	3.3750	3.5625	12.0234	10.1250	8.7500	258.3984	268.5234	
5 (Right)	Perforated Plate	3.3750	21.0625	71.0859	10.1250	8.7500	258.3984	268.5234	
Total		73.28		902.28	530.49		7653.26	8183.75	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3125 in	S _{right} =	664.67 in ³	x-bar =	12.3125 in	S _{right} =	664.67 in ³
I _y =	8183.75 in ⁴	S _{left} =	664.67 in ³	I _y =	8183.75 in ⁴	S _{left} =	664.67 in ³
C _{right} =	12.3125 in	A =	73.2813 in ²	C _{right} =	12.3125 in	A =	73.2813 in ²
C _{left} =	12.3125 in	r _y =	10.5677 in	C _{left} =	12.3125 in	r _y =	10.5677 in

South Truss

Member L17-L18



Made By KMW
Checked By ADK

Date 1/31/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.4375$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_f = 0.4375$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.5000$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member L17-L18

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x, gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.2500	26.2813	137.9766	0.0837	12.2124	783.0045	783.0882
	Vertical Leg	6.6172	22.2813	147.4392	31.5372	8.2124	446.2908	477.8280
2	Horizontal Leg	5.2500	0.7188	3.7734	0.0837	13.3501	935.6764	935.7601
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	9.3501	578.4984	610.0356
3	Plate	26.0000	13.5000	351.0000	1464.6667	0.5688	8.4121	1473.0788
4	Plate	8.8125	26.6875	235.1836	0.1033	12.6187	1403.2264	1403.3297
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	13.8188	1145.7569	1145.8819
Total		64.55		908.10	1528.14		5300.87	6829.00
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	2.5000	0.1250	-0.3125	26.5000	-8.2813	-0.0004	12.6801	-50.2451
2	2.5000	0.1250	-0.3125	26.5000	-8.2813	-0.0004	12.6801	-50.2451
3	4.0000	0.0625	-0.2500	26.8438	-6.7109	-0.0001	13.0238	-42.4050
4	4.0000	0.0625	-0.2500	26.8438	-6.7109	-0.0001	13.0238	-42.4050
5	2.0000	0.0625	-0.1250	26.8438	-3.3555	0.0000	13.0238	-21.2025
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.25	-33.34	0.00		-206.50	-206.50



Made By KMW
Checked By ADK

Date 1/31/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.0688 in	S _{top} =	533.26 in ³	y-bar =	13.8199 in	S _{top} =	507.27 in ³
I _x =	6829.00 in ⁴	S _{bott.} =	485.40 in ³	I _x =	6622.50 in ⁴	S _{bott.} =	479.20 in ³
C _{top} =	12.8062 in	A =	64.5469 in ²	C _{top} =	13.0551 in	A =	63.2969 in ²
C _{bottom} =	14.0688 in	r _x =	10.2859 in	C _{bottom} =	13.8199 in	r _x =	10.2287 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.5000	9.1875	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.7188	2.3781	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	21.0000	55.1250	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7813	78.6825	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.5000	9.1875	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.7188	2.3781	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	21.0000	55.1250	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7813	78.6825	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	13.0000	0.2500	3.2500	0.2708	12.0000	1872.0000	1872.2708	
3 (Right)	Plate	13.0000	24.2500	315.2500	0.2708	12.0000	1872.0000	1872.2708	
4	Plate	8.8125	12.2500	107.9531	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.5000	10.5000	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	21.0000	63.0000	9.0000	8.7500	229.6875	238.6875	
Total		64.55		790.70	455.81		6767.05	7222.86	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1250	2.5000	-0.3125	1.7500	-0.5469	-0.1628	10.5000	-34.4531	-34.6159
2	0.1250	2.5000	-0.3125	22.7500	-7.1094	-0.1628	10.5000	-34.4531	-34.6159
3	0.0625	4.0000	-0.2500	2.5000	-0.6250	-0.3333	9.7500	-23.7656	-24.0990
4	0.0625	4.0000	-0.2500	22.0000	-5.5000	-0.3333	9.7500	-23.7656	-24.0990
5	0.0625	2.0000	-0.1250	12.2500	-1.5313	-0.0417	0.0000	0.0000	-0.0417
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.25		-15.31	-1.03		-116.44	-117.47

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2500 in	S _{right} =	589.62 in ³	x-bar =	12.2500 in	S _{right} =	580.03 in ³
I _y =	7222.86 in ⁴	S _{left} =	589.62 in ³	I _y =	7105.39 in ⁴	S _{left} =	580.03 in ³
C _{right} =	12.2500 in	A =	64.5469 in ²	C _{right} =	12.2500 in	A =	63.2969 in ²
C _{left} =	12.2500 in	r _y =	10.5783 in	C _{left} =	12.2500 in	r _y =	10.5950 in



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.4375$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.4375$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.5000$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member L18-L19

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.2500	26.2813	137.9766	0.0837	12.2124	783.0045	783.0882
	Vertical Leg	6.6172	22.2813	147.4392	31.5372	8.2124	446.2908	477.8280
2	Horizontal Leg	5.2500	0.7188	3.7734	0.0837	13.3501	935.6764	935.7601
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	9.3501	578.4984	610.0356
3	Plate	26.0000	13.5000	351.0000	1464.6667	0.5688	8.4121	1473.0788
4	Plate	8.8125	26.6875	235.1836	0.1033	12.6187	1403.2264	1403.3297
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	13.8188	1145.7569	1145.8819
Total		64.55		908.10	1528.14		5300.87	6829.00
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.0688 in	S _{top} =	533.26 in ³	y-bar =	14.0688 in	S _{top} =	533.26 in ³
I _x =	6829.00 in ⁴	S _{bott.} =	485.40 in ³	I _x =	6829.00 in ⁴	S _{bott.} =	485.40 in ³
C _{top} =	12.8062 in	A =	64.5469 in ²	C _{top} =	12.8062 in	A =	64.5469 in ²
C _{bottom} =	14.0688 in	r _x =	10.2859 in	C _{bottom} =	14.0688 in	r _x =	10.2859 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.5000	9.1875	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.7188	2.3781	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	21.0000	55.1250	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7813	78.6825	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.5000	9.1875	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.7188	2.3781	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	21.0000	55.1250	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7813	78.6825	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	13.0000	0.2500	3.2500	0.2708	12.0000	1872.0000	1872.2708	
3 (Right)	Plate	13.0000	24.2500	315.2500	0.2708	12.0000	1872.0000	1872.2708	
4	Plate	8.8125	12.2500	107.9531	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.5000	10.5000	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	21.0000	63.0000	9.0000	8.7500	229.6875	238.6875	
Total		64.55		790.70	455.81		6767.05	7222.86	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2500 in	S _{right} =	589.62 in ³	x-bar =	12.2500 in	S _{right} =	589.62 in ³
I _y =	7222.86 in ⁴	S _{left} =	589.62 in ³	I _y =	7222.86 in ⁴	S _{left} =	589.62 in ³
C _{right} =	12.2500 in	A =	64.5469 in ²	C _{right} =	12.2500 in	A =	64.5469 in ²
C _{left} =	12.2500 in	r _y =	10.5783 in	C _{left} =	12.2500 in	r _y =	10.5783 in

South Truss

Member L19-L20



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.4375$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_f = 0.4375$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.5625$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member L19-L20

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.2500	26.2813	137.9766	0.0837	12.2397	786.5049	786.5886
	Vertical Leg	6.6172	22.2813	147.4392	31.5372	8.2397	449.2593	480.7965
2	Horizontal Leg	5.2500	0.7188	3.7734	0.0837	13.3228	931.8581	931.9418
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	9.3228	575.1292	606.6664
3	Plate	29.2500	13.5000	394.8750	1647.7500	0.5415	8.5781	1656.3281
4	Plate	8.8125	26.6875	235.1836	0.1033	12.6460	1409.2973	1409.4005
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	13.7915	1141.2398	1141.3648
Total		67.80		951.97	1711.22		5301.87	7013.09
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.0415	in	$S_{top} = 546.47 \text{ in}^3$	y-bar =	14.0415	in	$S_{top} = 546.47 \text{ in}^3$
$I_x =$	7013.09	in^4	$S_{bott.} = 499.45 \text{ in}^3$	$I_x =$	7013.09	in^4	$S_{bott.} = 499.45 \text{ in}^3$
$C_{top} =$	12.8335	in	$A = 67.7969 \text{ in}^2$	$C_{top} =$	12.8335	in	$A = 67.7969 \text{ in}^2$
$C_{bottom} =$	14.0415	in	$r_x = 10.1707 \text{ in}$	$C_{bottom} =$	14.0415	in	$r_x = 10.1707 \text{ in}$

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I_o	d	Ad^2	$I_{y,gross}$	
Element	Description	(in^2)	(in)	(in^3)	(in^4)	(in)	(in^4)	(in^4)	
1 (Left)	Horizontal Leg	2.6250	3.5625	9.3516	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.7813	2.5848	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	21.0625	55.2891	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.8438	78.8893	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.5625	9.3516	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.7813	2.5848	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	21.0625	55.2891	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.8438	78.8893	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	14.6250	0.2813	4.1133	0.3856	12.0313	2116.9830	2117.3687	
3 (Right)	Plate	14.6250	24.3438	356.0273	0.3856	12.0313	2116.9830	2117.3687	
4	Plate	8.8125	12.3125	108.5039	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.5625	10.6875	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	21.0625	63.1875	9.0000	8.7500	229.6875	238.6875	
Total		67.80		834.75	456.04		7257.02	7713.06	
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y,loss}$
Loss #	b (in)	h (in)	(in^2)	(in)	(in^3)	(in^4)	(in)	(in^4)	(in^4)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3125	in	$S_{right} = 626.44 \text{ in}^3$	x-bar =	12.3125	in	$S_{right} = 626.44 \text{ in}^3$
$I_y =$	7713.06	in^4	$S_{left} = 626.44 \text{ in}^3$	$I_y =$	7713.06	in^4	$S_{left} = 626.44 \text{ in}^3$
$C_{right} =$	12.3125	in	$A = 67.7969 \text{ in}^2$	$C_{right} =$	12.3125	in	$A = 67.7969 \text{ in}^2$
$C_{left} =$	12.3125	in	$r_y = 10.6662 \text{ in}$	$C_{left} =$	12.3125	in	$r_y = 10.6662 \text{ in}$

South Truss

Member L20-L21



Made By KMW
Checked By ADK

Date 1/31/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.4375$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.4375$ in

Top Cover Plate:

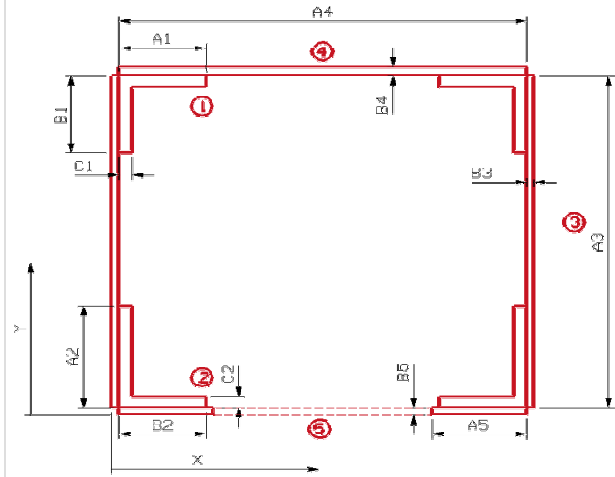
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.5625$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member L20-L21

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.2500	26.2813	137.9766	0.0837	12.2397	786.5049	786.5886
	Vertical Leg	6.6172	22.2813	147.4392	31.5372	8.2397	449.2593	480.7965
2	Horizontal Leg	5.2500	0.7188	3.7734	0.0837	13.3228	931.8581	931.9418
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	9.3228	575.1292	606.6664
3	Plate	29.2500	13.5000	394.8750	1647.7500	0.5415	8.5781	1656.3281
4	Plate	8.8125	26.6875	235.1836	0.1033	12.6460	1409.2973	1409.4005
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	13.7915	1141.2398	1141.3648
Total		67.80		951.97	1711.22		5301.87	7013.09
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	11.7500	0.0625	-0.7344	26.8438	-19.7134	-0.0002	12.9424	-123.0120
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.73	-19.71	0.00		-123.01	-123.01



Made By KMW
Checked By ADK

Date 1/31/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.0415 in	S _{top} =	546.47 in ³	y-bar =	13.9013 in	S _{top} =	531.08 in ³
I _x =	7013.09 in ⁴	S _{bott.} =	499.45 in ³	I _x =	6890.07 in ⁴	S _{bott.} =	495.64 in ³
C _{top} =	12.8335 in	A =	67.7969 in ²	C _{top} =	12.9737 in	A =	67.0625 in ²
C _{bottom} =	14.0415 in	r _x =	10.1707 in	C _{bottom} =	13.9013 in	r _x =	10.1361 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.5625	9.3516	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.7813	2.5848	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	21.0625	55.2891	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.8438	78.8893	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.5625	9.3516	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.7813	2.5848	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	21.0625	55.2891	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.8438	78.8893	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	14.6250	0.2813	4.1133	0.3856	12.0313	2116.9830	2117.3687	
3 (Right)	Plate	14.6250	24.3438	356.0273	0.3856	12.0313	2116.9830	2117.3687	
4	Plate	8.8125	12.3125	108.5039	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.5625	10.6875	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	21.0625	63.1875	9.0000	8.7500	229.6875	238.6875	
Total		67.80		834.75	456.04		7257.02	7713.06	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0625	11.7500	-0.7344	12.3125	-9.0420	-8.4491	0.0000	0.0000	-8.4491
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.73		-9.04	-8.45		0.00	-8.45

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3125 in	S _{right} =	626.44 in ³	x-bar =	12.3125 in	S _{right} =	625.76 in ³
I _y =	7713.06 in ⁴	S _{left} =	626.44 in ³	I _y =	7704.61 in ⁴	S _{left} =	625.76 in ³
C _{right} =	12.3125 in	A =	67.7969 in ²	C _{right} =	12.3125 in	A =	67.0625 in ²
C _{left} =	12.3125 in	r _y =	10.6662 in	C _{left} =	12.3125 in	r _y =	10.7185 in



Made By KMW
Checked By ADK

Date 2/2/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3750$ in

Top Cover Plate:

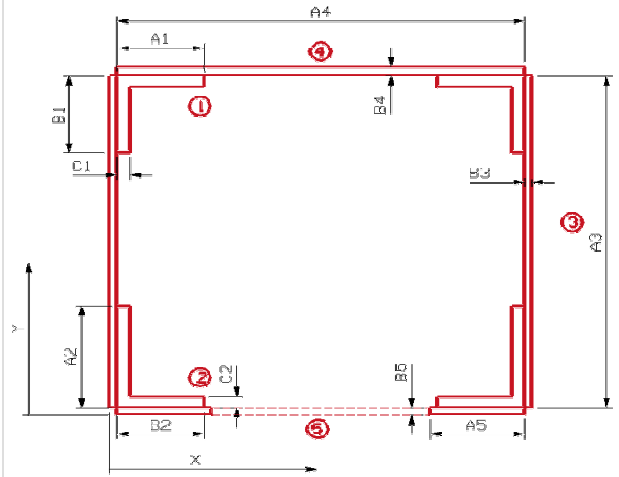
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.6250$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member L21-L22

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	3.0000	26.3125	78.9375	0.0352	12.1876	445.6103	445.6455	
	Vertical Leg	2.7188	24.3125	66.0996	2.9772	10.1876	282.1696	285.1467	
2	Horizontal Leg	3.0000	0.6875	2.0625	0.0352	13.4374	541.6939	541.7290	
	Vertical Leg	2.7188	2.6875	7.3066	2.9772	11.4374	355.6530	358.6301	
3	Plate	32.5000	13.5000	438.7500	1830.8333	0.6249	12.6926	1843.5259	
4	Plate	8.8125	26.6875	235.1836	0.1033	12.5626	1390.7718	1390.8751	
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	13.8749	1155.0827	1155.2077	
Total		58.75		829.84	1837.09		4183.67	6020.76	
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	
1	4.0000	0.1250	-0.5000	26.8125	-13.4063	-0.0007	12.7965	-81.8749	-81.8755
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.50	-13.41	0.00		-81.87	-81.88	



Made By KMW
Checked By ADK

Date 2/2/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.1249 in	S _{top} =	472.21 in ³	y-bar =	14.0160 in	S _{top} =	461.85 in ³
I _x =	6020.76 in ⁴	S _{bott.} =	426.25 in ³	I _x =	5938.88 in ⁴	S _{bott.} =	423.72 in ³
C _{top} =	12.7501 in	A =	58.7500 in ²	C _{top} =	12.8590 in	A =	58.2500 in ²
C _{bottom} =	14.1249 in	r _x =	10.1233 in	C _{bottom} =	14.0160 in	r _x =	10.0973 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.5000	2.6250	3.9375	2.0000	9.7500	142.5938	144.5938	
	Vertical Leg	1.3594	0.8125	1.1045	0.0159	11.5625	181.7368	181.7527	
1 (Right)	Horizontal Leg	1.5000	22.1250	33.1875	2.0000	9.7500	142.5938	144.5938	
	Vertical Leg	1.3594	23.9375	32.5400	0.0159	11.5625	181.7368	181.7527	
2 (Left)	Horizontal Leg	1.5000	2.6250	3.9375	2.0000	9.7500	142.5938	144.5938	
	Vertical Leg	1.3594	0.8125	1.1045	0.0159	11.5625	181.7368	181.7527	
2 (Right)	Horizontal Leg	1.5000	22.1250	33.1875	2.0000	9.7500	142.5938	144.5938	
	Vertical Leg	1.3594	23.9375	32.5400	0.0159	11.5625	181.7368	181.7527	
3 (Left)	Plate	16.2500	0.3125	5.0781	0.5290	12.0625	2364.4385	2364.9674	
3 (Right)	Plate	16.2500	24.4375	397.1094	0.5290	12.0625	2364.4385	2364.9674	
4	Plate	8.8125	12.3750	109.0547	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.6250	10.8750	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	21.1250	63.3750	9.0000	8.7500	229.6875	238.6875	
Total		58.75		727.03	432.68		6485.57	6918.25	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1250	4.0000	-0.5000	2.6250	-1.3125	-0.6667	9.8337	-48.3507	-49.0174
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.50		-1.31	-0.67		-48.35	-49.02

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3750 in	S _{right} =	559.05 in ³	x-bar =	12.4587 in	S _{right} =	558.87 in ³
I _y =	6918.25 in ⁴	S _{left} =	559.05 in ³	I _y =	6869.24 in ⁴	S _{left} =	551.36 in ³
C _{right} =	12.3750 in	A =	58.7500 in ²	C _{right} =	12.2913 in	A =	58.2500 in ²
C _{left} =	12.3750 in	r _y =	10.8516 in	C _{left} =	12.4587 in	r _y =	10.8594 in



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L22-L23

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg		2.5000	26.2188	65.5469	0.0203	11.5985	336.3153	336.3356
	Vertical Leg		2.3047	24.2188	55.8167	2.6115	9.5985	212.3354	214.9469
2	Horizontal Leg		2.5000	0.5313	1.3281	0.0203	14.0890	496.2470	496.2674
	Vertical Leg		2.3047	2.5313	5.8337	2.6115	12.0890	336.8139	339.4254
3	Plate		22.7500	13.3750	304.2813	1281.5833	1.2452	35.2750	1316.8583
4	Plate		8.8125	26.5625	234.0820	0.1033	11.9423	1256.8236	1256.9269
5	Perforated Plate		4.5000	0.1875	0.8438	0.0527	14.4327	937.3641	937.4168
Total			45.67		667.73	1287.00		3611.17	4898.18
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.6202 in	S _{top} =	403.81 in ³	y-bar =	14.6202 in	S _{top} =	403.81 in ³
I _x =	4898.18 in ⁴	S _{bott.} =	335.03 in ³	I _x =	4898.18 in ⁴	S _{bott.} =	335.03 in ³
C _{top} =	12.1298 in	A =	45.6719 in ²	C _{top} =	12.1298 in	A =	45.6719 in ²
C _{bottom} =	14.6202 in	r _x =	10.3560 in	C _{bottom} =	14.6202 in	r _x =	10.3560 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.4375	7.7344	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.9375	47.1094	6.7500	8.7500	172.2656	179.0156	
Total		45.67		556.63	426.13		4698.37	5124.50	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	420.47 in ³	x-bar =	12.1875 in	S _{right} =	420.47 in ³
I _y =	5124.50 in ⁴	S _{left} =	420.47 in ³	I _y =	5124.50 in ⁴	S _{left} =	420.47 in ³
C _{right} =	12.1875 in	A =	45.6719 in ²	C _{right} =	12.1875 in	A =	45.6719 in ²
C _{left} =	12.1875 in	r _y =	10.5926 in	C _{left} =	12.1875 in	r _y =	10.5926 in



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_f = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3125$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L23-L24

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5031	330.8057	330.8260
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5031	208.1357	210.7472
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.1844	502.9900	503.0104
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.1844	342.1506	344.7621
3	Plate	19.5000	13.3750	260.8125	1098.5000	1.3406	35.0460	1133.5460
4	Plate	8.8125	26.5625	234.0820	0.1033	11.8469	1236.8243	1236.9276
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.5281	949.7966	949.8493
Total		42.42		624.26	1103.92		3605.75	4709.67
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.7156 in	S _{top} =	391.35 in ³	y-bar =	14.7156 in	S _{top} =	391.35 in ³
I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³	I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³
C _{top} =	12.0344 in	A =	42.4219 in ²	C _{top} =	12.0344 in	A =	42.4219 in ²
C _{bottom} =	14.7156 in	r _x =	10.5366 in	C _{bottom} =	14.7156 in	r _x =	10.5366 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	9.7500	0.1875	1.8281	0.1143	11.9375	1389.4131	1389.5273	
3 (Right)	Plate	9.7500	24.0625	234.6094	0.1143	11.9375	1389.4131	1389.5273	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.3750	7.5938	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.8750	46.9688	6.7500	8.7500	172.2656	179.0156	
Total		42.42		514.37	425.99		4218.24	4644.23	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	383.03 in ³	x-bar =	12.1250 in	S _{right} =	383.03 in ³
I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³	I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³
C _{right} =	12.1250 in	A =	42.4219 in ²	C _{right} =	12.1250 in	A =	42.4219 in ²
C _{left} =	12.1250 in	r _y =	10.4631 in	C _{left} =	12.1250 in	r _y =	10.4631 in



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L24-L25

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5031	330.8057	330.8260
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5031	208.1357	210.7472
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.1844	502.9900	503.0104
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.1844	342.1506	344.7621
3	Plate	19.5000	13.3750	260.8125	1098.5000	1.3406	35.0460	1133.5460
4	Plate	8.8125	26.5625	234.0820	0.1033	11.8469	1236.8243	1236.9276
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.5281	949.7966	949.8493
Total		42.42		624.26	1103.92		3605.75	4709.67
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.7156 in	S _{top} =	391.35 in ³	y-bar =	14.7156 in	S _{top} =	391.35 in ³
I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³	I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³
C _{top} =	12.0344 in	A =	42.4219 in ²	C _{top} =	12.0344 in	A =	42.4219 in ²
C _{bottom} =	14.7156 in	r _x =	10.5366 in	C _{bottom} =	14.7156 in	r _x =	10.5366 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	9.7500	0.1875	1.8281	0.1143	11.9375	1389.4131	1389.5273	
3 (Right)	Plate	9.7500	24.0625	234.6094	0.1143	11.9375	1389.4131	1389.5273	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.3750	7.5938	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.8750	46.9688	6.7500	8.7500	172.2656	179.0156	
Total		42.42		514.37	425.99		4218.24	4644.23	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	383.03 in ³	x-bar =	12.1250 in	S _{right} =	383.03 in ³
I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³	I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³
C _{right} =	12.1250 in	A =	42.4219 in ²	C _{right} =	12.1250 in	A =	42.4219 in ²
C _{left} =	12.1250 in	r _y =	10.4631 in	C _{left} =	12.1250 in	r _y =	10.4631 in



Made By KMW
Checked By ADK

Date 1/30/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

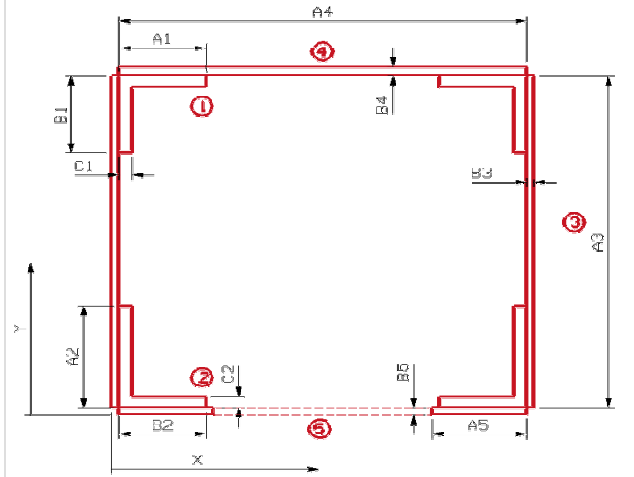
Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_f = 0.3125$ in

Bottom Angles:
 $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3125$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L25-L26

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5985	336.3153	336.3356	
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5985	212.3354	214.9469	
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.0890	496.2470	496.2674	
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.0890	336.8139	339.4254	
3	Plate	22.7500	13.3750	304.2813	1281.5833	1.2452	35.2750	1316.8583	
4	Plate	8.8125	26.5625	234.0820	0.1033	11.9423	1256.8236	1256.9269	
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.4327	937.3641	937.4168	
Total		45.67		667.73	1287.00		3611.17	4898.18	
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	
1	0.0625	26.0000	-1.6250	13.3750	-21.7344	-91.5417	1.2911	-2.7090	-94.2506
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.63	-21.73	-91.54		-2.71	-94.25	



Made By KMW
Checked By ADK

Date 1/30/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.6202 in	S _{top} =	403.81 in ³	y-bar =	14.6661 in	S _{top} =	397.55 in ³
I _x =	4898.18 in ⁴	S _{bottom} =	335.03 in ³	I _x =	4803.93 in ⁴	S _{bottom} =	327.55 in ³
C _{top} =	12.1298 in	A =	45.6719 in ²	C _{top} =	12.0839 in	A =	44.0469 in ²
C _{bottom} =	14.6202 in	r _x =	10.3560 in	C _{bottom} =	14.6661 in	r _x =	10.4434 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.4375	7.7344	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.9375	47.1094	6.7500	8.7500	172.2656	179.0156	
Total		45.67		556.63	426.13		4698.37	5124.50	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	26.0000	0.0625	-1.6250	0.0313	-0.0508	-0.0005	12.6047	-258.1785	-258.1790
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.63		-0.05	0.00		-258.18	-258.18

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	420.47 in ³	x-bar =	12.6360 in	S _{right} =	414.54 in ³
I _y =	5124.50 in ⁴	S _{left} =	420.47 in ³	I _y =	4866.32 in ⁴	S _{left} =	385.12 in ³
C _{right} =	12.1875 in	A =	45.6719 in ²	C _{right} =	11.7390 in	A =	44.0469 in ²
C _{left} =	12.1875 in	r _y =	10.5926 in	C _{left} =	12.6360 in	r _y =	10.5110 in



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_f = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3125$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L26-L27

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x, gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5031	330.8057	330.8260
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5031	208.1357	210.7472
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.1844	502.9900	503.0104
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.1844	342.1506	344.7621
3	Plate	19.5000	13.3750	260.8125	1098.5000	1.3406	35.0460	1133.5460
4	Plate	8.8125	26.5625	234.0820	0.1033	11.8469	1236.8243	1236.9276
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.5281	949.7966	949.8493
Total		42.42		624.26	1103.92		3605.75	4709.67
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.7156 in	S _{top} =	391.35 in ³	y-bar =	14.7156 in	S _{top} =	391.35 in ³
I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³	I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³
C _{top} =	12.0344 in	A =	42.4219 in ²	C _{top} =	12.0344 in	A =	42.4219 in ²
C _{bottom} =	14.7156 in	r _x =	10.5366 in	C _{bottom} =	14.7156 in	r _x =	10.5366 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	9.7500	0.1875	1.8281	0.1143	11.9375	1389.4131	1389.5273	
3 (Right)	Plate	9.7500	24.0625	234.6094	0.1143	11.9375	1389.4131	1389.5273	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.3750	7.5938	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.8750	46.9688	6.7500	8.7500	172.2656	179.0156	
Total		42.42		514.37	425.99		4218.24	4644.23	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	383.03 in ³	x-bar =	12.1250 in	S _{right} =	383.03 in ³
I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³	I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³
C _{right} =	12.1250 in	A =	42.4219 in ²	C _{right} =	12.1250 in	A =	42.4219 in ²
C _{left} =	12.1250 in	r _y =	10.4631 in	C _{left} =	12.1250 in	r _y =	10.4631 in



Made By KMW
Checked By ADK

Date 1/30/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

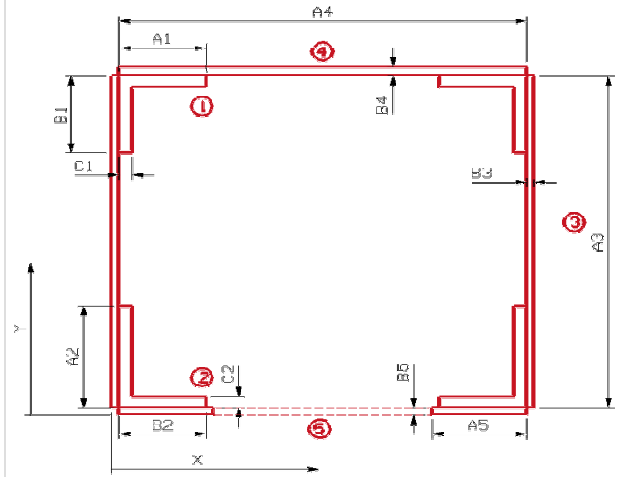
Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_f = 0.3125$ in

Bottom Angles:
 $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3125$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L27-L28

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5031	330.8057	330.8260
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5031	208.1357	210.7472
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.1844	502.9900	503.0104
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.1844	342.1506	344.7621
3	Plate	19.5000	13.3750	260.8125	1098.5000	1.3406	35.0460	1133.5460
4	Plate	8.8125	26.5625	234.0820	0.1033	11.8469	1236.8243	1236.9276
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.5281	949.7966	949.8493
Total		42.42		624.26	1103.92		3605.75	4709.67
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	23.5000	0.1250	-2.9375	26.6875	-78.3945	-0.0038	13.6171	-544.6894
2	11.7500	0.1875	-2.2031	26.5938	-58.5894	-0.0065	13.5234	-402.9114
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-5.14	-136.98	-0.01		-947.60	-947.61



Made By KMW
Checked By ADK

Date 1/30/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.7156 in	S _{top} =	391.35 in ³	y-bar =	13.0704 in	S _{top} =	275.01 in ³
I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³	I _x =	3762.06 in ⁴	S _{bott.} =	287.83 in ³
C _{top} =	12.0344 in	A =	42.4219 in ²	C _{top} =	13.6796 in	A =	37.2813 in ²
C _{bottom} =	14.7156 in	r _x =	10.5366 in	C _{bottom} =	13.0704 in	r _x =	10.0454 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	9.7500	0.1875	1.8281	0.1143	11.9375	1389.4131	1389.5273	
3 (Right)	Plate	9.7500	24.0625	234.6094	0.1143	11.9375	1389.4131	1389.5273	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.3750	7.5938	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.8750	46.9688	6.7500	8.7500	172.2656	179.0156	
Total		42.42		514.37	425.99		4218.24	4644.23	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1250	23.5000	-2.9375	12.1250	-35.6172	-135.1862	0.0000	0.0000	-135.1862
2	0.1875	11.7500	-2.2031	12.1250	-26.7129	-25.3474	0.0000	0.0000	-25.3474
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-5.14		-62.33	-160.53		0.00	-160.53

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	383.03 in ³	x-bar =	12.1250 in	S _{right} =	369.79 in ³
I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³	I _y =	4483.70 in ⁴	S _{left} =	369.79 in ³
C _{right} =	12.1250 in	A =	42.4219 in ²	C _{right} =	12.1250 in	A =	37.2813 in ²
C _{left} =	12.1250 in	r _y =	10.4631 in	C _{left} =	12.1250 in	r _y =	10.9666 in



Made By KMW
Checked By ADK

Date 1/31/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_f = 0.3125$ in

Bottom Angles:
 $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3125$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L28-L29

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5985	336.3153	336.3356	
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5985	212.3354	214.9469	
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.0890	496.2470	496.2674	
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.0890	336.8139	339.4254	
3	Plate	22.7500	13.3750	304.2813	1281.5833	1.2452	35.2750	1316.8583	
4	Plate	8.8125	26.5625	234.0820	0.1033	11.9423	1256.8236	1256.9269	
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.4327	937.3641	937.4168	
Total		45.67		667.73	1287.00		3611.17	4898.18	
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	
1	0.0625	26.0000	-1.6250	13.3750	-21.7344	-91.5417	0.1171	-0.0223	-91.5640
2	0.0625	5.0000	-0.3125	23.8750	-7.4609	-0.6510	10.6171	-35.2259	-35.8770
3	0.1875	3.0000	-0.5625	23.8750	-13.4297	-0.4219	10.6171	-63.4067	-63.8285
4	0.1250	1.0000	-0.1250	23.8750	-2.9844	-0.0104	10.6171	-14.0904	-14.1008
5	23.5000	0.1250	-2.9375	26.6875	-78.3945	-0.0038	13.4296	-529.7908	-529.7946
6	4.0000	0.1250	-0.5000	26.6250	-13.3125	-0.0007	13.3671	-89.3398	-89.3404
7	0.2500	6.0000	-1.5000	23.3750	-35.0625	-4.5000	10.1171	-153.5337	-158.0337
8	6.0000	0.1250	-0.7500	0.0625	-0.0469	-0.0010	13.1954	-130.5888	-130.5898
Total			-8.31	-172.43	-97.13		-1016.00	-1113.13	



Made By KMW
Checked By ADK

Date 1/31/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.6202 in	S _{top} =	403.81 in ³	y-bar =	13.2579 in	S _{top} =	280.54 in ³
I _x =	4898.18 in ⁴	S _{bott.} =	335.03 in ³	I _x =	3785.05 in ⁴	S _{bott.} =	285.49 in ³
C _{top} =	12.1298 in	A =	45.6719 in ²	C _{top} =	13.4921 in	A =	37.3594 in ²
C _{bottom} =	14.6202 in	r _x =	10.3560 in	C _{bottom} =	13.2579 in	r _x =	10.0655 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.4375	7.7344	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.9375	47.1094	6.7500	8.7500	172.2656	179.0156	
Total		45.67		556.63	426.13		4698.37	5124.50	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	26.0000	0.0625	-1.6250	0.0313	-0.0508	-0.0005	12.5667	-256.6251	-256.6256
2	5.0000	0.0625	-0.3125	0.0938	-0.0293	-0.0001	12.5042	-48.8613	-48.8614
3	3.0000	0.1875	-0.5625	0.2188	-0.1230	-0.0016	12.3792	-86.2007	-86.2024
4	1.0000	0.1250	-0.1250	0.3750	-0.0469	-0.0002	12.2230	-18.6752	-18.6754
5	0.1250	23.5000	-2.9375	12.1875	-35.8008	-135.1862	0.4105	-0.4950	-135.6812
6	0.1250	4.0000	-0.5000	21.9375	-10.9688	-0.6667	9.3395	-43.6132	-44.2798
7	6.0000	0.2500	-1.5000	24.2500	-36.3750	-0.0078	11.6520	-203.6537	-203.6615
8	0.1250	6.0000	-0.7500	3.4375	-2.5781	-2.2500	9.1605	-62.9360	-65.1860
Total			-8.31		-85.97	-138.11		-721.06	-859.17

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	420.47 in ³	x-bar =	12.5980 in	S _{right} =	362.17 in ³
I _y =	5124.50 in ⁴	S _{left} =	420.47 in ³	I _y =	4265.33 in ⁴	S _{left} =	338.57 in ³
C _{right} =	12.1875 in	A =	45.6719 in ²	C _{right} =	11.7770 in	A =	37.3594 in ²
C _{left} =	12.1875 in	r _y =	10.5926 in	C _{left} =	12.5980 in	r _y =	10.6850 in



Made By KMW
Checked By ADK

Date 1/31/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

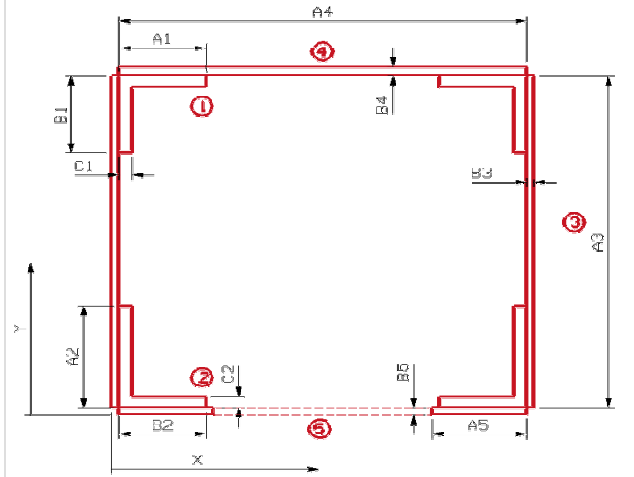
Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:
 $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.5000$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L29-L30

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.6813	341.1297	341.1500	
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.6813	216.0111	218.6226	
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.0062	490.4368	490.4571	
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.0062	332.2201	334.8317	
3	Plate	26.0000	13.3750	347.7500	1464.6667	1.1625	35.1358	1499.8025	
4	Plate	8.8125	26.5625	234.0820	0.1033	12.0250	1274.2955	1274.3988	
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.3500	926.6497	926.7024	
Total		48.92		711.20	1470.09		3615.88	5085.97	
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	
1	23.5000	0.1250	-2.9375	26.6875	-78.3945	-0.0038	13.0676	-501.6113	-501.6152
2	4.0000	0.1250	-0.5000	26.6250	-13.3125	-0.0007	13.0051	-84.5659	-84.5665
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-3.44	-91.71	0.00		-586.18	-586.18	



Made By KMW
Checked By ADK

Date 1/31/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.5375 in	S _{top} =	416.46 in ³	y-bar =	13.6199 in	S _{top} =	342.71 in ³
I _x =	5085.97 in ⁴	S _{bott.} =	349.85 in ³	I _x =	4499.78 in ⁴	S _{bott.} =	330.38 in ³
C _{top} =	12.2125 in	A =	48.9219 in ²	C _{top} =	13.1301 in	A =	45.4844 in ²
C _{bottom} =	14.5375 in	r _x =	10.1961 in	C _{bottom} =	13.6199 in	r _x =	9.9464 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.5000	3.1250	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.6563	0.7562	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	22.0000	27.5000	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.8438	27.4762	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.5000	3.1250	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.6563	0.7562	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	22.0000	27.5000	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.8438	27.4762	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	13.0000	0.2500	3.2500	0.2708	12.0000	1872.0000	1872.2708	
3 (Right)	Plate	13.0000	24.2500	315.2500	0.2708	12.0000	1872.0000	1872.2708	
4	Plate	8.8125	12.2500	107.9531	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.5000	7.8750	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	21.0000	47.2500	6.7500	8.7500	172.2656	179.0156	
Total		48.92		599.29	426.30		5183.41	5609.72	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1250	23.5000	-2.9375	12.2500	-35.9844	-135.1862	0.1072	-0.0337	-135.2199
2	0.1250	4.0000	-0.5000	2.5000	-1.2500	-0.6667	9.8572	-48.5820	-49.2487
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-3.44		-37.23	-135.85		-48.62	-184.47

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2500 in	S _{right} =	457.94 in ³	x-bar =	12.3572 in	S _{right} =	446.79 in ³
I _y =	5609.72 in ⁴	S _{left} =	457.94 in ³	I _y =	5425.25 in ⁴	S _{left} =	439.04 in ³
C _{right} =	12.2500 in	A =	48.9219 in ²	C _{right} =	12.1428 in	A =	45.4844 in ²
C _{left} =	12.2500 in	r _y =	10.7083 in	C _{left} =	12.3572 in	r _y =	10.9214 in



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

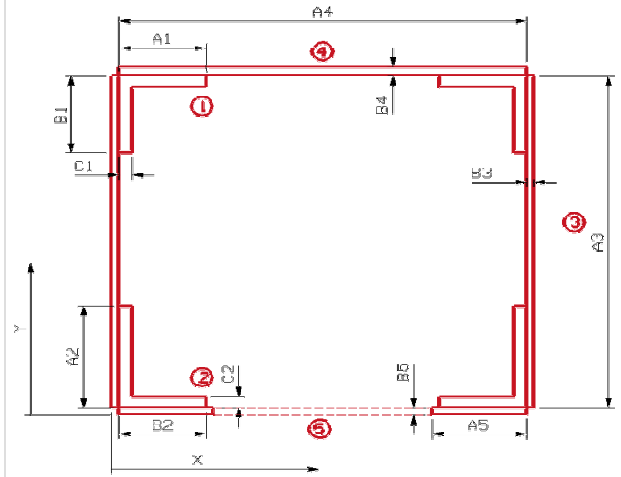
Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:
 $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.5000$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L30-L31

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x, gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.6813	341.1297	341.1500
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.6813	216.0111	218.6226
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.0062	490.4368	490.4571
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.0062	332.2201	334.8317
3	Plate	26.0000	13.3750	347.7500	1464.6667	1.1625	35.1358	1499.8025
4	Plate	8.8125	26.5625	234.0820	0.1033	12.0250	1274.2955	1274.3988
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.3500	926.6497	926.7024
Total		48.92		711.20	1470.09		3615.88	5085.97
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.5375 in	S _{top} =	416.46 in ³	y-bar =	14.5375 in	S _{top} =	416.46 in ³
I _x =	5085.97 in ⁴	S _{bott.} =	349.85 in ³	I _x =	5085.97 in ⁴	S _{bott.} =	349.85 in ³
C _{top} =	12.2125 in	A =	48.9219 in ²	C _{top} =	12.2125 in	A =	48.9219 in ²
C _{bottom} =	14.5375 in	r _x =	10.1961 in	C _{bottom} =	14.5375 in	r _x =	10.1961 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.5000	3.1250	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.6563	0.7562	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	22.0000	27.5000	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.8438	27.4762	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.5000	3.1250	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.6563	0.7562	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	22.0000	27.5000	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.8438	27.4762	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	13.0000	0.2500	3.2500	0.2708	12.0000	1872.0000	1872.2708	
3 (Right)	Plate	13.0000	24.2500	315.2500	0.2708	12.0000	1872.0000	1872.2708	
4	Plate	8.8125	12.2500	107.9531	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.5000	7.8750	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	21.0000	47.2500	6.7500	8.7500	172.2656	179.0156	
Total		48.92		599.29	426.30		5183.41	5609.72	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2500 in	S _{right} =	457.94 in ³	x-bar =	12.2500 in	S _{right} =	457.94 in ³
I _y =	5609.72 in ⁴	S _{left} =	457.94 in ³	I _y =	5609.72 in ⁴	S _{left} =	457.94 in ³
C _{right} =	12.2500 in	A =	48.9219 in ²	C _{right} =	12.2500 in	A =	48.9219 in ²
C _{left} =	12.2500 in	r _y =	10.7083 in	C _{left} =	12.2500 in	r _y =	10.7083 in



Made By CTG
Checked By NRF

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L31-L32

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x, gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5985	336.3153	336.3356
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5985	212.3354	214.9469
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.0890	496.2470	496.2674
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.0890	336.8139	339.4254
3	Plate	22.7500	13.3750	304.2813	1281.5833	1.2452	35.2750	1316.8583
4	Plate	8.8125	26.5625	234.0820	0.1033	11.9423	1256.8236	1256.9269
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.4327	937.3641	937.4168
Total		45.67		667.73	1287.00		3611.17	4898.18
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.6202 in	S _{top} =	403.81 in ³	y-bar =	14.6202 in	S _{top} =	403.81 in ³
I _x =	4898.18 in ⁴	S _{bott.} =	335.03 in ³	I _x =	4898.18 in ⁴	S _{bott.} =	335.03 in ³
C _{top} =	12.1298 in	A =	45.6719 in ²	C _{top} =	12.1298 in	A =	45.6719 in ²
C _{bottom} =	14.6202 in	r _x =	10.3560 in	C _{bottom} =	14.6202 in	r _x =	10.3560 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.4375	7.7344	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.9375	47.1094	6.7500	8.7500	172.2656	179.0156	
Total		45.67		556.63	426.13		4698.37	5124.50	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	420.47 in ³	x-bar =	12.1875 in	S _{right} =	420.47 in ³
I _y =	5124.50 in ⁴	S _{left} =	420.47 in ³	I _y =	5124.50 in ⁴	S _{left} =	420.47 in ³
C _{right} =	12.1875 in	A =	45.6719 in ²	C _{right} =	12.1875 in	A =	45.6719 in ²
C _{left} =	12.1875 in	r _y =	10.5926 in	C _{left} =	12.1875 in	r _y =	10.5926 in



Made By KMW
Checked By ADK

Date 1/30/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

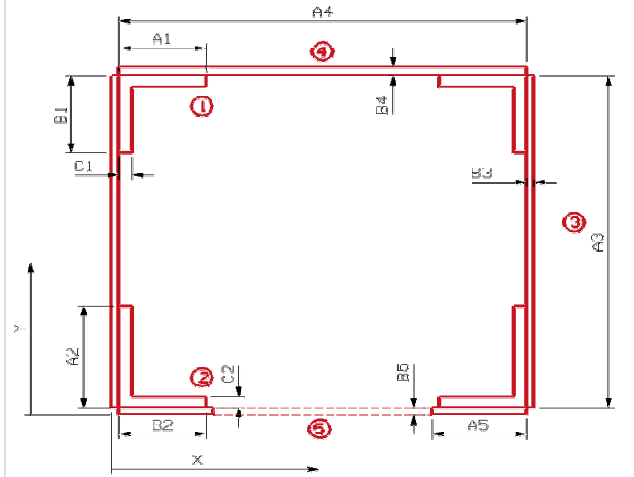
Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:
 $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L32-L33

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x, gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5985	336.3153	336.3356
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5985	212.3354	214.9469
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.0890	496.2470	496.2674
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.0890	336.8139	339.4254
3	Plate	22.7500	13.3750	304.2813	1281.5833	1.2452	35.2750	1316.8583
4	Plate	8.8125	26.5625	234.0820	0.1033	11.9423	1256.8236	1256.9269
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.4327	937.3641	937.4168
Total		45.67		667.73	1287.00		3611.17	4898.18
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	8.6667	0.0625	-0.5417	26.7188	-14.4727	-0.0002	12.2438	-81.2009
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.54	-14.47	0.00		-81.20	-81.20



Made By KMW
Checked By ADK

Date 1/30/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.6202 in	S _{top} =	403.81 in ³	y-bar =	14.4750 in	S _{top} =	392.42 in ³
I _x =	4898.18 in ⁴	S _{bott.} =	335.03 in ³	I _x =	4816.98 in ⁴	S _{bott.} =	332.78 in ³
C _{top} =	12.1298 in	A =	45.6719 in ²	C _{top} =	12.2750 in	A =	45.1302 in ²
C _{bottom} =	14.6202 in	r _x =	10.3560 in	C _{bottom} =	14.4750 in	r _x =	10.3313 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.4375	7.7344	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.9375	47.1094	6.7500	8.7500	172.2656	179.0156	
Total		45.67		556.63	426.13		4698.37	5124.50	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0625	8.6667	-0.5417	12.1875	-6.6016	-3.3904	0.0000	0.0000	-3.3904
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.54		-6.60	-3.39		0.00	-3.39

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	420.47 in ³	x-bar =	12.1875 in	S _{right} =	420.19 in ³
I _y =	5124.50 in ⁴	S _{left} =	420.47 in ³	I _y =	5121.11 in ⁴	S _{left} =	420.19 in ³
C _{right} =	12.1875 in	A =	45.6719 in ²	C _{right} =	12.1875 in	A =	45.1302 in ²
C _{left} =	12.1875 in	r _y =	10.5926 in	C _{left} =	12.1875 in	r _y =	10.6524 in



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.4375$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_f = 0.4375$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.4375$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member L33-L34

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.2500	26.2813	137.9766	0.0837	11.8826	741.2781	741.3618
	Vertical Leg	6.6172	22.2813	147.4392	31.5372	7.8826	411.1599	442.6971
2	Horizontal Leg	5.2500	0.7188	3.7734	0.0837	13.6799	982.4854	982.5691
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	9.6799	620.0355	651.5727
3	Plate	22.7500	13.5000	307.1250	1281.5833	0.8987	18.3729	1299.9562
4	Plate	10.2813	26.7188	274.7021	0.1640	12.3201	1560.5343	1560.6983
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	14.1487	1201.1083	1201.2333
Total		62.77		903.74	1345.11		5534.97	6880.09
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.3987 in	S _{top} =	548.70 in ³	y-bar =	14.3987 in	S _{top} =	548.70 in ³
I _x =	6880.09 in ⁴	S _{bott.} =	477.83 in ³	I _x =	6880.09 in ⁴	S _{bott.} =	477.83 in ³
C _{top} =	12.5388 in	A =	62.7656 in ²	C _{top} =	12.5388 in	A =	62.7656 in ²
C _{bottom} =	14.3987 in	r _x =	10.4697 in	C _{bottom} =	14.3987 in	r _x =	10.4697 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.4375	9.0234	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	20.9375	54.9609	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.4375	9.0234	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	20.9375	54.9609	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	10.2813	12.1875	125.3027	473.1517	0.0000	0.0000	473.1517	
5 (Left)	Perforated Plate	3.0000	3.4375	10.3125	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.9375	62.8125	9.0000	8.7500	229.6875	238.6875	
Total		62.77		764.96	523.23		6282.01	6805.24	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	558.38 in ³	x-bar =	12.1875 in	S _{right} =	558.38 in ³
I _y =	6805.24 in ⁴	S _{left} =	558.38 in ³	I _y =	6805.24 in ⁴	S _{left} =	558.38 in ³
C _{right} =	12.1875 in	A =	62.7656 in ²	C _{right} =	12.1875 in	A =	62.7656 in ²
C _{left} =	12.1875 in	r _y =	10.4126 in	C _{left} =	12.1875 in	r _y =	10.4126 in

South Truss

Member L34-L35



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.5625$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.5625$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.8750$ in

Top Cover Plate:

$A_4 = b = 22.0000$ in
 $B_4 = t = 0.5000$ in

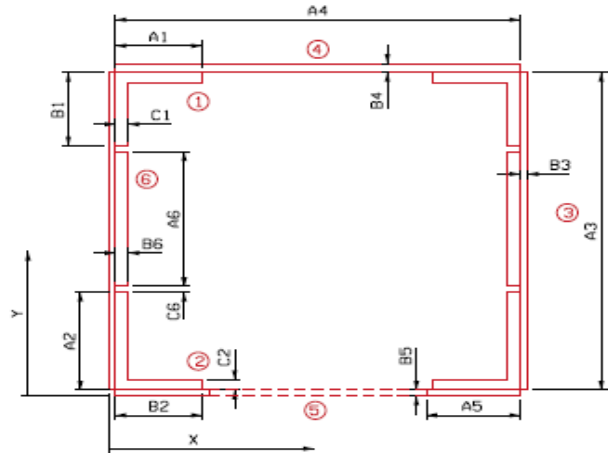
Web Plate 2:

$A_6 = b = 10.0000$ in
 $B_6 = t = 0.6250$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.6250$ in

$C_6 = \text{gap} = 0.0000$ in



Member L34-L35

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	6.7500	26.3438	177.8203	0.1780	12.1669	999.2216	999.3996
	Vertical Leg	8.3672	22.3438	186.9543	38.5702	8.1669	558.0733	596.6435
2	Horizontal Leg	6.7500	0.9063	6.1172	0.1780	13.2706	1188.7392	1188.9171
	Vertical Leg	8.3672	4.9063	41.0515	38.5702	9.2706	719.1137	757.6840
3	Plate	45.5000	13.6250	619.9375	2563.1667	0.5519	13.8578	2577.0245
4	Plate	11.0000	26.8750	295.6250	0.2292	12.6981	1773.6660	1773.8951
5	Perforated Plate	6.5625	0.3125	2.0508	0.2136	13.8644	1261.4497	1261.6634
6	Side Plates	12.5000	13.6250	170.3125	104.1667	0.5519	3.8071	107.9738
Total		105.80		1499.87	2745.27		6517.93	9263.20
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.1769 in	S _{top} =	715.41 in ³	y-bar =	14.1769 in	S _{top} =	715.41 in ³
I _x =	9263.20 in ⁴	S _{bott.} =	653.40 in ³	I _x =	9263.20 in ⁴	S _{bott.} =	653.40 in ³
C _{top} =	12.9481 in	A =	105.7969 in ²	C _{top} =	12.9481 in	A =	105.7969 in ²
C _{bottom} =	14.1769 in	r _x =	9.3572 in	C _{bottom} =	14.1769 in	r _x =	9.3572 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.3750	3.8750	13.0781	10.1250	8.0000	216.0000	226.1250	
	Vertical Leg	4.1836	1.1563	4.8373	0.1103	10.7188	480.6598	480.7701	
1 (Right)	Horizontal Leg	3.3750	19.8750	67.0781	10.1250	8.0000	216.0000	226.1250	
	Vertical Leg	4.1836	22.5938	94.5231	0.1103	10.7188	480.6598	480.7701	
2 (Left)	Horizontal Leg	3.3750	3.8750	13.0781	10.1250	8.0000	216.0000	226.1250	
	Vertical Leg	4.1836	1.1563	4.8373	0.1103	10.7188	480.6598	480.7701	
2 (Right)	Horizontal Leg	3.3750	19.8750	67.0781	10.1250	8.0000	216.0000	226.1250	
	Vertical Leg	4.1836	22.5938	94.5231	0.1103	10.7188	480.6598	480.7701	
3 (Left)	Plate	22.7500	0.4375	9.9531	1.4515	11.4375	2976.0732	2977.5247	
3 (Right)	Plate	22.7500	23.3125	530.3594	1.4515	11.4375	2976.0732	2977.5247	
4	Plate	11.0000	11.8750	130.6250	443.6667	0.0000	0.0000	443.6667	
5 (Left)	Perforated Plate	3.2813	3.5000	11.4844	7.5366	8.3750	230.1489	237.6855	
5 (Right)	Perforated Plate	3.2813	20.2500	66.4453	7.5366	8.3750	230.1489	237.6855	
6 (Left)	Plate	6.2500	1.1875	7.4219	0.2035	10.6875	713.8916	714.0951	
6 (Right)	Plate	6.2500	22.5625	141.0156	0.2035	10.6875	713.8916	714.0951	
Total		105.80		1256.34	502.99		10626.87	11129.86	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	11.8750 in	S _{right} =	937.25 in ³	x-bar =	11.8750 in	S _{right} =	937.25 in ³
I _y =	11129.86 in ⁴	S _{left} =	937.25 in ³	I _y =	11129.86 in ⁴	S _{left} =	937.25 in ³
C _{right} =	11.8750 in	A =	105.7969 in ²	C _{right} =	11.8750 in	A =	105.7969 in ²
C _{left} =	11.8750 in	r _y =	10.2567 in	C _{left} =	11.8750 in	r _y =	10.2567 in

South Truss

Member L35-L36



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.5625$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.5625$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.8750$ in

Top Cover Plate:

$A_4 = b = 22.0000$ in
 $B_4 = t = 0.5000$ in

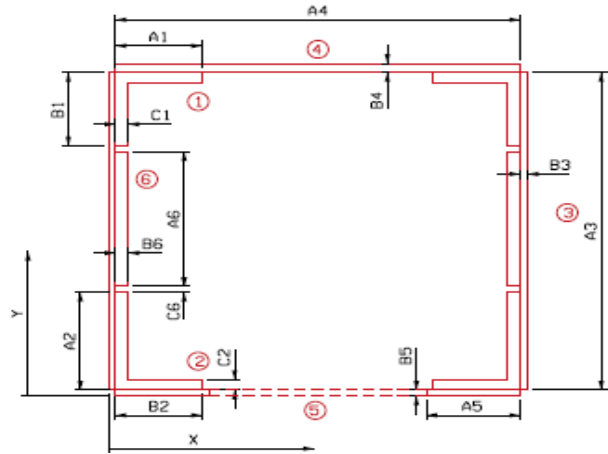
Web Plate 2:

$A_6 = b = 10.0000$ in
 $B_6 = t = 0.6250$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.6250$ in

$C_6 = \text{gap} = 0.0000$ in



Member L35-L36

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	6.7500	26.3438	177.8203	0.1780	12.1669	999.2216	999.3996
	Vertical Leg	8.3672	22.3438	186.9543	38.5702	8.1669	558.0733	596.6435
2	Horizontal Leg	6.7500	0.9063	6.1172	0.1780	13.2706	1188.7392	1188.9171
	Vertical Leg	8.3672	4.9063	41.0515	38.5702	9.2706	719.1137	757.6840
3	Plate	45.5000	13.6250	619.9375	2563.1667	0.5519	13.8578	2577.0245
4	Plate	11.0000	26.8750	295.6250	0.2292	12.6981	1773.6660	1773.8951
5	Perforated Plate	6.5625	0.3125	2.0508	0.2136	13.8644	1261.4497	1261.6634
6	Side Plates	12.5000	13.6250	170.3125	104.1667	0.5519	3.8071	107.9738
Total		105.80		1499.87	2745.27		6517.93	9263.20
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.1769 in	S _{top} =	715.41 in ³	y-bar =	14.1769 in	S _{top} =	715.41 in ³
I _x =	9263.20 in ⁴	S _{bott.} =	653.40 in ³	I _x =	9263.20 in ⁴	S _{bott.} =	653.40 in ³
C _{top} =	12.9481 in	A =	105.7969 in ²	C _{top} =	12.9481 in	A =	105.7969 in ²
C _{bottom} =	14.1769 in	r _x =	9.3572 in	C _{bottom} =	14.1769 in	r _x =	9.3572 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.3750	3.8750	13.0781	10.1250	8.0000	216.0000	226.1250	
	Vertical Leg	4.1836	1.1563	4.8373	0.1103	10.7188	480.6598	480.7701	
1 (Right)	Horizontal Leg	3.3750	19.8750	67.0781	10.1250	8.0000	216.0000	226.1250	
	Vertical Leg	4.1836	22.5938	94.5231	0.1103	10.7188	480.6598	480.7701	
2 (Left)	Horizontal Leg	3.3750	3.8750	13.0781	10.1250	8.0000	216.0000	226.1250	
	Vertical Leg	4.1836	1.1563	4.8373	0.1103	10.7188	480.6598	480.7701	
2 (Right)	Horizontal Leg	3.3750	19.8750	67.0781	10.1250	8.0000	216.0000	226.1250	
	Vertical Leg	4.1836	22.5938	94.5231	0.1103	10.7188	480.6598	480.7701	
3 (Left)	Plate	22.7500	0.4375	9.9531	1.4515	11.4375	2976.0732	2977.5247	
3 (Right)	Plate	22.7500	23.3125	530.3594	1.4515	11.4375	2976.0732	2977.5247	
4	Plate	11.0000	11.8750	130.6250	443.6667	0.0000	0.0000	443.6667	
5 (Left)	Perforated Plate	3.2813	3.5000	11.4844	7.5366	8.3750	230.1489	237.6855	
5 (Right)	Perforated Plate	3.2813	20.2500	66.4453	7.5366	8.3750	230.1489	237.6855	
6 (Left)	Plate	6.2500	1.1875	7.4219	0.2035	10.6875	713.8916	714.0951	
6 (Right)	Plate	6.2500	22.5625	141.0156	0.2035	10.6875	713.8916	714.0951	
Total		105.80		1256.34	502.99		10626.87	11129.86	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	11.8750 in	S _{right} =	937.25 in ³	x-bar =	11.8750 in	S _{right} =	937.25 in ³
I _y =	11129.86 in ⁴	S _{left} =	937.25 in ³	I _y =	11129.86 in ⁴	S _{left} =	937.25 in ³
C _{right} =	11.8750 in	A =	105.7969 in ²	C _{right} =	11.8750 in	A =	105.7969 in ²
C _{left} =	11.8750 in	r _y =	10.2567 in	C _{left} =	11.8750 in	r _y =	10.2567 in

South Truss

Member L36-L37



Made By KMW
Checked By ADK

Date 1/30/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.4375$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_f = 0.4375$ in

Top Cover Plate:

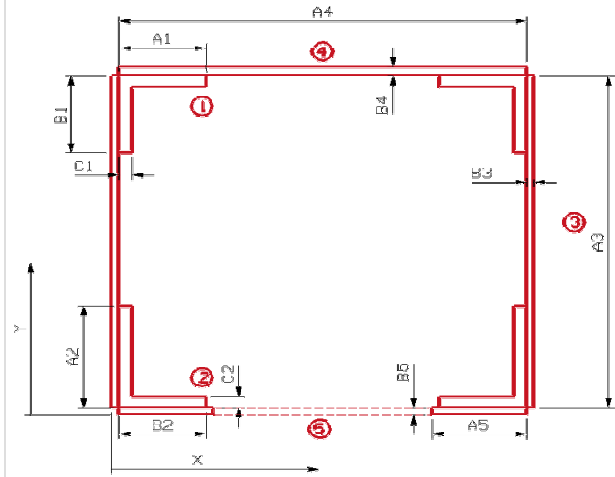
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	5.2500	26.2813	137.9766	0.0837	12.1487	774.8582	774.9420	
	Vertical Leg	6.6172	22.2813	147.4392	31.5372	8.1487	439.3950	470.9321	
2	Horizontal Leg	5.2500	0.7188	3.7734	0.0837	13.4138	944.6261	944.7098	
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	9.4138	586.4069	617.9441	
3	Plate	19.5000	13.5000	263.2500	1098.5000	0.6325	7.8012	1106.3012	
4	Plate	8.8125	26.6875	235.1836	0.1033	12.5550	1389.0962	1389.1995	
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	13.8825	1156.3434	1156.4684	
Total		58.05		820.35	1161.97		5298.53	6460.50	
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	
1	0.0625	7.5625	-0.4727	4.2813	-2.0236	-2.2527	9.9321	-46.6262	-48.8789
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.47	-2.02	-2.25		-46.63	-48.88	



Made By KMW
Checked By ADK

Date 1/30/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.1325 in	S _{top} =	507.00 in ³	y-bar =	14.2134 in	S _{top} =	506.38 in ³
I _x =	6460.50 in ⁴	S _{bott.} =	457.14 in ³	I _x =	6411.62 in ⁴	S _{bott.} =	451.10 in ³
C _{top} =	12.7425 in	A =	58.0469 in ²	C _{top} =	12.6616 in	A =	57.5742 in ²
C _{bottom} =	14.1325 in	r _x =	10.5498 in	C _{bottom} =	14.2134 in	r _x =	10.5529 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.3750	8.8594	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.5938	1.9645	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	20.8750	54.7969	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.6563	78.2689	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.3750	8.8594	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.5938	1.9645	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	20.8750	54.7969	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.6563	78.2689	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	9.7500	0.1875	1.8281	0.1143	11.9375	1389.4131	1389.5273	
3 (Right)	Plate	9.7500	24.0625	234.6094	0.1143	11.9375	1389.4131	1389.5273	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.3750	10.1250	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.8750	62.6250	9.0000	8.7500	229.6875	238.6875	
Total		58.05		703.82	455.50		5801.88	6257.38	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	7.5625	0.0625	-0.4727	0.7813	-0.3693	-0.0002	11.4369	-61.8245	-61.8246
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.47		-0.37	0.00		-61.82	-61.82

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	516.07 in ³	x-bar =	12.2181 in	S _{right} =	514.93 in ³
I _y =	6257.38 in ⁴	S _{left} =	516.07 in ³	I _y =	6195.55 in ⁴	S _{left} =	507.08 in ³
C _{right} =	12.1250 in	A =	58.0469 in ²	C _{right} =	12.0319 in	A =	57.5742 in ²
C _{left} =	12.1250 in	r _y =	10.3826 in	C _{left} =	12.2181 in	r _y =	10.3735 in



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_f = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3125$ in

Top Cover Plate:

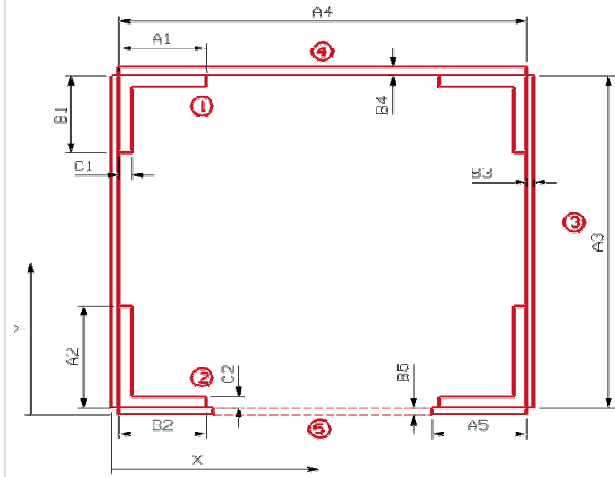
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L37-L38

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5985	336.3153	336.3356
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5985	212.3354	214.9469
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.0890	496.2470	496.2674
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.0890	336.8139	339.4254
3	Plate	22.7500	13.3750	304.2813	1281.5833	1.2452	35.2750	1316.8583
4	Plate	8.8125	26.5625	234.0820	0.1033	11.9423	1256.8236	1256.9269
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.4327	937.3641	937.4168
Total		45.67		667.73	1287.00		3611.17	4898.18
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.6202 in	S _{top} =	403.81 in ³	y-bar =	14.6202 in	S _{top} =	403.81 in ³
I _x =	4898.18 in ⁴	S _{bott.} =	335.03 in ³	I _x =	4898.18 in ⁴	S _{bott.} =	335.03 in ³
C _{top} =	12.1298 in	A =	45.6719 in ²	C _{top} =	12.1298 in	A =	45.6719 in ²
C _{bottom} =	14.6202 in	r _x =	10.3560 in	C _{bottom} =	14.6202 in	r _x =	10.3560 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.4375	7.7344	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.9375	47.1094	6.7500	8.7500	172.2656	179.0156	
Total		45.67		556.63	426.13		4698.37	5124.50	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	420.47 in ³	x-bar =	12.1875 in	S _{right} =	420.47 in ³
I _y =	5124.50 in ⁴	S _{left} =	420.47 in ³	I _y =	5124.50 in ⁴	S _{left} =	420.47 in ³
C _{right} =	12.1875 in	A =	45.6719 in ²	C _{right} =	12.1875 in	A =	45.6719 in ²
C _{left} =	12.1875 in	r _y =	10.5926 in	C _{left} =	12.1875 in	r _y =	10.5926 in



Made By KMW
Checked By ADK

Date 1/30/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

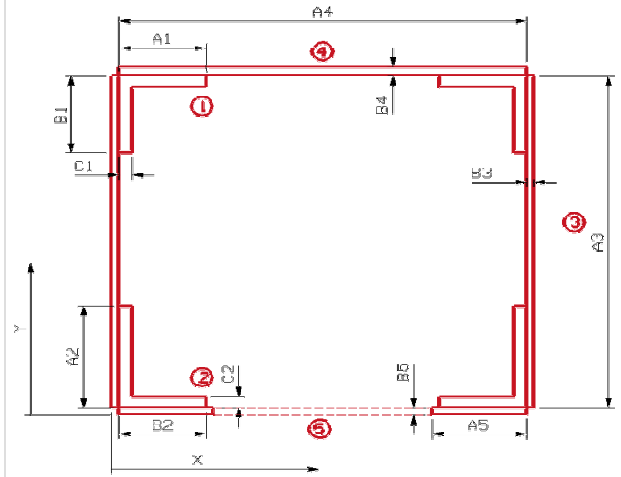
Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:
 $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x, gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5985	336.3153	336.3356	
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5985	212.3354	214.9469	
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.0890	496.2470	496.2674	
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.0890	336.8139	339.4254	
3	Plate	22.7500	13.3750	304.2813	1281.5833	1.2452	35.2750	1316.8583	
4	Plate	8.8125	26.5625	234.0820	0.1033	11.9423	1256.8236	1256.9269	
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.4327	937.3641	937.4168	
Total		45.67		667.73	1287.00		3611.17	4898.18	
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x, loss}	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	
1	7.8333	0.2500	-1.9583	26.6250	-52.1406	-0.0102	12.8314	-322.4301	-322.4403
2	7.8333	0.1250	-0.9792	26.6875	-26.1315	-0.0013	12.8939	-162.7894	-162.7907
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.94	-78.27	-0.01		-485.22	-485.23	



Made By KMW
Checked By ADK

Date 1/30/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.6202 in	S _{top} =	403.81 in ³	y-bar =	13.7936 in	S _{top} =	340.60 in ³
I _x =	4898.18 in ⁴	S _{bott.} =	335.03 in ³	I _x =	4412.95 in ⁴	S _{bott.} =	319.93 in ³
C _{top} =	12.1298 in	A =	45.6719 in ²	C _{top} =	12.9564 in	A =	42.7344 in ²
C _{bottom} =	14.6202 in	r _x =	10.3560 in	C _{bottom} =	13.7936 in	r _x =	10.1619 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.4375	7.7344	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.9375	47.1094	6.7500	8.7500	172.2656	179.0156	
Total		45.67		556.63	426.13		4698.37	5124.50	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.2500	7.8333	-1.9583	8.2708	-16.1970	-10.0138	4.0064	-31.4338	-41.4476
2	0.1250	7.8333	-0.9792	16.1042	-15.7687	-5.0069	3.8269	-14.3402	-19.3471
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.94		-31.97	-15.02		-45.77	-60.79

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	420.47 in ³	x-bar =	12.2772 in	S _{right} =	418.57 in ³
I _y =	5124.50 in ⁴	S _{left} =	420.47 in ³	I _y =	5063.70 in ⁴	S _{left} =	412.45 in ³
C _{right} =	12.1875 in	A =	45.6719 in ²	C _{right} =	12.0978 in	A =	42.7344 in ²
C _{left} =	12.1875 in	r _y =	10.5926 in	C _{left} =	12.2772 in	r _y =	10.8854 in



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.5000$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L39-L40

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x, gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.6813	341.1297	341.1500
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.6813	216.0111	218.6226
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.0062	490.4368	490.4571
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.0062	332.2201	334.8317
3	Plate	26.0000	13.3750	347.7500	1464.6667	1.1625	35.1358	1499.8025
4	Plate	8.8125	26.5625	234.0820	0.1033	12.0250	1274.2955	1274.3988
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.3500	926.6497	926.7024
Total		48.92		711.20	1470.09		3615.88	5085.97
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.5375	in	$S_{top} = 416.46 \text{ in}^3$	y-bar =	14.5375	in	$S_{top} = 416.46 \text{ in}^3$
$I_x =$	5085.97	in^4	$S_{bott.} = 349.85 \text{ in}^3$	$I_x =$	5085.97	in^4	$S_{bott.} = 349.85 \text{ in}^3$
$C_{top} =$	12.2125	in	$A = 48.9219 \text{ in}^2$	$C_{top} =$	12.2125	in	$A = 48.9219 \text{ in}^2$
$C_{bottom} =$	14.5375	in	$r_x = 10.1961 \text{ in}$	$C_{bottom} =$	14.5375	in	$r_x = 10.1961 \text{ in}$

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I_o	d	Ad^2	$I_{y,gross}$	
Element	Description	(in^2)	(in)	(in^3)	(in^4)	(in)	(in^4)	(in^4)	
1 (Left)	Horizontal Leg	1.2500	2.5000	3.1250	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.6563	0.7562	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	22.0000	27.5000	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.8438	27.4762	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.5000	3.1250	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.6563	0.7562	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	22.0000	27.5000	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.8438	27.4762	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	13.0000	0.2500	3.2500	0.2708	12.0000	1872.0000	1872.2708	
3 (Right)	Plate	13.0000	24.2500	315.2500	0.2708	12.0000	1872.0000	1872.2708	
4	Plate	8.8125	12.2500	107.9531	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.5000	7.8750	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	21.0000	47.2500	6.7500	8.7500	172.2656	179.0156	
Total		48.92		599.29	426.30		5183.41	5609.72	
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y,loss}$
Loss #	b (in)	h (in)	(in^2)	(in)	(in^3)	(in^4)	(in)	(in^4)	(in^4)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2500	in	$S_{right} = 457.94 \text{ in}^3$	x-bar =	12.2500	in	$S_{right} = 457.94 \text{ in}^3$
$I_y =$	5609.72	in^4	$S_{left} = 457.94 \text{ in}^3$	$I_y =$	5609.72	in^4	$S_{left} = 457.94 \text{ in}^3$
$C_{right} =$	12.2500	in	$A = 48.9219 \text{ in}^2$	$C_{right} =$	12.2500	in	$A = 48.9219 \text{ in}^2$
$C_{left} =$	12.2500	in	$r_y = 10.7083 \text{ in}$	$C_{left} =$	12.2500	in	$r_y = 10.7083 \text{ in}$



Made By KMW
Checked By ADK

Date 2/2/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:
 $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.5000$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L40-L41

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.6813	341.1297	341.1500
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.6813	216.0111	218.6226
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.0062	490.4368	490.4571
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.0062	332.2201	334.8317
3	Plate	26.0000	13.3750	347.7500	1464.6667	1.1625	35.1358	1499.8025
4	Plate	8.8125	26.5625	234.0820	0.1033	12.0250	1274.2955	1274.3988
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.3500	926.6497	926.7024
Total		48.92		711.20	1470.09		3615.88	5085.97
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	2.5000	0.1250	-0.3125	0.3750	-0.1172	-0.0004	14.3458	-64.3128
2	2.5000	0.1250	-0.3125	0.3750	-0.1172	-0.0004	14.3458	-64.3128
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.63	-0.23	0.00		-128.63	-128.63



Made By KMW
Checked By ADK

Date 2/2/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	14.5375	in	S _{top} =	416.46	in ³	y-bar =	14.7208	in	S _{top} =	412.11	in ³
I _x =	5085.97	in ⁴	S _{bott.} =	349.85	in ³	I _x =	4957.34	in ⁴	S _{bott.} =	336.76	in ³
C _{top} =	12.2125	in	A =	48.9219	in ²	C _{top} =	12.0292	in	A =	48.2969	in ²
C _{bottom} =	14.5375	in	r _x =	10.1961	in	C _{bottom} =	14.7208	in	r _x =	10.1313	in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.5000	3.1250	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.6563	0.7562	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	22.0000	27.5000	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.8438	27.4762	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.5000	3.1250	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.6563	0.7562	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	22.0000	27.5000	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.8438	27.4762	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	13.0000	0.2500	3.2500	0.2708	12.0000	1872.0000	1872.2708	
3 (Right)	Plate	13.0000	24.2500	315.2500	0.2708	12.0000	1872.0000	1872.2708	
4	Plate	8.8125	12.2500	107.9531	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.5000	7.8750	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	21.0000	47.2500	6.7500	8.7500	172.2656	179.0156	
Total		48.92		599.29	426.30		5183.41	5609.72	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1250	2.5000	-0.3125	3.2500	-1.0156	-0.1628	9.0000	-25.3125	-25.4753
2	0.1250	2.5000	-0.3125	21.2500	-6.6406	-0.1628	9.0000	-25.3125	-25.4753
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.63		-7.66	-0.33		-50.63	-50.95

As-Built Section Properties				As-Inspected Section Properties							
x-bar =	12.2500	in	S _{right} =	457.94	in ³	x-bar =	12.2500	in	S _{right} =	453.78	in ³
I _y =	5609.72	in ⁴	S _{left} =	457.94	in ³	I _y =	5558.77	in ⁴	S _{left} =	453.78	in ³
C _{right} =	12.2500	in	A =	48.9219	in ²	C _{right} =	12.2500	in	A =	48.2969	in ²
C _{left} =	12.2500	in	r _y =	10.7083	in	C _{left} =	12.2500	in	r _y =	10.7283	in

South Truss

Member L41-L42



Made By KMW
Checked By ADK

Date 1/30/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

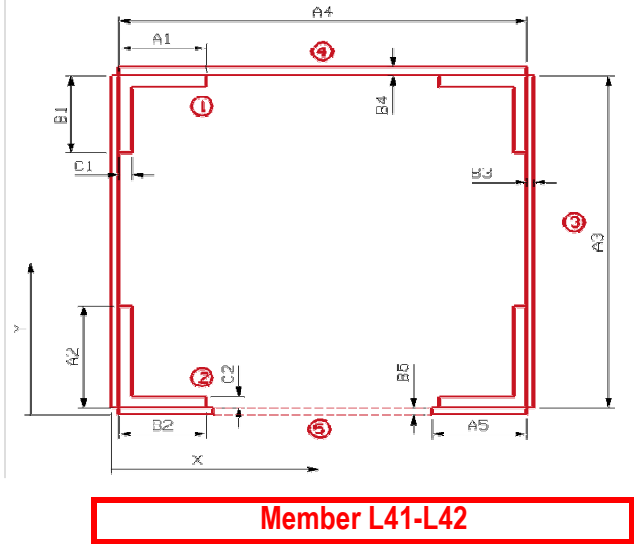
Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:
 $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5985	336.3153	336.3356
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5985	212.3354	214.9469
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.0890	496.2470	496.2674
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.0890	336.8139	339.4254
3	Plate	22.7500	13.3750	304.2813	1281.5833	1.2452	35.2750	1316.8583
4	Plate	8.8125	26.5625	234.0820	0.1033	11.9423	1256.8236	1256.9269
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.4327	937.3641	937.4168
Total		45.67		667.73	1287.00		3611.17	4898.18
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	12.0000	0.1250	-1.5000	26.6875	-40.0313	-0.0020	12.4771	-233.5161
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.50	-40.03	0.00		-233.52	-233.52



Made By KMW
Checked By ADK

Date 1/30/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.6202 in	S _{top} =	403.81 in ³	y-bar =	14.2104 in	S _{top} =	372.00 in ³
I _x =	4898.18 in ⁴	S _{bott.} =	335.03 in ³	I _x =	4664.66 in ⁴	S _{bott.} =	328.26 in ³
C _{top} =	12.1298 in	A =	45.6719 in ²	C _{top} =	12.5396 in	A =	44.1719 in ²
C _{bottom} =	14.6202 in	r _x =	10.3560 in	C _{bottom} =	14.2104 in	r _x =	10.2763 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.4375	7.7344	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.9375	47.1094	6.7500	8.7500	172.2656	179.0156	
Total		45.67		556.63	426.13		4698.37	5124.50	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1250	12.0000	-1.5000	8.2708	-12.4063	-18.0000	4.0497	-24.5997	-42.5997
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.50		-12.41	-18.00		-24.60	-42.60

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	420.47 in ³	x-bar =	12.3205 in	S _{right} =	421.58 in ³
I _y =	5124.50 in ⁴	S _{left} =	420.47 in ³	I _y =	5081.90 in ⁴	S _{left} =	412.47 in ³
C _{right} =	12.1875 in	A =	45.6719 in ²	C _{right} =	12.0545 in	A =	44.1719 in ²
C _{left} =	12.1875 in	r _y =	10.5926 in	C _{left} =	12.3205 in	r _y =	10.7261 in



Made By KMW
Checked By ADK

Date 2/2/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

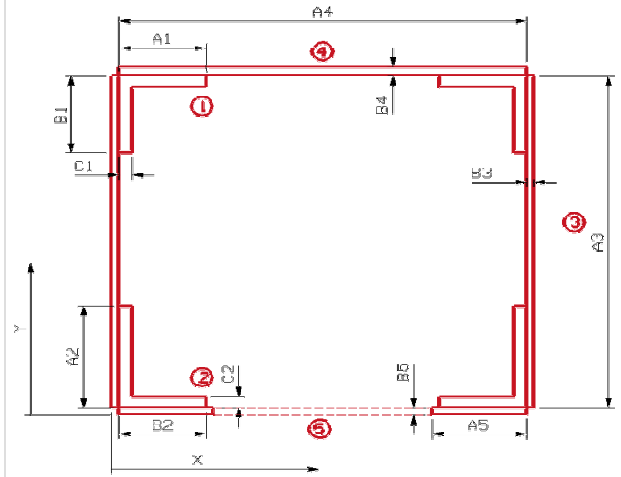
Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_f = 0.3125$ in

Bottom Angles:
 $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3125$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L42-L43

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5031	330.8057	330.8260	
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5031	208.1357	210.7472	
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.1844	502.9900	503.0104	
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.1844	342.1506	344.7621	
3	Plate	19.5000	13.3750	260.8125	1098.5000	1.3406	35.0460	1133.5460	
4	Plate	8.8125	26.5625	234.0820	0.1033	11.8469	1236.8243	1236.9276	
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.5281	949.7966	949.8493	
Total		42.42		624.26	1103.92		3605.75	4709.67	
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	
1	0.2500	8.0000	-2.0000	22.3750	-44.7500	-10.6667	8.0384	-129.2306	-139.8973
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.00	-44.75	-10.67			-129.23	-139.90



Made By KMW
Checked By ADK

Date 2/2/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.7156 in	S _{top} =	391.35 in ³	y-bar =	14.3366 in	S _{top} =	368.13 in ³
I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³	I _x =	4569.77 in ⁴	S _{bott.} =	318.75 in ³
C _{top} =	12.0344 in	A =	42.4219 in ²	C _{top} =	12.4134 in	A =	40.4219 in ²
C _{bottom} =	14.7156 in	r _x =	10.5366 in	C _{bottom} =	14.3366 in	r _x =	10.6326 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	9.7500	0.1875	1.8281	0.1143	11.9375	1389.4131	1389.5273	
3 (Right)	Plate	9.7500	24.0625	234.6094	0.1143	11.9375	1389.4131	1389.5273	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.3750	7.5938	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.8750	46.9688	6.7500	8.7500	172.2656	179.0156	
Total		42.42		514.37	425.99		4218.24	4644.23	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	8.0000	0.2500	-2.0000	0.1250	-0.2500	-0.0104	12.5937	-317.2045	-317.2149
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.00		-0.25	-0.01		-317.20	-317.21

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	383.03 in ³	x-bar =	12.7187 in	S _{right} =	375.24 in ³
I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³	I _y =	4327.02 in ⁴	S _{left} =	340.21 in ³
C _{right} =	12.1250 in	A =	42.4219 in ²	C _{right} =	11.5313 in	A =	40.4219 in ²
C _{left} =	12.1250 in	r _y =	10.4631 in	C _{left} =	12.7187 in	r _y =	10.3463 in



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_f = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3125$ in

Top Cover Plate:

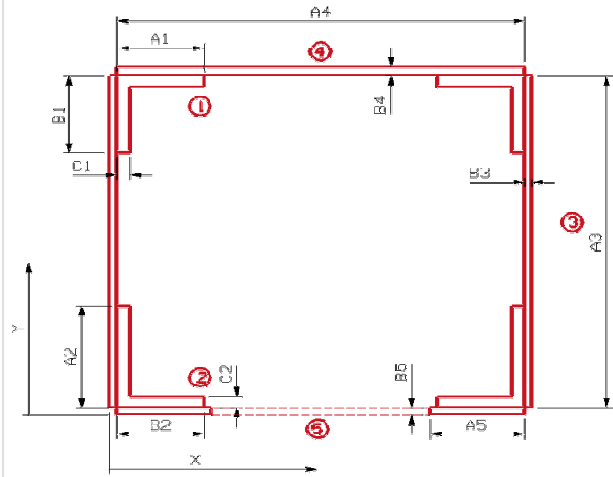
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L43-L44

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5031	330.8057	330.8260
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5031	208.1357	210.7472
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.1844	502.9900	503.0104
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.1844	342.1506	344.7621
3	Plate	19.5000	13.3750	260.8125	1098.5000	1.3406	35.0460	1133.5460
4	Plate	8.8125	26.5625	234.0820	0.1033	11.8469	1236.8243	1236.9276
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.5281	949.7966	949.8493
Total		42.42		624.26	1103.92		3605.75	4709.67
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.7156 in	S _{top} =	391.35 in ³	y-bar =	14.7156 in	S _{top} =	391.35 in ³
I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³	I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³
C _{top} =	12.0344 in	A =	42.4219 in ²	C _{top} =	12.0344 in	A =	42.4219 in ²
C _{bottom} =	14.7156 in	r _x =	10.5366 in	C _{bottom} =	14.7156 in	r _x =	10.5366 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	9.7500	0.1875	1.8281	0.1143	11.9375	1389.4131	1389.5273	
3 (Right)	Plate	9.7500	24.0625	234.6094	0.1143	11.9375	1389.4131	1389.5273	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.3750	7.5938	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.8750	46.9688	6.7500	8.7500	172.2656	179.0156	
Total		42.42		514.37	425.99		4218.24	4644.23	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	383.03 in ³	x-bar =	12.1250 in	S _{right} =	383.03 in ³
I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³	I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³
C _{right} =	12.1250 in	A =	42.4219 in ²	C _{right} =	12.1250 in	A =	42.4219 in ²
C _{left} =	12.1250 in	r _y =	10.4631 in	C _{left} =	12.1250 in	r _y =	10.4631 in



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_f = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.5000$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	4.0000	26.2500	105.0000	0.0833	12.0515	580.9547	581.0381
	Vertical Leg	3.5000	24.2500	84.8750	3.5729	10.0515	353.6144	357.1873
2	Horizontal Leg	4.0000	0.7500	3.0000	0.0833	13.4485	723.4485	723.5318
	Vertical Leg	3.5000	2.7500	9.6250	3.5729	11.4485	458.7384	462.3114
3	Plate	22.7500	13.5000	307.1250	1281.5833	0.6985	11.0997	1292.6831
4	Plate	8.8125	26.6875	235.1836	0.1033	12.4890	1374.5310	1374.6343
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	13.9485	1167.3637	1167.4887
Total		52.56		746.31	1289.12		4669.75	5958.87
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.1985 in	S _{top} =	470.07 in ³	y-bar =	14.1985 in	S _{top} =	470.07 in ³
I _x =	5958.87 in ⁴	S _{bott.} =	419.68 in ³	I _x =	5958.87 in ⁴	S _{bott.} =	419.68 in ³
C _{top} =	12.6765 in	A =	52.5625 in ²	C _{top} =	12.6765 in	A =	52.5625 in ²
C _{bottom} =	14.1985 in	r _x =	10.6474 in	C _{bottom} =	14.1985 in	r _x =	10.6474 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.0000	2.4375	4.8750	2.6667	9.7500	190.1250	192.7917	
	Vertical Leg	1.7500	0.6875	1.2031	0.0365	11.5000	231.4375	231.4740	
1 (Right)	Horizontal Leg	2.0000	21.9375	43.8750	2.6667	9.7500	190.1250	192.7917	
	Vertical Leg	1.7500	23.6875	41.4531	0.0365	11.5000	231.4375	231.4740	
2 (Left)	Horizontal Leg	2.0000	2.4375	4.8750	2.6667	9.7500	190.1250	192.7917	
	Vertical Leg	1.7500	0.6875	1.2031	0.0365	11.5000	231.4375	231.4740	
2 (Right)	Horizontal Leg	2.0000	21.9375	43.8750	2.6667	9.7500	190.1250	192.7917	
	Vertical Leg	1.7500	23.6875	41.4531	0.0365	11.5000	231.4375	231.4740	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.4375	10.3125	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.9375	62.8125	9.0000	8.7500	229.6875	238.6875	
Total		52.56		640.61	434.73		5404.58	5839.32	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	479.12 in ³	x-bar =	12.1875 in	S _{right} =	479.12 in ³
I _y =	5839.32 in ⁴	S _{left} =	479.12 in ³	I _y =	5839.32 in ⁴	S _{left} =	479.12 in ³
C _{right} =	12.1875 in	A =	52.5625 in ²	C _{right} =	12.1875 in	A =	52.5625 in ²
C _{left} =	12.1875 in	r _y =	10.5401 in	C _{left} =	12.1875 in	r _y =	10.5401 in



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.5000$ in

Top Cover Plate:

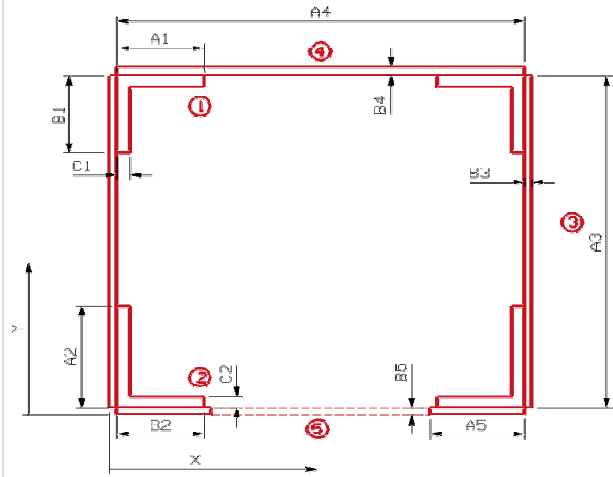
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member L45-L46

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	4.0000	26.2500	105.0000	0.0833	12.0515	580.9547	581.0381
	Vertical Leg	3.5000	24.2500	84.8750	3.5729	10.0515	353.6144	357.1873
2	Horizontal Leg	4.0000	0.7500	3.0000	0.0833	13.4485	723.4485	723.5318
	Vertical Leg	3.5000	2.7500	9.6250	3.5729	11.4485	458.7384	462.3114
3	Plate	22.7500	13.5000	307.1250	1281.5833	0.6985	11.0997	1292.6831
4	Plate	8.8125	26.6875	235.1836	0.1033	12.4890	1374.5310	1374.6343
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	13.9485	1167.3637	1167.4887
Total		52.56		746.31	1289.12		4669.75	5958.87
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.1985 in	S _{top} =	470.07 in ³	y-bar =	14.1985 in	S _{top} =	470.07 in ³
I _x =	5958.87 in ⁴	S _{bott.} =	419.68 in ³	I _x =	5958.87 in ⁴	S _{bott.} =	419.68 in ³
C _{top} =	12.6765 in	A =	52.5625 in ²	C _{top} =	12.6765 in	A =	52.5625 in ²
C _{bottom} =	14.1985 in	r _x =	10.6474 in	C _{bottom} =	14.1985 in	r _x =	10.6474 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.0000	2.4375	4.8750	2.6667	9.7500	190.1250	192.7917	
	Vertical Leg	1.7500	0.6875	1.2031	0.0365	11.5000	231.4375	231.4740	
1 (Right)	Horizontal Leg	2.0000	21.9375	43.8750	2.6667	9.7500	190.1250	192.7917	
	Vertical Leg	1.7500	23.6875	41.4531	0.0365	11.5000	231.4375	231.4740	
2 (Left)	Horizontal Leg	2.0000	2.4375	4.8750	2.6667	9.7500	190.1250	192.7917	
	Vertical Leg	1.7500	0.6875	1.2031	0.0365	11.5000	231.4375	231.4740	
2 (Right)	Horizontal Leg	2.0000	21.9375	43.8750	2.6667	9.7500	190.1250	192.7917	
	Vertical Leg	1.7500	23.6875	41.4531	0.0365	11.5000	231.4375	231.4740	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.4375	10.3125	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.9375	62.8125	9.0000	8.7500	229.6875	238.6875	
Total		52.56		640.61	434.73		5404.58	5839.32	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	479.12 in ³	x-bar =	12.1875 in	S _{right} =	479.12 in ³
I _y =	5839.32 in ⁴	S _{left} =	479.12 in ³	I _y =	5839.32 in ⁴	S _{left} =	479.12 in ³
C _{right} =	12.1875 in	A =	52.5625 in ²	C _{right} =	12.1875 in	A =	52.5625 in ²
C _{left} =	12.1875 in	r _y =	10.5401 in	C _{left} =	12.1875 in	r _y =	10.5401 in



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_f = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3125$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L46-L47

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5031	330.8057	330.8260
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5031	208.1357	210.7472
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.1844	502.9900	503.0104
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.1844	342.1506	344.7621
3	Plate	19.5000	13.3750	260.8125	1098.5000	1.3406	35.0460	1133.5460
4	Plate	8.8125	26.5625	234.0820	0.1033	11.8469	1236.8243	1236.9276
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.5281	949.7966	949.8493
Total		42.42		624.26	1103.92		3605.75	4709.67
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.7156 in	S _{top} =	391.35 in ³	y-bar =	14.7156 in	S _{top} =	391.35 in ³
I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³	I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³
C _{top} =	12.0344 in	A =	42.4219 in ²	C _{top} =	12.0344 in	A =	42.4219 in ²
C _{bottom} =	14.7156 in	r _x =	10.5366 in	C _{bottom} =	14.7156 in	r _x =	10.5366 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	9.7500	0.1875	1.8281	0.1143	11.9375	1389.4131	1389.5273	
3 (Right)	Plate	9.7500	24.0625	234.6094	0.1143	11.9375	1389.4131	1389.5273	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.3750	7.5938	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.8750	46.9688	6.7500	8.7500	172.2656	179.0156	
Total		42.42		514.37	425.99		4218.24	4644.23	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	383.03 in ³	x-bar =	12.1250 in	S _{right} =	383.03 in ³
I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³	I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³
C _{right} =	12.1250 in	A =	42.4219 in ²	C _{right} =	12.1250 in	A =	42.4219 in ²
C _{left} =	12.1250 in	r _y =	10.4631 in	C _{left} =	12.1250 in	r _y =	10.4631 in



Made By NRF
Checked By CTG

Date 1/25/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

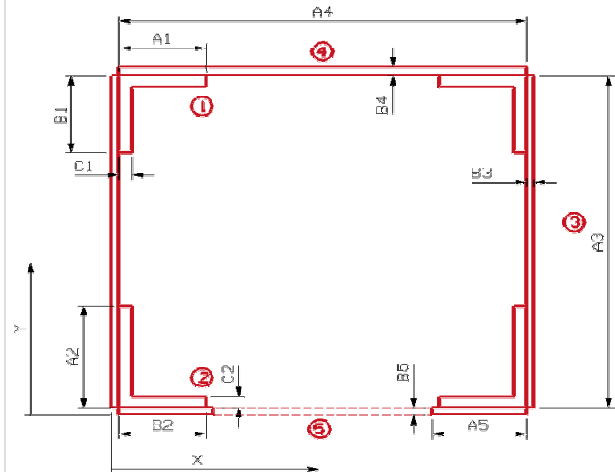
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L47-L48

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5031	330.8057	330.8260
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5031	208.1357	210.7472
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.1844	502.9900	503.0104
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.1844	342.1506	344.7621
3	Plate	19.5000	13.3750	260.8125	1098.5000	1.3406	35.0460	1133.5460
4	Plate	8.8125	26.5625	234.0820	0.1033	11.8469	1236.8243	1236.9276
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.5281	949.7966	949.8493
Total		42.42		624.26	1103.92		3605.75	4709.67
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By NRF
Checked By CTG

Date 1/25/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.7156 in	S _{top} =	391.35 in ³	y-bar =	14.7156 in	S _{top} =	391.35 in ³
I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³	I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³
C _{top} =	12.0344 in	A =	42.4219 in ²	C _{top} =	12.0344 in	A =	42.4219 in ²
C _{bottom} =	14.7156 in	r _x =	10.5366 in	C _{bottom} =	14.7156 in	r _x =	10.5366 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	9.7500	0.1875	1.8281	0.1143	11.9375	1389.4131	1389.5273	
3 (Right)	Plate	9.7500	24.0625	234.6094	0.1143	11.9375	1389.4131	1389.5273	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.3750	7.5938	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.8750	46.9688	6.7500	8.7500	172.2656	179.0156	
Total		42.42		514.37	425.99		4218.24	4644.23	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	383.03 in ³	x-bar =	12.1250 in	S _{right} =	383.03 in ³
I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³	I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³
C _{right} =	12.1250 in	A =	42.4219 in ²	C _{right} =	12.1250 in	A =	42.4219 in ²
C _{left} =	12.1250 in	r _y =	10.4631 in	C _{left} =	12.1250 in	r _y =	10.4631 in



Made By KMW
Checked By ADK

Date 2/2/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_f = 0.3125$ in

Bottom Angles:
 $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3125$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L48-L49

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5031	330.8057	330.8260
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5031	208.1357	210.7472
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.1844	502.9900	503.0104
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.1844	342.1506	344.7621
3	Plate	19.5000	13.3750	260.8125	1098.5000	1.3406	35.0460	1133.5460
4	Plate	8.8125	26.5625	234.0820	0.1033	11.8469	1236.8243	1236.9276
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.5281	949.7966	949.8493
Total		42.42		624.26	1103.92		3605.75	4709.67
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.1875	6.0000	-1.1250	23.3750	-26.2969	-3.3750	8.5423	-82.0929
3	0.3750	1.5000	-0.5625	19.6250	-11.0391	-0.1055	4.7923	-12.9186
4	0.1250	10.5000	-1.3125	13.6250	-17.8828	-12.0586	1.2077	-1.9142
5	0.1875	8.0000	-1.5000	4.3750	-6.5625	-8.0000	10.4577	-164.0441
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-4.50	-61.78	-23.54		-260.97	-284.51



Made By KMW
Checked By ADK

Date 2/2/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.7156 in	S _{top} =	391.35 in ³	y-bar =	14.8327 in	S _{top} =	371.32 in ³
I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³	I _x =	4425.16 in ⁴	S _{bott.} =	298.34 in ³
C _{top} =	12.0344 in	A =	42.4219 in ²	C _{top} =	11.9173 in	A =	37.9219 in ²
C _{bottom} =	14.7156 in	r _x =	10.5366 in	C _{bottom} =	14.8327 in	r _x =	10.8024 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	9.7500	0.1875	1.8281	0.1143	11.9375	1389.4131	1389.5273	
3 (Right)	Plate	9.7500	24.0625	234.6094	0.1143	11.9375	1389.4131	1389.5273	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.3750	7.5938	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.8750	46.9688	6.7500	8.7500	172.2656	179.0156	
Total		42.42		514.37	425.99		4218.24	4644.23	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	6.0000	0.1875	-1.1250	24.1563	-27.1758	-0.0033	13.4586	-203.7765	-203.7798
3	1.5000	0.3750	-0.5625	24.0625	-13.5352	-0.0066	13.3649	-100.4738	-100.4803
4	10.5000	0.1250	-1.3125	24.1875	-31.7461	-0.0017	13.4899	-238.8446	-238.8463
5	8.0000	0.1875	-1.5000	24.1563	-36.2344	-0.0044	13.4586	-271.7021	-271.7065
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-4.50		-108.69	-0.02		-814.80	-814.81

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	383.03 in ³	x-bar =	10.6976 in	S _{right} =	282.56 in ³
I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³	I _y =	3829.42 in ⁴	S _{left} =	357.97 in ³
C _{right} =	12.1250 in	A =	42.4219 in ²	C _{right} =	13.5524 in	A =	37.9219 in ²
C _{left} =	12.1250 in	r _y =	10.4631 in	C _{left} =	10.6976 in	r _y =	10.0490 in



Made By KMW
Checked By ADK

Date 1/18/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3750$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member L49-L50

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	3.0000	26.3125	78.9375	0.0352	12.0632	436.5636	436.5988	
	Vertical Leg	2.7188	24.3125	66.0996	2.9772	10.0632	275.3233	278.3005	
2	Horizontal Leg	3.0000	0.6875	2.0625	0.0352	13.5618	551.7658	551.8010	
	Vertical Leg	2.7188	2.6875	7.3066	2.9772	11.5618	363.4284	366.4056	
3	Plate	22.7500	13.5000	307.1250	1281.5833	0.7493	12.7724	1294.3557	
4	Plate	8.8125	26.6875	235.1836	0.1033	12.4382	1363.3753	1363.4786	
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	13.9993	1175.8795	1176.0045	
Total		49.00		698.21	1287.84		4179.11	5466.94	
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	
1	0.1250	3.6250	-0.4531	2.6875	-1.2178	-0.4962	12.2793	-68.3224	-68.8186
2	0.1250	3.6250	-0.4531	2.6875	-1.2178	-0.4962	12.2793	-68.3224	-68.8186
3	3.6250	0.1250	-0.4531	0.8125	-0.3682	-0.0006	14.1543	-90.7806	-90.7812
4	3.6250	0.1250	-0.4531	0.8125	-0.3682	-0.0006	14.1543	-90.7806	-90.7812
5	6.0000	0.0625	-0.3750	0.0313	-0.0117	-0.0001	14.9355	-83.6512	-83.6513
6	6.0000	0.0625	-0.3750	0.0313	-0.0117	-0.0001	14.9355	-83.6512	-83.6513
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.56	-3.20	-0.99		-485.51	-486.50	



Made By KMW
 Checked By ADK

Date 1/18/2012
 Date 2/15/2012

Job No. P402110046
 Sheet No.

Calculations For: **CUY-2-1441**

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	14.2493	in	S _{top} =	433.00	in ³	y-bar =	14.9668	in	S _{top} =	418.24	in ³
I _x =	5466.94	in ⁴	S _{bott.} =	383.66	in ³	I _x =	4980.44	in ⁴	S _{bott.} =	332.77	in ³
C _{top} =	12.6257	in	A =	49.0000	in ²	C _{top} =	11.9082	in	A =	46.4375	in ²
C _{bottom} =	14.2493	in	r _x =	10.5627	in	C _{bottom} =	14.9668	in	r _x =	10.3562	in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.5000	2.4375	3.6563	2.0000	9.7500	142.5938	144.5938	
	Vertical Leg	1.3594	0.6250	0.8496	0.0159	11.5625	181.7368	181.7527	
1 (Right)	Horizontal Leg	1.5000	21.9375	32.9063	2.0000	9.7500	142.5938	144.5938	
	Vertical Leg	1.3594	23.7500	32.2852	0.0159	11.5625	181.7368	181.7527	
2 (Left)	Horizontal Leg	1.5000	2.4375	3.6563	2.0000	9.7500	142.5938	144.5938	
	Vertical Leg	1.3594	0.6250	0.8496	0.0159	11.5625	181.7368	181.7527	
2 (Right)	Horizontal Leg	1.5000	21.9375	32.9063	2.0000	9.7500	142.5938	144.5938	
	Vertical Leg	1.3594	23.7500	32.2852	0.0159	11.5625	181.7368	181.7527	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.4375	10.3125	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.9375	62.8125	9.0000	8.7500	229.6875	238.6875	
Total		49.00		597.19	431.99		5015.66	5447.64	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	3.6250	0.1250	-0.4531	0.7500	-0.3398	-0.0006	11.4375	-59.2762	-59.2768
2	3.6250	0.1250	-0.4531	23.6250	-10.7051	-0.0006	11.4375	-59.2762	-59.2768
3	0.1250	3.6250	-0.4531	2.6250	-1.1895	-0.4962	9.5625	-41.4344	-41.9306
4	0.1250	3.6250	-0.4531	21.7500	-9.8555	-0.4962	9.5625	-41.4344	-41.9306
5	0.0625	6.0000	-0.3750	3.4375	-1.2891	-1.1250	8.7500	-28.7109	-29.8359
6	0.0625	6.0000	-0.3750	20.9375	-7.8516	-1.1250	8.7500	-28.7109	-29.8359
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.56		-31.23	-3.24		-258.84	-262.09

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.1875	in	S _{right} =	446.99	in ³	x-bar =	12.1875	in	S _{right} =	425.48	in ³
I _y =	5447.64	in ⁴	S _{left} =	446.99	in ³	I _y =	5185.56	in ⁴	S _{left} =	425.48	in ³
C _{right} =	12.1875	in	A =	49.0000	in ²	C _{right} =	12.1875	in	A =	46.4375	in ²
C _{left} =	12.1875	in	r _y =	10.5440	in	C _{left} =	12.1875	in	r _y =	10.5673	in



Made By KMW
Checked By ADK

Date 1/31/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

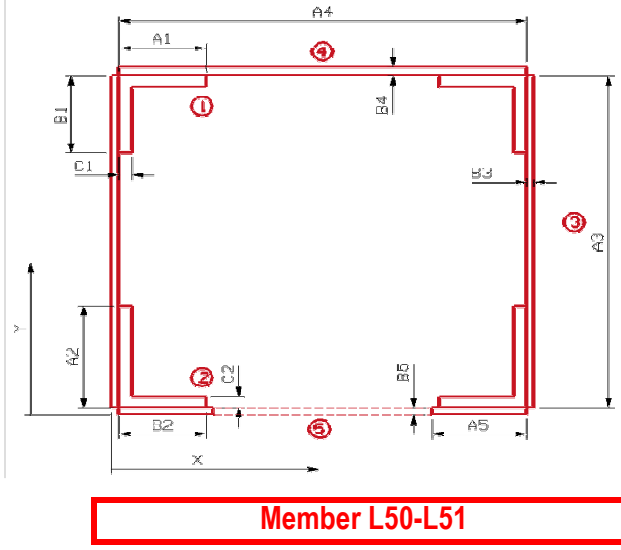
Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3750$ in

Bottom Angles:
 $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3750$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member L50-L51

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x, gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	3.0000	26.3125	78.9375	0.0352	12.0632	436.5636	436.5988	
	Vertical Leg	2.7188	24.3125	66.0996	2.9772	10.0632	275.3233	278.3005	
2	Horizontal Leg	3.0000	0.6875	2.0625	0.0352	13.5618	551.7658	551.8010	
	Vertical Leg	2.7188	2.6875	7.3066	2.9772	11.5618	363.4284	366.4056	
3	Plate	22.7500	13.5000	307.1250	1281.5833	0.7493	12.7724	1294.3557	
4	Plate	8.8125	26.6875	235.1836	0.1033	12.4382	1363.3753	1363.4786	
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	13.9993	1175.8795	1176.0045	
Total		49.00		698.21	1287.84		4179.11	5466.94	
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x, loss}	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	
1	23.5000	0.0625	-1.4688	26.8438	-39.4268	-0.0005	12.9709	-247.1087	-247.1092
2	0.0625	26.0000	-1.6250	13.5000	-21.9375	-91.5417	0.3729	-0.2259	-91.7676
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-3.09	-61.36	-91.54		-247.33	-338.88	



Made By KMW
Checked By ADK

Date 1/31/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.2493 in	S _{top} =	433.00 in ³	y-bar =	13.8729 in	S _{top} =	394.40 in ³
I _x =	5466.94 in ⁴	S _{bott.} =	383.66 in ³	I _x =	5128.07 in ⁴	S _{bott.} =	369.65 in ³
C _{top} =	12.6257 in	A =	49.0000 in ²	C _{top} =	13.0021 in	A =	45.9063 in ²
C _{bottom} =	14.2493 in	r _x =	10.5627 in	C _{bottom} =	13.8729 in	r _x =	10.5692 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.5000	2.4375	3.6563	2.0000	9.7500	142.5938	144.5938	
	Vertical Leg	1.3594	0.6250	0.8496	0.0159	11.5625	181.7368	181.7527	
1 (Right)	Horizontal Leg	1.5000	21.9375	32.9063	2.0000	9.7500	142.5938	144.5938	
	Vertical Leg	1.3594	23.7500	32.2852	0.0159	11.5625	181.7368	181.7527	
2 (Left)	Horizontal Leg	1.5000	2.4375	3.6563	2.0000	9.7500	142.5938	144.5938	
	Vertical Leg	1.3594	0.6250	0.8496	0.0159	11.5625	181.7368	181.7527	
2 (Right)	Horizontal Leg	1.5000	21.9375	32.9063	2.0000	9.7500	142.5938	144.5938	
	Vertical Leg	1.3594	23.7500	32.2852	0.0159	11.5625	181.7368	181.7527	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.4375	10.3125	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.9375	62.8125	9.0000	8.7500	229.6875	238.6875	
Total		49.00		597.19	431.99		5015.66	5447.64	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0625	23.5000	-1.4688	12.1875	-17.9004	-67.5931	0.4303	-0.2720	-67.8651
2	26.0000	0.0625	-1.6250	0.0313	-0.0508	-0.0005	12.5866	-257.4349	-257.4354
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-3.09		-17.95	-67.59		-257.71	-325.30

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	446.99 in ³	x-bar =	12.6178 in	S _{right} =	435.68 in ³
I _y =	5447.64 in ⁴	S _{left} =	446.99 in ³	I _y =	5122.34 in ⁴	S _{left} =	405.96 in ³
C _{right} =	12.1875 in	A =	49.0000 in ²	C _{right} =	11.7572 in	A =	45.9063 in ²
C _{left} =	12.1875 in	r _y =	10.5440 in	C _{left} =	12.6178 in	r _y =	10.5633 in



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

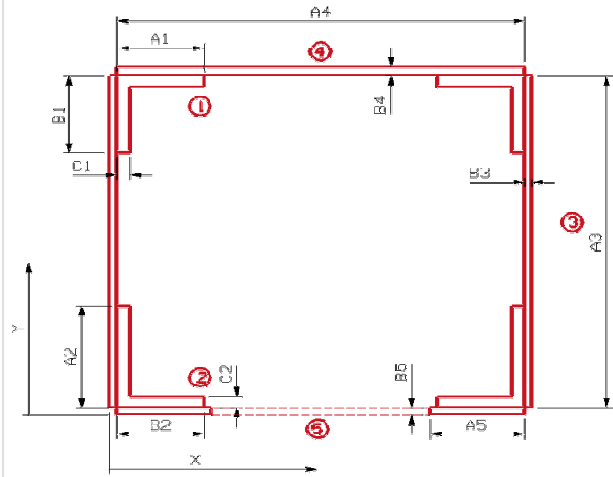
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L51-L52

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5985	336.3153	336.3356
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5985	212.3354	214.9469
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.0890	496.2470	496.2674
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.0890	336.8139	339.4254
3	Plate	22.7500	13.3750	304.2813	1281.5833	1.2452	35.2750	1316.8583
4	Plate	8.8125	26.5625	234.0820	0.1033	11.9423	1256.8236	1256.9269
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.4327	937.3641	937.4168
Total		45.67		667.73	1287.00		3611.17	4898.18
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.6202 in	S _{top} =	403.81 in ³	y-bar =	14.6202 in	S _{top} =	403.81 in ³
I _x =	4898.18 in ⁴	S _{bott.} =	335.03 in ³	I _x =	4898.18 in ⁴	S _{bott.} =	335.03 in ³
C _{top} =	12.1298 in	A =	45.6719 in ²	C _{top} =	12.1298 in	A =	45.6719 in ²
C _{bottom} =	14.6202 in	r _x =	10.3560 in	C _{bottom} =	14.6202 in	r _x =	10.3560 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.4375	7.7344	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.9375	47.1094	6.7500	8.7500	172.2656	179.0156	
Total		45.67		556.63	426.13		4698.37	5124.50	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	420.47 in ³	x-bar =	12.1875 in	S _{right} =	420.47 in ³
I _y =	5124.50 in ⁴	S _{left} =	420.47 in ³	I _y =	5124.50 in ⁴	S _{left} =	420.47 in ³
C _{right} =	12.1875 in	A =	45.6719 in ²	C _{right} =	12.1875 in	A =	45.6719 in ²
C _{left} =	12.1875 in	r _y =	10.5926 in	C _{left} =	12.1875 in	r _y =	10.5926 in



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:
 $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L52-L53

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5985	336.3153	336.3356
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5985	212.3354	214.9469
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.0890	496.2470	496.2674
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.0890	336.8139	339.4254
3	Plate	22.7500	13.3750	304.2813	1281.5833	1.2452	35.2750	1316.8583
4	Plate	8.8125	26.5625	234.0820	0.1033	11.9423	1256.8236	1256.9269
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.4327	937.3641	937.4168
Total		45.67		667.73	1287.00		3611.17	4898.18
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.6202 in	S _{top} =	403.81 in ³	y-bar =	14.6202 in	S _{top} =	403.81 in ³
I _x =	4898.18 in ⁴	S _{bott.} =	335.03 in ³	I _x =	4898.18 in ⁴	S _{bott.} =	335.03 in ³
C _{top} =	12.1298 in	A =	45.6719 in ²	C _{top} =	12.1298 in	A =	45.6719 in ²
C _{bottom} =	14.6202 in	r _x =	10.3560 in	C _{bottom} =	14.6202 in	r _x =	10.3560 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.4375	7.7344	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.9375	47.1094	6.7500	8.7500	172.2656	179.0156	
Total		45.67		556.63	426.13		4698.37	5124.50	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	420.47 in ³	x-bar =	12.1875 in	S _{right} =	420.47 in ³
I _y =	5124.50 in ⁴	S _{left} =	420.47 in ³	I _y =	5124.50 in ⁴	S _{left} =	420.47 in ³
C _{right} =	12.1875 in	A =	45.6719 in ²	C _{right} =	12.1875 in	A =	45.6719 in ²
C _{left} =	12.1875 in	r _y =	10.5926 in	C _{left} =	12.1875 in	r _y =	10.5926 in



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.4375$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.4375$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L53-L54

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.5000	26.1563	91.5469	0.0558	11.7092	479.8654	479.9212
	Vertical Leg	6.6172	22.1563	146.6121	31.5372	7.7092	393.2669	424.8041
2	Horizontal Leg	3.5000	0.5938	2.0781	0.0558	13.8533	671.7027	671.7586
	Vertical Leg	6.6172	4.5938	30.3977	31.5372	9.8533	642.4517	673.9889
3	Plate	19.5000	13.3750	260.8125	1098.5000	1.0721	22.4129	1120.9129
4	Plate	8.8125	26.5625	234.0820	0.1033	12.1154	1293.5263	1293.6296
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.2596	915.0117	915.0645
Total		53.05		766.37	1161.84		4418.24	5580.08
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.4471 in	S _{top} =	453.56 in ³	y-bar =	14.4471 in	S _{top} =	453.56 in ³
I _x =	5580.08 in ⁴	S _{bott.} =	386.24 in ³	I _x =	5580.08 in ⁴	S _{bott.} =	386.24 in ³
C _{top} =	12.3029 in	A =	53.0469 in ²	C _{top} =	12.3029 in	A =	53.0469 in ²
C _{bottom} =	14.4471 in	r _x =	10.2563 in	C _{bottom} =	14.4471 in	r _x =	10.2563 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.7500	2.3750	4.1563	2.3333	9.7500	166.3594	168.6927	
	Vertical Leg	3.3086	0.5938	1.9645	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	1.7500	21.8750	38.2813	2.3333	9.7500	166.3594	168.6927	
	Vertical Leg	3.3086	23.6563	78.2689	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	1.7500	2.3750	4.1563	2.3333	9.7500	166.3594	168.6927	
	Vertical Leg	3.3086	0.5938	1.9645	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	1.7500	21.8750	38.2813	2.3333	9.7500	166.3594	168.6927	
	Vertical Leg	3.3086	23.6563	78.2689	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	9.7500	0.1875	1.8281	0.1143	11.9375	1389.4131	1389.5273	
3 (Right)	Plate	9.7500	24.0625	234.6094	0.1143	11.9375	1389.4131	1389.5273	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.3750	7.5938	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.8750	46.9688	6.7500	8.7500	172.2656	179.0156	
Total		53.05		643.19	428.83		5548.57	5977.40	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	492.98 in ³	x-bar =	12.1250 in	S _{right} =	492.98 in ³
I _y =	5977.40 in ⁴	S _{left} =	492.98 in ³	I _y =	5977.40 in ⁴	S _{left} =	492.98 in ³
C _{right} =	12.1250 in	A =	53.0469 in ²	C _{right} =	12.1250 in	A =	53.0469 in ²
C _{left} =	12.1250 in	r _y =	10.6152 in	C _{left} =	12.1250 in	r _y =	10.6152 in



Made By KMW
Checked By ADK

Date 2/2/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

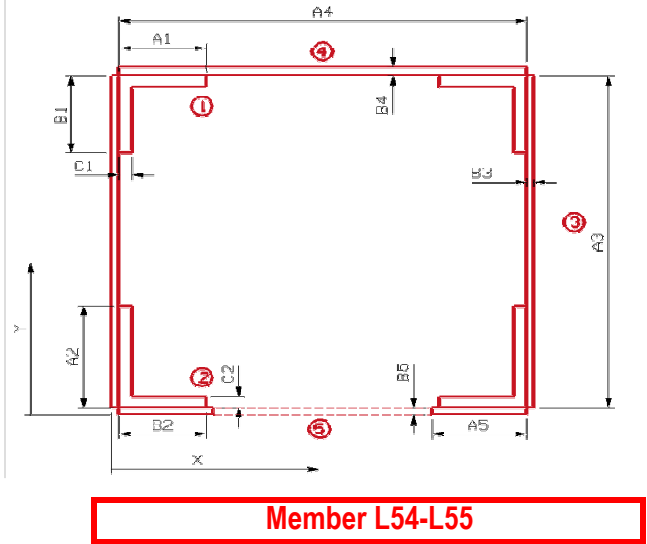
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.4375$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.4375$ in

Top Cover Plate:
 $A_4 = b = 22.0000$ in
 $B_4 = t = 0.3750$ in

Web Plate:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.8125$ in

Perforated Cover Plate
 $A_5 = b = 5.2500$ in
 $B_5 = t = 0.5000$ in



X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.2500	26.2813	137.9766	0.0837	12.2876	792.6769	792.7606
	Vertical Leg	6.6172	22.2813	147.4392	31.5372	8.2876	454.5012	486.0384
2	Horizontal Leg	5.2500	0.7188	3.7734	0.0837	13.2749	925.1652	925.2489
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	9.2749	569.2306	600.7678
3	Plate	42.2500	13.5000	570.3750	2380.0833	0.4936	10.2943	2390.3776
4	Plate	8.2500	26.6875	220.1719	0.0967	12.6939	1329.3622	1329.4589
5	Perforated Plate	5.2500	0.2500	1.3125	0.1094	13.7436	991.6560	991.7653
Total		79.48		1112.27	2443.53		5072.89	7516.42
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	22.0000	0.3125	-6.8750	26.5000	-182.1875	-0.0559	13.7260	-1295.2707
2	3.0000	0.0625	-0.1875	26.5000	-4.9688	-0.0001	13.7260	-35.3256
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-7.06	-187.16	-0.06		-1330.60	-1330.65



Made By KMW
Checked By ADK

Date 2/2/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	13.9936 in	S _{top} =	583.51 in ³	y-bar =	12.7740 in	S _{top} =	438.68 in ³
I _x =	7516.42 in ⁴	S _{bott.} =	537.13 in ³	I _x =	6185.77 in ⁴	S _{bott.} =	484.25 in ³
C _{top} =	12.8814 in	A =	79.4844 in ²	C _{top} =	14.1010 in	A =	72.4219 in ²
C _{bottom} =	13.9936 in	r _x =	9.7244 in	C _{bottom} =	12.7740 in	r _x =	9.2419 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.8125	10.0078	7.8750	8.0000	168.0000	175.8750	
	Vertical Leg	3.3086	1.0313	3.4120	0.0528	10.7813	384.5756	384.6283	
1 (Right)	Horizontal Leg	2.6250	19.8125	52.0078	7.8750	8.0000	168.0000	175.8750	
	Vertical Leg	3.3086	22.5938	74.7535	0.0528	10.7813	384.5756	384.6283	
2 (Left)	Horizontal Leg	2.6250	3.8125	10.0078	7.8750	8.0000	168.0000	175.8750	
	Vertical Leg	3.3086	1.0313	3.4120	0.0528	10.7813	384.5756	384.6283	
2 (Right)	Horizontal Leg	2.6250	19.8125	52.0078	7.8750	8.0000	168.0000	175.8750	
	Vertical Leg	3.3086	22.5938	74.7535	0.0528	10.7813	384.5756	384.6283	
3 (Left)	Plate	21.1250	0.4063	8.5820	1.1622	11.4063	2748.4161	2749.5783	
3 (Right)	Plate	21.1250	23.2188	490.4961	1.1622	11.4063	2748.4161	2749.5783	
4	Plate	8.2500	11.8125	97.4531	332.7500	0.0000	0.0000	332.7500	
5 (Left)	Perforated Plate	2.6250	3.4375	9.0234	6.0293	8.3750	184.1191	190.1484	
5 (Right)	Perforated Plate	2.6250	20.1875	52.9922	6.0293	8.3750	184.1191	190.1484	
Total		79.48		938.91	378.84		8075.37	8454.22	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.3125	22.0000	-6.8750	11.8125	-81.2109	-277.2917	0.0091	-0.0006	-277.2922
2	0.0625	3.0000	-0.1875	8.3125	-1.5586	-0.1406	3.5091	-2.3088	-2.4494
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-7.06		-82.77	-277.43		-2.31	-279.74

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	11.8125 in	S _{right} =	715.70 in ³	x-bar =	11.8216 in	S _{right} =	692.55 in ³
I _y =	8454.22 in ⁴	S _{left} =	715.70 in ³	I _y =	8174.48 in ⁴	S _{left} =	691.49 in ³
C _{right} =	11.8125 in	A =	79.4844 in ²	C _{right} =	11.8034 in	A =	72.4219 in ²
C _{left} =	11.8125 in	r _y =	10.3133 in	C _{left} =	11.8216 in	r _y =	10.6242 in



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_l = 0.5625$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_l = 0.5625$ in

Top Cover Plate: PL

$A_6 = b = 22.0000$ in
 $B_6 = t = 0.5000$ in

Side Plate 1: PL

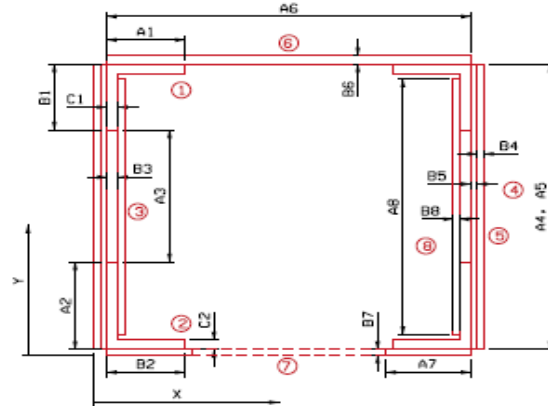
$A_3 = b = 10.0000$ in
 $B_3 = t = 0.5625$ in

Web Plate 1: PL

$A_4 = b = 26.0000$ in
 $B_4 = t = 0.9375$ in

Side Plate 2: PL

$A_8 = b = 24.0000$ in
 $B_8 = t = 0.6875$ in



Member L55-L56

Web Plate 2: PL **

$A_5 = b = 0.0000$ in
 $B_5 = t = 0.0000$ in

Perforated Bottom Cover Plate: PL

$A_7 = b = 5.2500$ in
 $B_7 = t = 0.6250$ in

**This section only has 1 outside web plate

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	6.7500	26.3438	177.8203	0.1780	12.3041	1021.8822	1022.0602
	Vertical Leg	8.3672	22.3438	186.9543	38.5702	8.3041	576.9799	615.5502
2	Horizontal Leg	6.7500	0.9063	6.1172	0.1780	13.1334	1164.2885	1164.4665
	Vertical Leg	8.3672	4.9063	41.0515	38.5702	9.1334	697.9881	736.5584
3	Plate	11.2500	13.6250	153.2813	93.7500	0.4147	1.9346	95.6846
4	Plate	48.7500	13.6250	664.2188	2746.2500	0.4147	8.3833	2754.6333
5	Plate	0.0000	0.6250	0.0000	0.0000	13.4147	0.0000	0.0000
6	Plate	11.0000	26.8750	295.6250	0.2292	12.8353	1812.1977	1812.4269
7	Perforated Plate	6.5625	0.3125	2.0508	0.2136	13.7272	1236.6091	1236.8228
8	Plate	33.0000	13.6250	449.6250	1584.0000	0.4147	5.6749	1589.6749
Total		140.80		1976.74	4501.94		6525.94	11027.88
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 14.0397 in	$S_{top} = 842.77 \text{ in}^3$			y-bar = 14.0397 in	$S_{top} = 842.77 \text{ in}^3$		
$I_x = 11027.88 \text{ in}^4$	$S_{bott.} = 785.48 \text{ in}^3$			$I_x = 11027.88 \text{ in}^4$	$S_{bott.} = 785.48 \text{ in}^3$		
$C_{top} = 13.0853 \text{ in}$	$A = 140.7969 \text{ in}^2$			$C_{top} = 13.0853 \text{ in}$	$A = 140.7969 \text{ in}^2$		
$C_{bottom} = 14.0397 \text{ in}$	$r_x = 8.8501 \text{ in}$			$C_{bottom} = 14.0397 \text{ in}$	$r_x = 8.8501 \text{ in}$		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I_o	d	Ad^2	$I_{y,gross}$	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.3750	3.9375	13.2891	10.1250	8.0000	216.0000	226.1250	
	Vertical Leg	4.1836	1.2188	5.0988	0.1103	10.7188	480.6598	480.7701	
1 (Right)	Horizontal Leg	3.3750	19.9375	67.2891	10.1250	8.0000	216.0000	226.1250	
	Vertical Leg	4.1836	22.6563	94.7845	0.1103	10.7188	480.6598	480.7701	
2 (Left)	Horizontal Leg	3.3750	3.9375	13.2891	10.1250	8.0000	216.0000	226.1250	
	Vertical Leg	4.1836	1.2188	5.0988	0.1103	10.7188	480.6598	480.7701	
2 (Right)	Horizontal Leg	3.3750	19.9375	67.2891	10.1250	8.0000	216.0000	226.1250	
	Vertical Leg	4.1836	22.6563	94.7845	0.1103	10.7188	480.6598	480.7701	
3 (Left)	Plate	5.6250	1.2188	6.8555	0.1483	10.7188	646.2653	646.4136	
3 (Right)	Plate	5.6250	22.6563	127.4414	0.1483	10.7188	646.2653	646.4136	
4 (Left)	Plate	24.3750	0.4688	11.4258	1.7853	11.4688	3206.0980	3207.8833	
4 (Right)	Plate	24.3750	23.4063	570.5273	1.7853	11.4688	3206.0980	3207.8833	
5 (Left)	Plate	0.0000	0.9375	0.0000	0.0000	11.0000	0.0000	0.0000	
5 (Right)	Plate	0.0000	22.9375	0.0000	0.0000	11.0000	0.0000	0.0000	
6	Plate	11.0000	11.9375	131.3125	443.6667	0.0000	0.0000	443.6667	
7 (Left)	Perforated Plate	3.2813	3.5625	11.6895	7.5366	8.3750	230.1489	237.6855	
7 (Right)	Perforated Plate	3.2813	20.3125	66.6504	7.5366	8.3750	230.1489	237.6855	
8 (Left)	Plate	16.5000	1.8438	30.4219	0.6499	10.0938	1681.0825	1681.7324	
8 (Right)	Plate	16.5000	22.0313	363.5156	0.6499	10.0938	1681.0825	1681.7324	
Total		140.80		1680.76	494.61		14313.83	14818.68	
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 11.9375 in	$S_{right} = 1241.36 \text{ in}^3$			x-bar = 11.9375 in	$S_{right} = 1241.36 \text{ in}^3$		
$I_y = 14818.68 \text{ in}^4$	$S_{left} = 1241.36 \text{ in}^3$			$I_y = 14818.68 \text{ in}^4$	$S_{left} = 1241.36 \text{ in}^3$		
$C_{right} = 11.9375 \text{ in}$	$A = 140.7969 \text{ in}^2$			$C_{right} = 11.9375 \text{ in}$	$A = 140.7969 \text{ in}^2$		
$C_{left} = 11.9375 \text{ in}$	$r_y = 10.2591 \text{ in}$			$C_{left} = 11.9375 \text{ in}$	$r_y = 10.2591 \text{ in}$		



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_l = 0.5625$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_l = 0.5625$ in

Top Cover Plate: PL

$A_6 = b = 22.0000$ in
 $B_6 = t = 0.5000$ in

Side Plate 1: PL

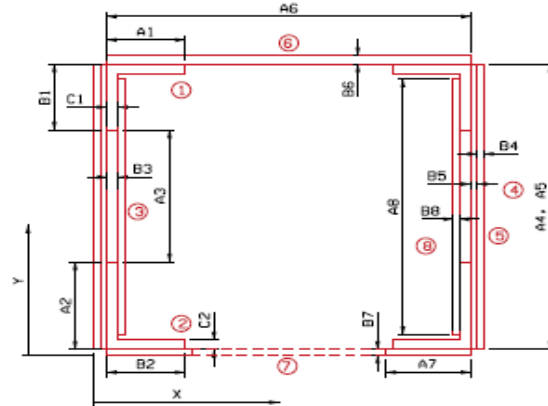
$A_3 = b = 10.0000$ in
 $B_3 = t = 0.5625$ in

Web Plate 1: PL

$A_4 = b = 26.0000$ in
 $B_4 = t = 0.9375$ in

Side Plate 2: PL

$A_8 = b = 24.0000$ in
 $B_8 = t = 0.4375$ in



Member L56-L57

Web Plate 2: PL **

$A_5 = b = 0.0000$ in
 $B_5 = t = 0.0000$ in

Perforated Bottom Cover Plate: PL

$A_7 = b = 5.2500$ in
 $B_7 = t = 0.6250$ in

**This section only has 1 outside web plate

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	6.7500	26.3438	177.8203	0.1780	12.2654	1015.4746	1015.6525
	Vertical Leg	8.3672	22.3438	186.9543	38.5702	8.2654	571.6234	610.1936
2	Horizontal Leg	6.7500	0.9063	6.1172	0.1780	13.1721	1171.1489	1171.3268
	Vertical Leg	8.3672	4.9063	41.0515	38.5702	9.1721	703.9059	742.4761
3	Plate	11.2500	13.6250	153.2813	93.7500	0.4533	2.3119	96.0619
4	Plate	48.7500	13.6250	664.2188	2746.2500	0.4533	10.0183	2756.2683
5	Plate	0.0000	0.6250	0.0000	0.0000	13.4533	0.0000	0.0000
6	Plate	11.0000	26.8750	295.6250	0.2292	12.7967	1801.3041	1801.5332
7	Perforated Plate	6.5625	0.3125	2.0508	0.2136	13.7658	1243.5800	1243.7937
8	Plate	21.0000	13.6250	286.1250	1008.0000	0.4533	4.3156	1012.3156
Total		128.80		1813.24	3925.94		6523.68	10449.62
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 14.0783 in	S _{top} = 800.94 in ³			y-bar = 14.0783 in	S _{top} = 800.94 in ³		
I _x = 10449.62 in ⁴	S _{bott.} = 742.25 in ³			I _x = 10449.62 in ⁴	S _{bott.} = 742.25 in ³		
C _{top} = 13.0467 in	A = 128.7969 in ²			C _{top} = 13.0467 in	A = 128.7969 in ²		
C _{bottom} = 14.0783 in	r _x = 9.0074 in			C _{bottom} = 14.0783 in	r _x = 9.0074 in		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.3750	3.9375	13.2891	10.1250	8.0000	216.0000	226.1250	
	Vertical Leg	4.1836	1.2188	5.0988	0.1103	10.7188	480.6598	480.7701	
1 (Right)	Horizontal Leg	3.3750	19.9375	67.2891	10.1250	8.0000	216.0000	226.1250	
	Vertical Leg	4.1836	22.6563	94.7845	0.1103	10.7188	480.6598	480.7701	
2 (Left)	Horizontal Leg	3.3750	3.9375	13.2891	10.1250	8.0000	216.0000	226.1250	
	Vertical Leg	4.1836	1.2188	5.0988	0.1103	10.7188	480.6598	480.7701	
2 (Right)	Horizontal Leg	3.3750	19.9375	67.2891	10.1250	8.0000	216.0000	226.1250	
	Vertical Leg	4.1836	22.6563	94.7845	0.1103	10.7188	480.6598	480.7701	
3 (Left)	Plate	5.6250	1.2188	6.8555	0.1483	10.7188	646.2653	646.4136	
3 (Right)	Plate	5.6250	22.6563	127.4414	0.1483	10.7188	646.2653	646.4136	
4 (Left)	Plate	24.3750	0.4688	11.4258	1.7853	11.4688	3206.0980	3207.8833	
4 (Right)	Plate	24.3750	23.4063	570.5273	1.7853	11.4688	3206.0980	3207.8833	
5 (Left)	Plate	0.0000	0.9375	0.0000	0.0000	11.0000	0.0000	0.0000	
5 (Right)	Plate	0.0000	22.9375	0.0000	0.0000	11.0000	0.0000	0.0000	
6	Plate	11.0000	11.9375	131.3125	443.6667	0.0000	0.0000	443.6667	
7 (Left)	Perforated Plate	3.2813	3.5625	11.6895	7.5366	8.3750	230.1489	237.6855	
7 (Right)	Perforated Plate	3.2813	20.3125	66.6504	7.5366	8.3750	230.1489	237.6855	
8 (Left)	Plate	10.5000	1.7188	18.0469	0.1675	10.2188	1096.4399	1096.6074	
8 (Right)	Plate	10.5000	22.1563	232.6406	0.1675	10.2188	1096.4399	1096.6074	
Total		128.80		1537.51	493.65		13144.54	13648.43	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 11.9375 in	S _{right} = 1143.32 in ³			x-bar = 11.9375 in	S _{right} = 1143.32 in ³		
I _y = 13648.43 in ⁴	S _{left} = 1143.32 in ³			I _y = 13648.43 in ⁴	S _{left} = 1143.32 in ³		
C _{right} = 11.9375 in	A = 128.7969 in ²			C _{right} = 11.9375 in	A = 128.7969 in ²		
C _{left} = 11.9375 in	r _y = 10.2941 in			C _{left} = 11.9375 in	r _y = 10.2941 in		



Made By KMW
Checked By ADK

Date 1/31/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.5625$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.5625$ in

Top Cover Plate:

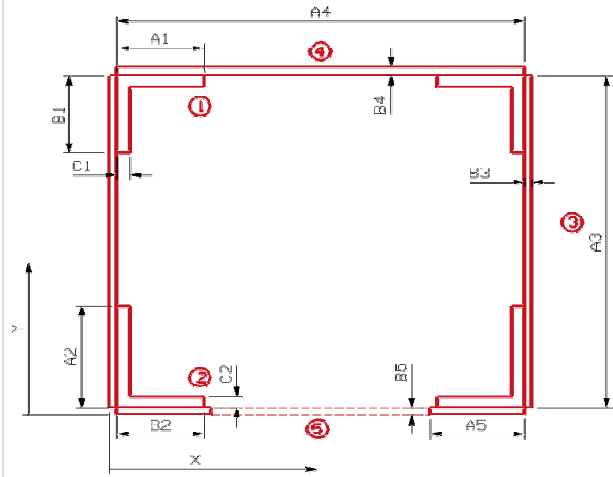
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.5000$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.6250$ in



Member L57-L58

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	6.7500	26.3438	177.8203	0.1780	11.9457	963.2167	963.3947
	Vertical Leg	8.3672	22.3438	186.9543	38.5702	7.9457	528.2498	566.8200
2	Horizontal Leg	6.7500	0.9063	6.1172	0.1780	13.4918	1228.7010	1228.8790
	Vertical Leg	8.3672	4.9063	41.0515	38.5702	9.4918	753.8421	792.4124
3	Plate	22.7500	13.6250	309.9688	1281.5833	0.7731	13.5970	1295.1803
4	Plate	11.7500	26.8750	315.7813	0.2448	12.4769	1829.1608	1829.4056
5	Perforated Plate	7.5000	0.3125	2.3438	0.2441	14.0856	1488.0291	1488.2732
Total		72.23		1040.04	1359.57		6804.80	8164.37
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	7.8333	0.1250	-0.9792	27.0625	-26.4987	-0.0013	12.8384	-161.3917
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.98	-26.50	0.00		-161.39	-161.39



Made By KMW
Checked By ADK

Date 1/31/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.3981 in	S _{top} =	641.50 in ³	y-bar =	14.2241 in	S _{top} =	620.34 in ³
I _x =	8164.37 in ⁴	S _{bott.} =	567.04 in ³	I _x =	8002.97 in ⁴	S _{bott.} =	562.64 in ³
C _{top} =	12.7269 in	A =	72.2344 in ²	C _{top} =	12.9009 in	A =	71.2552 in ²
C _{bottom} =	14.3981 in	r _x =	10.6314 in	C _{bottom} =	14.2241 in	r _x =	10.5978 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.3750	3.4375	11.6016	10.1250	8.7500	258.3984	268.5234	
	Vertical Leg	4.1836	0.7188	3.0070	0.1103	11.4688	550.2774	550.3877	
1 (Right)	Horizontal Leg	3.3750	20.9375	70.6641	10.1250	8.7500	258.3984	268.5234	
	Vertical Leg	4.1836	23.6563	98.9681	0.1103	11.4688	550.2774	550.3877	
2 (Left)	Horizontal Leg	3.3750	3.4375	11.6016	10.1250	8.7500	258.3984	268.5234	
	Vertical Leg	4.1836	0.7188	3.0070	0.1103	11.4688	550.2774	550.3877	
2 (Right)	Horizontal Leg	3.3750	20.9375	70.6641	10.1250	8.7500	258.3984	268.5234	
	Vertical Leg	4.1836	23.6563	98.9681	0.1103	11.4688	550.2774	550.3877	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	11.7500	12.1875	143.2031	540.7448	0.0000	0.0000	540.7448	
5 (Left)	Perforated Plate	3.7500	3.4375	12.8906	11.2500	8.7500	287.1094	298.3594	
5 (Right)	Perforated Plate	3.7500	20.9375	78.5156	11.2500	8.7500	287.1094	298.3594	
Total		72.23		880.36	604.55		7067.88	7672.43	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1250	7.8333	-0.9792	8.2708	-8.0985	-5.0069	3.9705	-15.4363	-20.4432
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.98		-8.10	-5.01		-15.44	-20.44

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	629.53 in ³	x-bar =	12.2413 in	S _{right} =	630.64 in ³
I _y =	7672.43 in ⁴	S _{left} =	629.53 in ³	I _y =	7651.99 in ⁴	S _{left} =	625.09 in ³
C _{right} =	12.1875 in	A =	72.2344 in ²	C _{right} =	12.1337 in	A =	71.2552 in ²
C _{left} =	12.1875 in	r _y =	10.3061 in	C _{left} =	12.2413 in	r _y =	10.3628 in



Made By KMW
Checked By ADK

Date 1/31/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.4375$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.4375$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L58-L59

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	3.5000	26.1563	91.5469	0.0558	11.7092	479.8654	479.9212	
	Vertical Leg	6.6172	22.1563	146.6121	31.5372	7.7092	393.2669	424.8041	
2	Horizontal Leg	3.5000	0.5938	2.0781	0.0558	13.8533	671.7027	671.7586	
	Vertical Leg	6.6172	4.5938	30.3977	31.5372	9.8533	642.4517	673.9889	
3	Plate	19.5000	13.3750	260.8125	1098.5000	1.0721	22.4129	1120.9129	
4	Plate	8.8125	26.5625	234.0820	0.1033	12.1154	1293.5263	1293.6296	
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.2596	915.0117	915.0645	
Total		53.05		766.37	1161.84		4418.24	5580.08	
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	
1	6.0000	0.1875	-1.1250	26.6563	-29.9883	-0.0033	12.3399	-171.3082	-171.3115
2	0.1250	6.0000	-0.7500	3.3750	-2.5313	-2.2500	10.9413	-89.7843	-92.0343
3	0.1250	6.0000	-0.7500	23.3750	-17.5313	-2.2500	9.0587	-61.5448	-63.7948
4	2.5000	0.1250	-0.3125	26.3750	-8.2422	-0.0004	12.0587	-45.4412	-45.4416
5	2.5000	0.1250	-0.3125	26.3750	-8.2422	-0.0004	12.0587	-45.4412	-45.4416
6	2.5000	0.1875	-0.4688	0.3750	-0.1758	-0.0014	13.9413	-91.1064	-91.1078
7	2.5000	0.1875	-0.4688	0.3750	-0.1758	-0.0014	13.9413	-91.1064	-91.1078
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-4.19	-66.89	-4.51		-595.73	-600.24	



Made By KMW
Checked By ADK

Date 1/31/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.4471 in	S _{top} =	453.56 in ³	y-bar =	14.3163 in	S _{top} =	400.51 in ³
I _x =	5580.08 in ⁴	S _{bott.} =	386.24 in ³	I _x =	4979.84 in ⁴	S _{bott.} =	347.84 in ³
C _{top} =	12.3029 in	A =	53.0469 in ²	C _{top} =	12.4337 in	A =	48.8594 in ²
C _{bottom} =	14.4471 in	r _x =	10.2563 in	C _{bottom} =	14.3163 in	r _x =	10.0956 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.7500	2.3750	4.1563	2.3333	9.7500	166.3594	168.6927	
	Vertical Leg	3.3086	0.5938	1.9645	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	1.7500	21.8750	38.2813	2.3333	9.7500	166.3594	168.6927	
	Vertical Leg	3.3086	23.6563	78.2689	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	1.7500	2.3750	4.1563	2.3333	9.7500	166.3594	168.6927	
	Vertical Leg	3.3086	0.5938	1.9645	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	1.7500	21.8750	38.2813	2.3333	9.7500	166.3594	168.6927	
	Vertical Leg	3.3086	23.6563	78.2689	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	9.7500	0.1875	1.8281	0.1143	11.9375	1389.4131	1389.5273	
3 (Right)	Plate	9.7500	24.0625	234.6094	0.1143	11.9375	1389.4131	1389.5273	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.3750	7.5938	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.8750	46.9688	6.7500	8.7500	172.2656	179.0156	
Total		53.05		643.19	428.83		5548.57	5977.40	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1875	6.0000	-1.1250	12.1250	-13.6406	-3.3750	0.3703	-0.1543	-3.5293
2	6.0000	0.1250	-0.7500	0.0625	-0.0469	-0.0010	12.4328	-115.9313	-115.9323
3	6.0000	0.1250	-0.7500	0.0625	-0.0469	-0.0010	12.4328	-115.9313	-115.9323
4	0.1250	2.5000	-0.3125	1.6250	-0.5078	-0.1628	10.8703	-36.9262	-37.0890
5	0.1250	2.5000	-0.3125	22.6250	-7.0703	-0.1628	10.1297	-32.0657	-32.2285
6	0.1875	2.5000	-0.4688	1.6250	-0.7617	-0.2441	10.8703	-55.3893	-55.6335
7	0.1875	2.5000	-0.4688	22.6250	-10.6055	-0.2441	10.1297	-48.0986	-48.3427
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-4.19		-32.68	-4.19		-404.50	-408.69

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	492.98 in ³	x-bar =	12.4953 in	S _{right} =	473.74 in ³
I _y =	5977.40 in ⁴	S _{left} =	492.98 in ³	I _y =	5568.71 in ⁴	S _{left} =	445.66 in ³
C _{right} =	12.1250 in	A =	53.0469 in ²	C _{right} =	11.7547 in	A =	48.8594 in ²
C _{left} =	12.1250 in	r _y =	10.6152 in	C _{left} =	12.4953 in	r _y =	10.6759 in

South Truss

Member L59-L60



Made By KMW
Checked By ADK

Date 1/31/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.4375$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.4375$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L59-L60

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.5000	26.1563	91.5469	0.0558	11.7092	479.8654	479.9212
	Vertical Leg	6.6172	22.1563	146.6121	31.5372	7.7092	393.2669	424.8041
2	Horizontal Leg	3.5000	0.5938	2.0781	0.0558	13.8533	671.7027	671.7586
	Vertical Leg	6.6172	4.5938	30.3977	31.5372	9.8533	642.4517	673.9889
3	Plate	19.5000	13.3750	260.8125	1098.5000	1.0721	22.4129	1120.9129
4	Plate	8.8125	26.5625	234.0820	0.1033	12.1154	1293.5263	1293.6296
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.2596	915.0117	915.0645
Total		53.05		766.37	1161.84		4418.24	5580.08
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	6.0000	0.1875	-1.1250	0.0938	-0.1055	-0.0033	14.9891	-252.7576
2	6.0000	0.1875	-1.1250	0.0938	-0.1055	-0.0033	14.9891	-252.7576
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.25	-0.21	-0.01		-505.52	-505.52



Made By KMW
Checked By ADK

Date 1/31/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.4471 in	S _{top} =	453.56 in ³	y-bar =	15.0829 in	S _{top} =	434.94 in ³
I _x =	5580.08 in ⁴	S _{bott.} =	386.24 in ³	I _x =	5074.56 in ⁴	S _{bott.} =	336.45 in ³
C _{top} =	12.3029 in	A =	53.0469 in ²	C _{top} =	11.6671 in	A =	50.7969 in ²
C _{bottom} =	14.4471 in	r _x =	10.2563 in	C _{bottom} =	15.0829 in	r _x =	9.9949 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.7500	2.3750	4.1563	2.3333	9.7500	166.3594	168.6927	
	Vertical Leg	3.3086	0.5938	1.9645	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	1.7500	21.8750	38.2813	2.3333	9.7500	166.3594	168.6927	
	Vertical Leg	3.3086	23.6563	78.2689	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	1.7500	2.3750	4.1563	2.3333	9.7500	166.3594	168.6927	
	Vertical Leg	3.3086	0.5938	1.9645	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	1.7500	21.8750	38.2813	2.3333	9.7500	166.3594	168.6927	
	Vertical Leg	3.3086	23.6563	78.2689	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	9.7500	0.1875	1.8281	0.1143	11.9375	1389.4131	1389.5273	
3 (Right)	Plate	9.7500	24.0625	234.6094	0.1143	11.9375	1389.4131	1389.5273	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.3750	7.5938	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.8750	46.9688	6.7500	8.7500	172.2656	179.0156	
Total		53.05		643.19	428.83		5548.57	5977.40	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1875	6.0000	-1.1250	3.3750	-3.7969	-3.3750	8.7500	-86.1328	-89.5078
2	0.1875	6.0000	-1.1250	20.8750	-23.4844	-3.3750	8.7500	-86.1328	-89.5078
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.25		-27.28	-6.75		-172.27	-179.02

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	492.98 in ³	x-bar =	12.1250 in	S _{right} =	478.22 in ³
I _y =	5977.40 in ⁴	S _{left} =	492.98 in ³	I _y =	5798.38 in ⁴	S _{left} =	478.22 in ³
C _{right} =	12.1250 in	A =	53.0469 in ²	C _{right} =	12.1250 in	A =	50.7969 in ²
C _{left} =	12.1250 in	r _y =	10.6152 in	C _{left} =	12.1250 in	r _y =	10.6840 in

South Truss

Member L60-L61



Made By KMW
Checked By ADK

Date 1/18/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.4375$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_f = 0.4375$ in

Top Cover Plate:

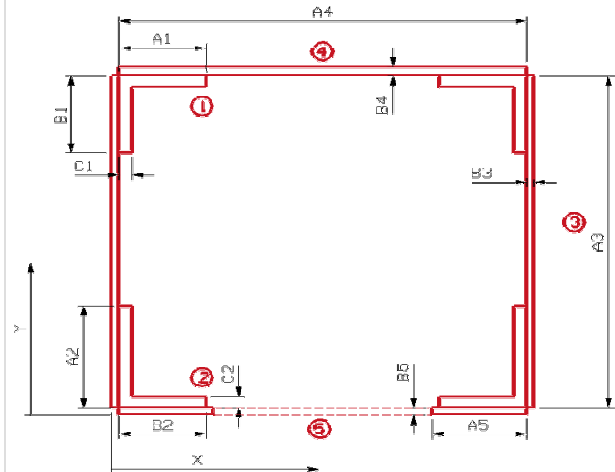
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member L60-L61

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x, gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.2500	26.2813	137.9766	0.0837	12.1487	774.8582	774.9420
	Vertical Leg	6.6172	22.2813	147.4392	31.5372	8.1487	439.3950	470.9321
2	Horizontal Leg	5.2500	0.7188	3.7734	0.0837	13.4138	944.6261	944.7098
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	9.4138	586.4069	617.9441
3	Plate	19.5000	13.5000	263.2500	1098.5000	0.6325	7.8012	1106.3012
4	Plate	8.8125	26.6875	235.1836	0.1033	12.5550	1389.0962	1389.1995
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	13.8825	1156.3434	1156.4684
Total		58.05		820.35	1161.97		5298.53	6460.50
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	2.5000	0.0938	-0.2344	0.5000	-0.1172	-0.0002	13.6429	-43.6238
2	2.5000	0.0938	-0.2344	0.5000	-0.1172	-0.0002	13.6429	-43.6238
3	2.5000	0.0938	-0.2344	26.5000	-6.2109	-0.0002	12.3571	-35.7887
4	2.5000	0.0938	-0.2344	26.5000	-6.2109	-0.0002	12.3571	-35.7887
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.94	-12.66	0.00		-158.82	-158.83



Made By KMW
Checked By ADK

Date 1/18/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	14.1325	in	S _{top} =	507.00	in ³	y-bar =	14.1429	in	S _{top} =	494.94	in ³
I _x =	6460.50	in ⁴	S _{bott.} =	457.14	in ³	I _x =	6301.67	in ⁴	S _{bott.} =	445.57	in ³
C _{top} =	12.7425	in	A =	58.0469	in ²	C _{top} =	12.7321	in	A =	57.1094	in ²
C _{bottom} =	14.1325	in	r _x =	10.5498	in	C _{bottom} =	14.1429	in	r _x =	10.5045	in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.3750	8.8594	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.5938	1.9645	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	20.8750	54.7969	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.6563	78.2689	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.3750	8.8594	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.5938	1.9645	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	20.8750	54.7969	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.6563	78.2689	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	9.7500	0.1875	1.8281	0.1143	11.9375	1389.4131	1389.5273	
3 (Right)	Plate	9.7500	24.0625	234.6094	0.1143	11.9375	1389.4131	1389.5273	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.3750	10.1250	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.8750	62.6250	9.0000	8.7500	229.6875	238.6875	
Total		58.05		703.82	455.50		5801.88	6257.38	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0938	2.5000	-0.2344	1.6250	-0.3809	-0.1221	10.5000	-25.8398	-25.9619
2	0.0938	2.5000	-0.2344	22.6250	-5.3027	-0.1221	10.5000	-25.8398	-25.9619
3	0.0938	2.5000	-0.2344	1.6250	-0.3809	-0.1221	10.5000	-25.8398	-25.9619
4	0.0938	2.5000	-0.2344	22.6250	-5.3027	-0.1221	10.5000	-25.8398	-25.9619
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.94		-11.37	-0.49		-103.36	-103.85

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.1250	in	S _{right} =	516.07	in ³	x-bar =	12.1250	in	S _{right} =	507.51	in ³
I _y =	6257.38	in ⁴	S _{left} =	516.07	in ³	I _y =	6153.53	in ⁴	S _{left} =	507.51	in ³
C _{right} =	12.1250	in	A =	58.0469	in ²	C _{right} =	12.1250	in	A =	57.1094	in ²
C _{left} =	12.1250	in	r _y =	10.3826	in	C _{left} =	12.1250	in	r _y =	10.3803	in

South Truss

Member L61-L62



Made By KMW
Checked By ADK

Date 1/31/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.4375$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_f = 0.4375$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.5000$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member L61-L62

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x, gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.2500	26.2813	137.9766	0.0837	12.2124	783.0045	783.0882
	Vertical Leg	6.6172	22.2813	147.4392	31.5372	8.2124	446.2908	477.8280
2	Horizontal Leg	5.2500	0.7188	3.7734	0.0837	13.3501	935.6764	935.7601
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	9.3501	578.4984	610.0356
3	Plate	26.0000	13.5000	351.0000	1464.6667	0.5688	8.4121	1473.0788
4	Plate	8.8125	26.6875	235.1836	0.1033	12.6187	1403.2264	1403.3297
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	13.8188	1145.7569	1145.8819
Total		64.55		908.10	1528.14		5300.87	6829.00
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	2.5000	0.0625	-0.1563	26.5000	-4.1406	-0.0001	12.4917	-24.3815
2	2.5000	0.0625	-0.1563	26.5000	-4.1406	-0.0001	12.4917	-24.3815
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.31	-8.28	0.00		-48.76	-48.76



Made By KMW
Checked By ADK

Date 1/31/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.0688 in	S _{top} =	533.26 in ³	y-bar =	14.0083 in	S _{top} =	526.96 in ³
I _x =	6829.00 in ⁴	S _{bott.} =	485.40 in ³	I _x =	6780.24 in ⁴	S _{bott.} =	484.01 in ³
C _{top} =	12.8062 in	A =	64.5469 in ²	C _{top} =	12.8667 in	A =	64.2344 in ²
C _{bottom} =	14.0688 in	r _x =	10.2859 in	C _{bottom} =	14.0083 in	r _x =	10.2740 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.5000	9.1875	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.7188	2.3781	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	21.0000	55.1250	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7813	78.6825	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.5000	9.1875	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.7188	2.3781	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	21.0000	55.1250	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7813	78.6825	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	13.0000	0.2500	3.2500	0.2708	12.0000	1872.0000	1872.2708	
3 (Right)	Plate	13.0000	24.2500	315.2500	0.2708	12.0000	1872.0000	1872.2708	
4	Plate	8.8125	12.2500	107.9531	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.5000	10.5000	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	21.0000	63.0000	9.0000	8.7500	229.6875	238.6875	
Total		64.55		790.70	455.81		6767.05	7222.86	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0625	2.5000	-0.1563	1.7500	-0.2734	-0.0814	10.5000	-17.2266	-17.3079
2	0.0625	2.5000	-0.1563	22.7500	-3.5547	-0.0814	10.5000	-17.2266	-17.3079
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.31		-3.83	-0.16		-34.45	-34.62

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2500 in	S _{right} =	589.62 in ³	x-bar =	12.2500 in	S _{right} =	586.80 in ³
I _y =	7222.86 in ⁴	S _{left} =	589.62 in ³	I _y =	7188.25 in ⁴	S _{left} =	586.80 in ³
C _{right} =	12.2500 in	A =	64.5469 in ²	C _{right} =	12.2500 in	A =	64.2344 in ²
C _{left} =	12.2500 in	r _y =	10.5783 in	C _{left} =	12.2500 in	r _y =	10.5786 in



Made By KMW
Checked By ADK

Date 1/31/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

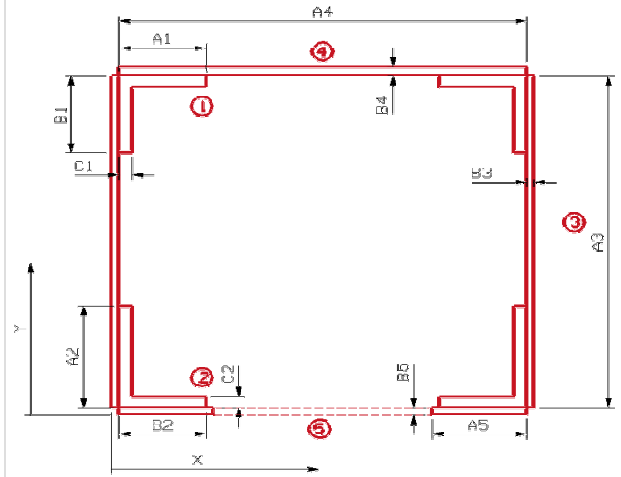
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.4375$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_f = 0.4375$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.5000$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member L62-L63

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.2500	26.2813	137.9766	0.0837	12.2124	783.0045	783.0882
	Vertical Leg	6.6172	22.2813	147.4392	31.5372	8.2124	446.2908	477.8280
2	Horizontal Leg	5.2500	0.7188	3.7734	0.0837	13.3501	935.6764	935.7601
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	9.3501	578.4984	610.0356
3	Plate	26.0000	13.5000	351.0000	1464.6667	0.5688	8.4121	1473.0788
4	Plate	8.8125	26.6875	235.1836	0.1033	12.6187	1403.2264	1403.3297
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	13.8188	1145.7569	1145.8819
Total		64.55		908.10	1528.14		5300.87	6829.00
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	2.5000	0.0938	-0.2344	26.5000	-6.2109	-0.0002	12.5174	-36.7232
2	2.5000	0.0938	-0.2344	26.5000	-6.2109	-0.0002	12.5174	-36.7232
3	0.0625	2.5000	-0.1563	1.7500	-0.2734	-0.0814	12.2326	-23.3806
4	0.0625	2.5000	-0.1563	1.7500	-0.2734	-0.0814	12.2326	-23.3806
5	0.0625	2.5000	-0.1563	25.2500	-3.9453	-0.0814	11.2674	-19.8367
6	0.0625	2.5000	-0.1563	25.2500	-3.9453	-0.0814	11.2674	-19.8367
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.09	-20.86	-0.33		-159.88	-160.21



Made By KMW
Checked By ADK

Date 1/31/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.0688 in	S _{top} =	533.26 in ³	y-bar =	13.9826 in	S _{top} =	517.26 in ³
I _x =	6829.00 in ⁴	S _{bott.} =	485.40 in ³	I _x =	6668.80 in ⁴	S _{bott.} =	476.94 in ³
C _{top} =	12.8062 in	A =	64.5469 in ²	C _{top} =	12.8924 in	A =	63.4531 in ²
C _{bottom} =	14.0688 in	r _x =	10.2859 in	C _{bottom} =	13.9826 in	r _x =	10.2517 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.5000	9.1875	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.7188	2.3781	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	21.0000	55.1250	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7813	78.6825	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.5000	9.1875	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.7188	2.3781	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	21.0000	55.1250	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7813	78.6825	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	13.0000	0.2500	3.2500	0.2708	12.0000	1872.0000	1872.2708	
3 (Right)	Plate	13.0000	24.2500	315.2500	0.2708	12.0000	1872.0000	1872.2708	
4	Plate	8.8125	12.2500	107.9531	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.5000	10.5000	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	21.0000	63.0000	9.0000	8.7500	229.6875	238.6875	
Total		64.55		790.70	455.81		6767.05	7222.86	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0938	2.5000	-0.2344	1.7500	-0.4102	-0.1221	10.5000	-25.8398	-25.9619
2	0.0938	2.5000	-0.2344	22.7500	-5.3320	-0.1221	10.5000	-25.8398	-25.9619
3	2.5000	0.0625	-0.1563	0.5000	-0.0781	-0.0001	11.7500	-21.5723	-21.5723
4	2.5000	0.0625	-0.1563	24.0000	-3.7500	-0.0001	11.7500	-21.5723	-21.5723
5	2.5000	0.0625	-0.1563	0.5000	-0.0781	-0.0001	11.7500	-21.5723	-21.5723
6	2.5000	0.0625	-0.1563	24.0000	-3.7500	-0.0001	11.7500	-21.5723	-21.5723
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.09		-13.40	-0.24		-137.97	-138.21

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2500 in	S _{right} =	589.62 in ³	x-bar =	12.2500 in	S _{right} =	578.34 in ³
I _y =	7222.86 in ⁴	S _{left} =	589.62 in ³	I _y =	7084.65 in ⁴	S _{left} =	578.34 in ³
C _{right} =	12.2500 in	A =	64.5469 in ²	C _{right} =	12.2500 in	A =	63.4531 in ²
C _{left} =	12.2500 in	r _y =	10.5783 in	C _{left} =	12.2500 in	r _y =	10.5665 in

South Truss

Member L63-L64



Made By KMW
Checked By ADK

Date 1/31/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.5625$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L63-L64

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg		2.5000	26.2188	65.5469	0.0203	11.7537	345.3724	345.3927
	Vertical Leg		2.3047	24.2188	55.8167	2.6115	9.7537	219.2547	221.8662
2	Horizontal Leg		2.5000	0.5313	1.3281	0.0203	13.9338	485.3785	485.3988
	Vertical Leg		2.3047	2.5313	5.8337	2.6115	11.9338	328.2246	330.8361
3	Plate		29.2500	13.3750	391.2188	1647.7500	1.0901	34.7565	1682.5065
4	Plate		8.8125	26.5625	234.0820	0.1033	12.0974	1289.6897	1289.7930
5	Perforated Plate		4.5000	0.1875	0.8438	0.0527	14.2776	917.3208	917.3735
Total			52.17		754.67	1653.17		3620.00	5273.17
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1250	6.5000	-0.8125	3.6250	-2.9453	-2.8607	12.4667	-126.2776	-129.1383
2	0.1250	13.0000	-1.6250	6.8750	-11.1719	-22.8854	9.2167	-138.0398	-160.9252
3	6.0000	0.3125	-1.8750	0.1563	-0.2930	-0.0153	15.9355	-476.1349	-476.1501
4	6.0000	0.3125	-1.8750	0.1563	-0.2930	-0.0153	15.9355	-476.1349	-476.1501
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-6.19		-14.70	-25.78		-1216.59	-1242.36



Made By KMW
Checked By ADK

Date 1/31/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.4651 in	S _{top} =	429.24 in ³	y-bar =	16.0917 in	S _{top} =	378.18 in ³
I _x =	5273.17 in ⁴	S _{bott.} =	364.54 in ³	I _x =	4030.80 in ⁴	S _{bott.} =	250.49 in ³
C _{top} =	12.2849 in	A =	52.1719 in ²	C _{top} =	10.6583 in	A =	45.9844 in ²
C _{bottom} =	14.4651 in	r _x =	10.0535 in	C _{bottom} =	16.0917 in	r _x =	9.3625 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.5625	3.2031	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.7188	0.8282	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	22.0625	27.5781	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.9063	27.5482	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.5625	3.2031	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.7188	0.8282	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	22.0625	27.5781	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.9063	27.5482	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	14.6250	0.2813	4.1133	0.3856	12.0313	2116.9830	2117.3687	
3 (Right)	Plate	14.6250	24.3438	356.0273	0.3856	12.0313	2116.9830	2117.3687	
4	Plate	8.8125	12.3125	108.5039	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.5625	8.0156	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	21.0625	47.3906	6.7500	8.7500	172.2656	179.0156	
Total		52.17		642.37	426.53		5673.38	6099.91	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	6.5000	0.1250	-0.8125	0.0625	-0.0508	-0.0011	12.0336	-117.6552	-117.6563
2	13.0000	0.1250	-1.6250	24.5625	-39.9141	-0.0021	12.4664	-252.5449	-252.5471
3	0.3125	6.0000	-1.8750	3.5625	-6.6797	-5.6250	8.5336	-136.5404	-142.1654
4	0.3125	6.0000	-1.8750	21.0625	-39.4922	-5.6250	8.9664	-150.7447	-156.3697
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-6.19		-86.14	-11.25		-657.49	-668.74

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3125 in	S _{right} =	495.42 in ³	x-bar =	12.0961 in	S _{right} =	433.49 in ³
I _y =	6099.91 in ⁴	S _{left} =	495.42 in ³	I _y =	5431.17 in ⁴	S _{left} =	449.00 in ³
C _{right} =	12.3125 in	A =	52.1719 in ²	C _{right} =	12.5289 in	A =	45.9844 in ²
C _{left} =	12.3125 in	r _y =	10.8129 in	C _{left} =	12.0961 in	r _y =	10.8678 in



Made By KMW
Checked By ADK

Date 1/31/2012
Date 2/16/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

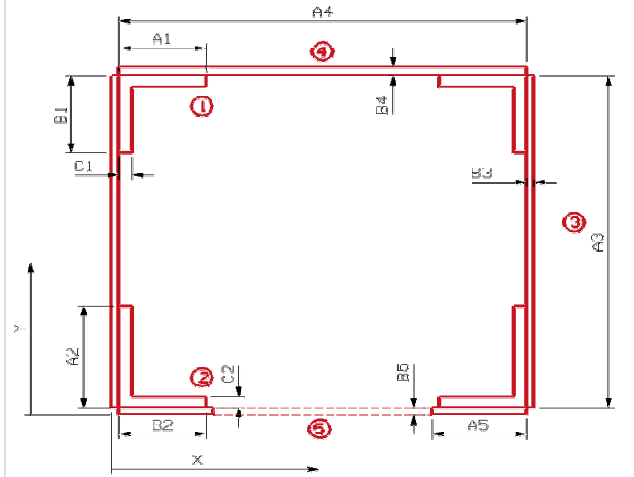
Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:
 $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L64-L65

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5985	336.3153	336.3356	
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5985	212.3354	214.9469	
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.0890	496.2470	496.2674	
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.0890	336.8139	339.4254	
3	Plate	22.7500	13.3750	304.2813	1281.5833	1.2452	35.2750	1316.8583	
4	Plate	8.8125	26.5625	234.0820	0.1033	11.9423	1256.8236	1256.9269	
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.4327	937.3641	937.4168	
Total		45.67		667.73	1287.00		3611.17	4898.18	
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	
1	0.1250	6.0000	-0.7500	3.3750	-2.5313	-2.2500	11.4330	-98.0344	-100.2844
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.75	-2.53	-2.25		-98.03	-100.28	



Made By KMW
Checked By ADK

Date 1/31/2012
Date 2/16/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.6202 in	S _{top} =	403.81 in ³	y-bar =	14.8080 in	S _{top} =	401.76 in ³
I _x =	4898.18 in ⁴	S _{bott.} =	335.03 in ³	I _x =	4797.89 in ⁴	S _{bott.} =	324.01 in ³
C _{top} =	12.1298 in	A =	45.6719 in ²	C _{top} =	11.9420 in	A =	44.9219 in ²
C _{bottom} =	14.6202 in	r _x =	10.3560 in	C _{bottom} =	14.8080 in	r _x =	10.3347 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.4375	7.7344	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.9375	47.1094	6.7500	8.7500	172.2656	179.0156	
Total		45.67		556.63	426.13		4698.37	5124.50	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	6.0000	0.1250	-0.7500	0.0625	-0.0469	-0.0010	12.3274	-113.9742	-113.9752
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.75		-0.05	0.00		-113.97	-113.98

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	420.47 in ³	x-bar =	12.3899 in	S _{right} =	418.06 in ³
I _y =	5124.50 in ⁴	S _{left} =	420.47 in ³	I _y =	5010.52 in ⁴	S _{left} =	404.40 in ³
C _{right} =	12.1875 in	A =	45.6719 in ²	C _{right} =	11.9851 in	A =	44.9219 in ²
C _{left} =	12.1875 in	r _y =	10.5926 in	C _{left} =	12.3899 in	r _y =	10.5612 in



Made By KMW
Checked By ADK

Date 2/2/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

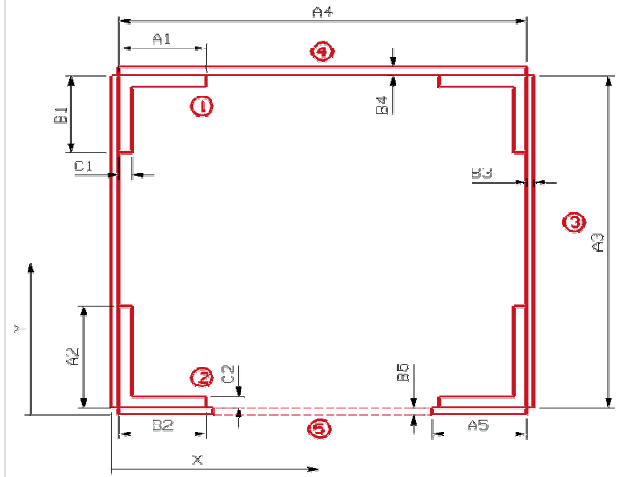
Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:
 $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L65-L66

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5031	330.8057	330.8260
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5031	208.1357	210.7472
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.1844	502.9900	503.0104
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.1844	342.1506	344.7621
3	Plate	19.5000	13.3750	260.8125	1098.5000	1.3406	35.0460	1133.5460
4	Plate	8.8125	26.5625	234.0820	0.1033	11.8469	1236.8243	1236.9276
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.5281	949.7966	949.8493
Total		42.42		624.26	1103.92		3605.75	4709.67
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	10.0000	0.1250	-1.2500	26.6875	-33.3594	-0.0016	12.3354	-190.2015
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.25	-33.36	0.00			-190.20



Made By KMW
Checked By ADK

Date 2/2/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.7156 in	S _{top} =	391.35 in ³	y-bar =	14.3521 in	S _{top} =	364.54 in ³
I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³	I _x =	4519.47 in ⁴	S _{bott.} =	314.90 in ³
C _{top} =	12.0344 in	A =	42.4219 in ²	C _{top} =	12.3979 in	A =	41.1719 in ²
C _{bottom} =	14.7156 in	r _x =	10.5366 in	C _{bottom} =	14.3521 in	r _x =	10.4772 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	9.7500	0.1875	1.8281	0.1143	11.9375	1389.4131	1389.5273	
3 (Right)	Plate	9.7500	24.0625	234.6094	0.1143	11.9375	1389.4131	1389.5273	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.3750	7.5938	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.8750	46.9688	6.7500	8.7500	172.2656	179.0156	
Total		42.42		514.37	425.99		4218.24	4644.23	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1250	10.0000	-1.2500	5.3750	-6.7188	-10.4167	6.9549	-60.4639	-70.8805
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.25		-6.72	-10.42		-60.46	-70.88

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	383.03 in ³	x-bar =	12.3299 in	S _{right} =	383.67 in ³
I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³	I _y =	4573.35 in ⁴	S _{left} =	370.91 in ³
C _{right} =	12.1250 in	A =	42.4219 in ²	C _{right} =	11.9201 in	A =	41.1719 in ²
C _{left} =	12.1250 in	r _y =	10.4631 in	C _{left} =	12.3299 in	r _y =	10.5394 in



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L66-L67

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5031	330.8057	330.8260
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5031	208.1357	210.7472
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.1844	502.9900	503.0104
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.1844	342.1506	344.7621
3	Plate	19.5000	13.3750	260.8125	1098.5000	1.3406	35.0460	1133.5460
4	Plate	8.8125	26.5625	234.0820	0.1033	11.8469	1236.8243	1236.9276
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.5281	949.7966	949.8493
Total		42.42		624.26	1103.92		3605.75	4709.67
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.7156 in	S _{top} =	391.35 in ³	y-bar =	14.7156 in	S _{top} =	391.35 in ³
I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³	I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³
C _{top} =	12.0344 in	A =	42.4219 in ²	C _{top} =	12.0344 in	A =	42.4219 in ²
C _{bottom} =	14.7156 in	r _x =	10.5366 in	C _{bottom} =	14.7156 in	r _x =	10.5366 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	9.7500	0.1875	1.8281	0.1143	11.9375	1389.4131	1389.5273	
3 (Right)	Plate	9.7500	24.0625	234.6094	0.1143	11.9375	1389.4131	1389.5273	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.3750	7.5938	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.8750	46.9688	6.7500	8.7500	172.2656	179.0156	
Total		42.42		514.37	425.99		4218.24	4644.23	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	383.03 in ³	x-bar =	12.1250 in	S _{right} =	383.03 in ³
I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³	I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³
C _{right} =	12.1250 in	A =	42.4219 in ²	C _{right} =	12.1250 in	A =	42.4219 in ²
C _{left} =	12.1250 in	r _y =	10.4631 in	C _{left} =	12.1250 in	r _y =	10.4631 in



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3750$ in

Top Cover Plate:

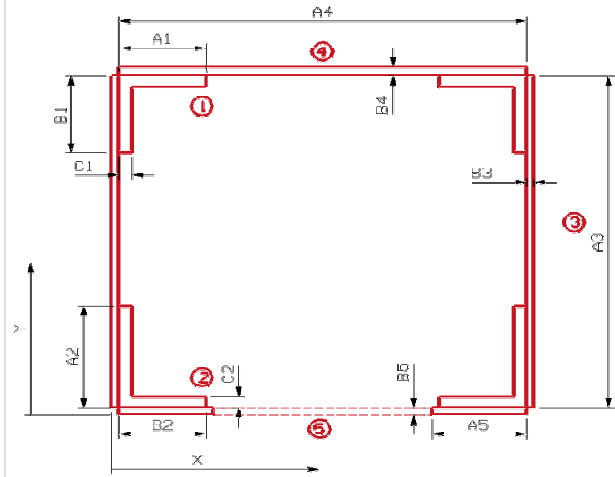
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member L67-L68

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.0000	26.3125	78.9375	0.0352	12.0632	436.5636	436.5988
	Vertical Leg	2.7188	24.3125	66.0996	2.9772	10.0632	275.3233	278.3005
2	Horizontal Leg	3.0000	0.6875	2.0625	0.0352	13.5618	551.7658	551.8010
	Vertical Leg	2.7188	2.6875	7.3066	2.9772	11.5618	363.4284	366.4056
3	Plate	22.7500	13.5000	307.1250	1281.5833	0.7493	12.7724	1294.3557
4	Plate	8.8125	26.6875	235.1836	0.1033	12.4382	1363.3753	1363.4786
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	13.9993	1175.8795	1176.0045
Total		49.00		698.21	1287.84		4179.11	5466.94
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	14.2493	in	S _{top} =	433.00	in ³	y-bar =	14.2493	in	S _{top} =	433.00	in ³
I _x =	5466.94	in ⁴	S _{bott.} =	383.66	in ³	I _x =	5466.94	in ⁴	S _{bott.} =	383.66	in ³
C _{top} =	12.6257	in	A =	49.0000	in ²	C _{top} =	12.6257	in	A =	49.0000	in ²
C _{bottom} =	14.2493	in	r _x =	10.5627	in	C _{bottom} =	14.2493	in	r _x =	10.5627	in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.5000	2.4375	3.6563	2.0000	9.7500	142.5938	144.5938	
	Vertical Leg	1.3594	0.6250	0.8496	0.0159	11.5625	181.7368	181.7527	
1 (Right)	Horizontal Leg	1.5000	21.9375	32.9063	2.0000	9.7500	142.5938	144.5938	
	Vertical Leg	1.3594	23.7500	32.2852	0.0159	11.5625	181.7368	181.7527	
2 (Left)	Horizontal Leg	1.5000	2.4375	3.6563	2.0000	9.7500	142.5938	144.5938	
	Vertical Leg	1.3594	0.6250	0.8496	0.0159	11.5625	181.7368	181.7527	
2 (Right)	Horizontal Leg	1.5000	21.9375	32.9063	2.0000	9.7500	142.5938	144.5938	
	Vertical Leg	1.3594	23.7500	32.2852	0.0159	11.5625	181.7368	181.7527	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.4375	10.3125	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.9375	62.8125	9.0000	8.7500	229.6875	238.6875	
Total		49.00		597.19	431.99		5015.66	5447.64	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.1875	in	S _{right} =	446.99	in ³	x-bar =	12.1875	in	S _{right} =	446.99	in ³
I _y =	5447.64	in ⁴	S _{left} =	446.99	in ³	I _y =	5447.64	in ⁴	S _{left} =	446.99	in ³
C _{right} =	12.1875	in	A =	49.0000	in ²	C _{right} =	12.1875	in	A =	49.0000	in ²
C _{left} =	12.1875	in	r _y =	10.5440	in	C _{left} =	12.1875	in	r _y =	10.5440	in



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3750$ in

Top Cover Plate:

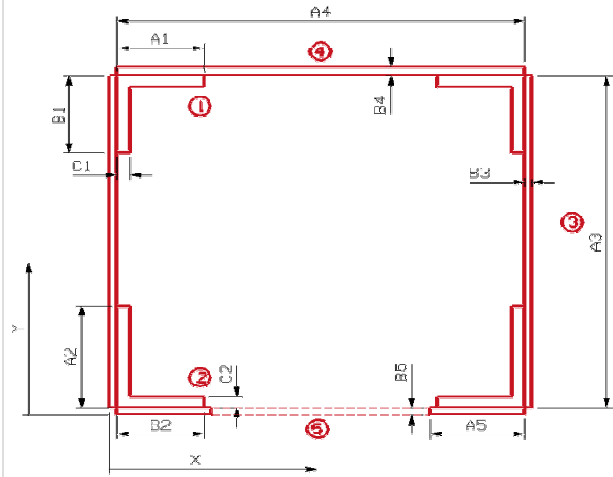
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member L68-L69

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.0000	26.3125	78.9375	0.0352	12.0632	436.5636	436.5988
	Vertical Leg	2.7188	24.3125	66.0996	2.9772	10.0632	275.3233	278.3005
2	Horizontal Leg	3.0000	0.6875	2.0625	0.0352	13.5618	551.7658	551.8010
	Vertical Leg	2.7188	2.6875	7.3066	2.9772	11.5618	363.4284	366.4056
3	Plate	22.7500	13.5000	307.1250	1281.5833	0.7493	12.7724	1294.3557
4	Plate	8.8125	26.6875	235.1836	0.1033	12.4382	1363.3753	1363.4786
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	13.9993	1175.8795	1176.0045
Total		49.00		698.21	1287.84		4179.11	5466.94
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	14.2493	in	S _{top} =	433.00	in ³	y-bar =	14.2493	in	S _{top} =	433.00	in ³
I _x =	5466.94	in ⁴	S _{bott.} =	383.66	in ³	I _x =	5466.94	in ⁴	S _{bott.} =	383.66	in ³
C _{top} =	12.6257	in	A =	49.0000	in ²	C _{top} =	12.6257	in	A =	49.0000	in ²
C _{bottom} =	14.2493	in	r _x =	10.5627	in	C _{bottom} =	14.2493	in	r _x =	10.5627	in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.5000	2.4375	3.6563	2.0000	9.7500	142.5938	144.5938	
	Vertical Leg	1.3594	0.6250	0.8496	0.0159	11.5625	181.7368	181.7527	
1 (Right)	Horizontal Leg	1.5000	21.9375	32.9063	2.0000	9.7500	142.5938	144.5938	
	Vertical Leg	1.3594	23.7500	32.2852	0.0159	11.5625	181.7368	181.7527	
2 (Left)	Horizontal Leg	1.5000	2.4375	3.6563	2.0000	9.7500	142.5938	144.5938	
	Vertical Leg	1.3594	0.6250	0.8496	0.0159	11.5625	181.7368	181.7527	
2 (Right)	Horizontal Leg	1.5000	21.9375	32.9063	2.0000	9.7500	142.5938	144.5938	
	Vertical Leg	1.3594	23.7500	32.2852	0.0159	11.5625	181.7368	181.7527	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.4375	10.3125	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.9375	62.8125	9.0000	8.7500	229.6875	238.6875	
Total		49.00		597.19	431.99		5015.66	5447.64	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.1875	in	S _{right} =	446.99	in ³	x-bar =	12.1875	in	S _{right} =	446.99	in ³
I _y =	5447.64	in ⁴	S _{left} =	446.99	in ³	I _y =	5447.64	in ⁴	S _{left} =	446.99	in ³
C _{right} =	12.1875	in	A =	49.0000	in ²	C _{right} =	12.1875	in	A =	49.0000	in ²
C _{left} =	12.1875	in	r _y =	10.5440	in	C _{left} =	12.1875	in	r _y =	10.5440	in



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

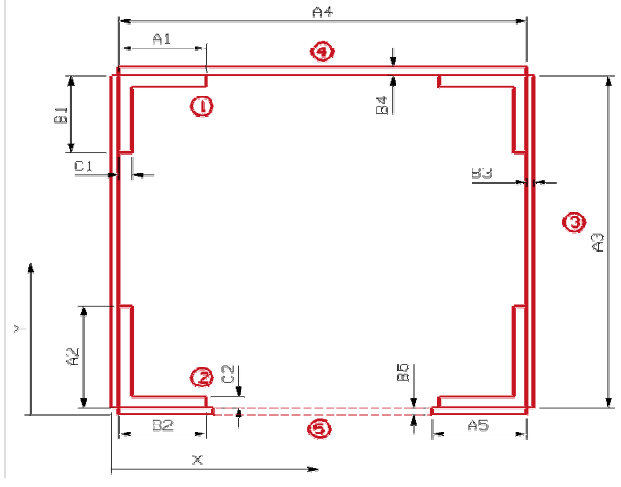
Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_f = 0.3125$ in

Bottom Angles:
 $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3125$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L69-L70

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5031	330.8057	330.8260
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5031	208.1357	210.7472
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.1844	502.9900	503.0104
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.1844	342.1506	344.7621
3	Plate	19.5000	13.3750	260.8125	1098.5000	1.3406	35.0460	1133.5460
4	Plate	8.8125	26.5625	234.0820	0.1033	11.8469	1236.8243	1236.9276
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.5281	949.7966	949.8493
Total		42.42		624.26	1103.92		3605.75	4709.67
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.7156 in	S _{top} =	391.35 in ³	y-bar =	14.7156 in	S _{top} =	391.35 in ³
I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³	I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³
C _{top} =	12.0344 in	A =	42.4219 in ²	C _{top} =	12.0344 in	A =	42.4219 in ²
C _{bottom} =	14.7156 in	r _x =	10.5366 in	C _{bottom} =	14.7156 in	r _x =	10.5366 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	9.7500	0.1875	1.8281	0.1143	11.9375	1389.4131	1389.5273	
3 (Right)	Plate	9.7500	24.0625	234.6094	0.1143	11.9375	1389.4131	1389.5273	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.3750	7.5938	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.8750	46.9688	6.7500	8.7500	172.2656	179.0156	
Total		42.42		514.37	425.99		4218.24	4644.23	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	383.03 in ³	x-bar =	12.1250 in	S _{right} =	383.03 in ³
I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³	I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³
C _{right} =	12.1250 in	A =	42.4219 in ²	C _{right} =	12.1250 in	A =	42.4219 in ²
C _{left} =	12.1250 in	r _y =	10.4631 in	C _{left} =	12.1250 in	r _y =	10.4631 in

South Truss

Member L70-L71



Made By KMW
Checked By ADK

Date 1/31/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_f = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3125$ in

Top Cover Plate:

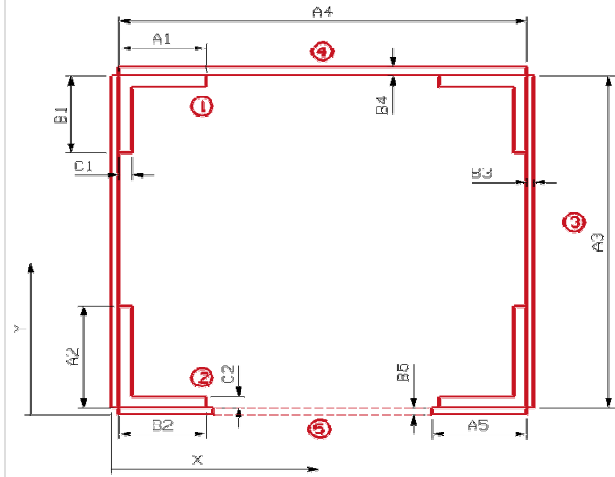
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L70-L71

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg		2.5000	26.2188	65.5469	0.0203	11.5031	330.8057	330.8260
	Vertical Leg		2.3047	24.2188	55.8167	2.6115	9.5031	208.1357	210.7472
2	Horizontal Leg		2.5000	0.5313	1.3281	0.0203	14.1844	502.9900	503.0104
	Vertical Leg		2.3047	2.5313	5.8337	2.6115	12.1844	342.1506	344.7621
3	Plate		19.5000	13.3750	260.8125	1098.5000	1.3406	35.0460	1133.5460
4	Plate		8.8125	26.5625	234.0820	0.1033	11.8469	1236.8243	1236.9276
5	Perforated Plate		4.5000	0.1875	0.8438	0.0527	14.5281	949.7966	949.8493
Total			42.42		624.26	1103.92		3605.75	4709.67
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	23.5000	0.2500	-5.8750	26.6250	-156.4219	-0.0306	13.8239	-1122.7067	-1122.7372
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-5.88		-156.42	-0.03		-1122.71	-1122.74



Made By KMW
Checked By ADK

Date 1/31/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.7156 in	S _{top} =	391.35 in ³	y-bar =	12.8011 in	S _{top} =	257.15 in ³
I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³	I _x =	3586.93 in ⁴	S _{bott.} =	280.20 in ³
C _{top} =	12.0344 in	A =	42.4219 in ²	C _{top} =	13.9489 in	A =	36.5469 in ²
C _{bottom} =	14.7156 in	r _x =	10.5366 in	C _{bottom} =	12.8011 in	r _x =	9.9069 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	9.7500	0.1875	1.8281	0.1143	11.9375	1389.4131	1389.5273	
3 (Right)	Plate	9.7500	24.0625	234.6094	0.1143	11.9375	1389.4131	1389.5273	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.3750	7.5938	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.8750	46.9688	6.7500	8.7500	172.2656	179.0156	
Total		42.42		514.37	425.99		4218.24	4644.23	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.2500	23.5000	-5.8750	12.1250	-71.2344	-270.3724	0.0000	0.0000	-270.3724
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-5.88		-71.23	-270.37		0.00	-270.37

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	383.03 in ³	x-bar =	12.1250 in	S _{right} =	360.73 in ³
I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³	I _y =	4373.86 in ⁴	S _{left} =	360.73 in ³
C _{right} =	12.1250 in	A =	42.4219 in ²	C _{right} =	12.1250 in	A =	36.5469 in ²
C _{left} =	12.1250 in	r _y =	10.4631 in	C _{left} =	12.1250 in	r _y =	10.9397 in

South Truss

Member L71-L72



Made By KMW
Checked By ADK

Date 1/31/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_f = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3125$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L71-L72

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x, gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5985	336.3153	336.3356	
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5985	212.3354	214.9469	
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.0890	496.2470	496.2674	
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.0890	336.8139	339.4254	
3	Plate	22.7500	13.3750	304.2813	1281.5833	1.2452	35.2750	1316.8583	
4	Plate	8.8125	26.5625	234.0820	0.1033	11.9423	1256.8236	1256.9269	
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.4327	937.3641	937.4168	
Total		45.67		667.73	1287.00		3611.17	4898.18	
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x, loss}	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	
1	0.1875	11.0000	-2.0625	6.0000	-12.3750	-20.7969	9.5369	-187.5913	-208.3881
2	0.1875	5.0000	-0.9375	9.0000	-8.4375	-1.9531	6.5369	-40.0609	-42.0141
3	5.0000	0.1250	-0.6250	26.8125	-16.7578	-0.0008	11.2756	-79.4613	-79.4621
4	3.0000	0.2500	-0.7500	0.1250	-0.0938	-0.0039	15.4119	-178.1461	-178.1500
5	3.0000	0.2500	-0.7500	0.1250	-0.0938	-0.0039	15.4119	-178.1461	-178.1500
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-5.13	-37.76	-22.76		-663.41	-686.16	



Made By KMW
Checked By ADK

Date 1/31/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.6202 in	S _{top} =	403.81 in ³	y-bar =	15.5369 in	S _{top} =	375.63 in ³
I _x =	4898.18 in ⁴	S _{bott.} =	335.03 in ³	I _x =	4212.01 in ⁴	S _{bott.} =	271.10 in ³
C _{top} =	12.1298 in	A =	45.6719 in ²	C _{top} =	11.2131 in	A =	40.5469 in ²
C _{bottom} =	14.6202 in	r _x =	10.3560 in	C _{bottom} =	15.5369 in	r _x =	10.1922 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.4375	7.7344	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.9375	47.1094	6.7500	8.7500	172.2656	179.0156	
Total		45.67		556.63	426.13		4698.37	5124.50	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	11.0000	0.1875	-2.0625	0.0938	-0.1934	-0.0060	12.8471	-340.4101	-340.4161
2	5.0000	0.1875	-0.9375	0.1875	-0.1758	-0.0027	12.7533	-152.4818	-152.4846
3	0.1250	5.0000	-0.6250	21.3750	-13.3594	-1.3021	8.4342	-44.4596	-45.7617
4	0.2500	3.0000	-0.7500	4.8750	-3.6563	-0.5625	8.0658	-48.7931	-49.3556
5	0.2500	3.0000	-0.7500	19.3750	-14.5313	-0.5625	6.4342	-31.0490	-31.6115
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-5.13		-31.92	-2.44		-617.19	-619.63

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	420.47 in ³	x-bar =	12.9408 in	S _{right} =	393.98 in ³
I _y =	5124.50 in ⁴	S _{left} =	420.47 in ³	I _y =	4504.87 in ⁴	S _{left} =	348.11 in ³
C _{right} =	12.1875 in	A =	45.6719 in ²	C _{right} =	11.4342 in	A =	40.5469 in ²
C _{left} =	12.1875 in	r _y =	10.5926 in	C _{left} =	12.9408 in	r _y =	10.5405 in



Made By KMW
Checked By ADK

Date 1/31/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.4375$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_f = 0.4375$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member L72-L73

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x, gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.2500	26.2813	137.9766	0.0837	12.1487	774.8582	774.9420
	Vertical Leg	6.6172	22.2813	147.4392	31.5372	8.1487	439.3950	470.9321
2	Horizontal Leg	5.2500	0.7188	3.7734	0.0837	13.4138	944.6261	944.7098
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	9.4138	586.4069	617.9441
3	Plate	19.5000	13.5000	263.2500	1098.5000	0.6325	7.8012	1106.3012
4	Plate	8.8125	26.6875	235.1836	0.1033	12.5550	1389.0962	1389.1995
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	13.8825	1156.3434	1156.4684
Total		58.05		820.35	1161.97		5298.53	6460.50
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	15.0000	0.1250	-1.8750	26.8125	-50.2734	-0.0024	13.1033	-321.9285
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.88	-50.27	0.00		-321.93	-321.93



Made By KMW
Checked By ADK

Date 1/31/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.1325 in	S _{top} =	507.00 in ³	y-bar =	13.7092 in	S _{top} =	466.25 in ³
I _x =	6460.50 in ⁴	S _{bott.} =	457.14 in ³	I _x =	6138.57 in ⁴	S _{bott.} =	447.77 in ³
C _{top} =	12.7425 in	A =	58.0469 in ²	C _{top} =	13.1658 in	A =	56.1719 in ²
C _{bottom} =	14.1325 in	r _x =	10.5498 in	C _{bottom} =	13.7092 in	r _x =	10.4538 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.3750	8.8594	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.5938	1.9645	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	20.8750	54.7969	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.6563	78.2689	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.3750	8.8594	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.5938	1.9645	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	20.8750	54.7969	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.6563	78.2689	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	9.7500	0.1875	1.8281	0.1143	11.9375	1389.4131	1389.5273	
3 (Right)	Plate	9.7500	24.0625	234.6094	0.1143	11.9375	1389.4131	1389.5273	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.3750	10.1250	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.8750	62.6250	9.0000	8.7500	229.6875	238.6875	
Total		58.05		703.82	455.50		5801.88	6257.38	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1250	15.0000	-1.8750	12.1250	-22.7344	-35.1563	0.0000	0.0000	-35.1563
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.88		-22.73	-35.16		0.00	-35.16

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	516.07 in ³	x-bar =	12.1250 in	S _{right} =	513.17 in ³
I _y =	6257.38 in ⁴	S _{left} =	516.07 in ³	I _y =	6222.22 in ⁴	S _{left} =	513.17 in ³
C _{right} =	12.1250 in	A =	58.0469 in ²	C _{right} =	12.1250 in	A =	56.1719 in ²
C _{left} =	12.1250 in	r _y =	10.3826 in	C _{left} =	12.1250 in	r _y =	10.5248 in



Made By KMW
Checked By ADK

Date 1/31/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.5000$ in

Top Cover Plate:

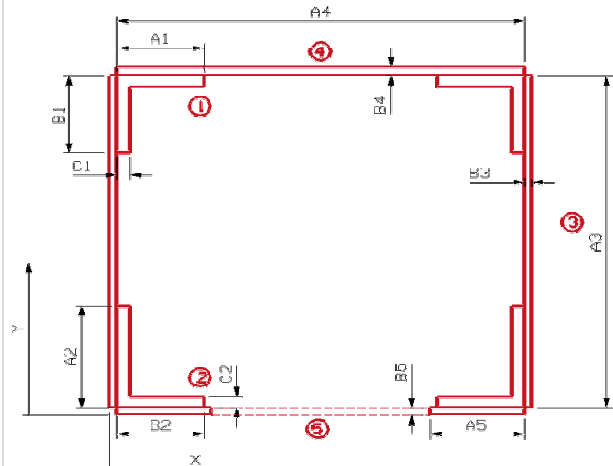
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member L73-L74

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	6.0000	26.2500	157.5000	0.1250	12.1813	890.3086	890.4336
	Vertical Leg	7.5000	22.2500	166.8750	35.1563	8.1813	502.0060	537.1623
2	Horizontal Leg	6.0000	0.7500	4.5000	0.1250	13.3187	1064.3220	1064.4470
	Vertical Leg	7.5000	4.7500	35.6250	35.1563	9.3187	651.2823	686.4385
3	Plate	22.7500	13.5000	307.1250	1281.5833	0.5687	7.3571	1288.9404
4	Plate	8.8125	26.6875	235.1836	0.1033	12.6188	1403.2570	1403.3603
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	13.8187	1145.7341	1145.8591
Total		64.56		908.31	1352.37		5664.27	7016.64
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.1563	2.5000	-0.3906	1.7500	-0.6836	-0.2035	12.2372	-58.4960
2	0.1563	2.5000	-0.3906	1.7500	-0.6836	-0.2035	12.2372	-58.4960
3	0.1563	2.5000	-0.3906	25.2500	-9.8633	-0.2035	11.2628	-49.5508
4	0.1563	2.5000	-0.3906	25.2500	-9.8633	-0.2035	11.2628	-49.5508
5	2.5000	0.0938	-0.2344	26.8281	-6.2878	-0.0002	12.8409	-38.6457
6	2.5000	0.0938	-0.2344	26.8281	-6.2878	-0.0002	12.8409	-38.6457
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.03	-33.67	-0.81		-293.39	-294.20



Made By KMW
Checked By ADK

Date 1/31/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	14.0687	in	S _{top} =	547.90	in ³	y-bar =	13.9872	in	S _{top} =	521.61	in ³
I _x =	7016.64	in ⁴	S _{bott.} =	498.74	in ³	I _x =	6722.44	in ⁴	S _{bott.} =	480.61	in ³
C _{top} =	12.8063	in	A =	64.5625	in ²	C _{top} =	12.8878	in	A =	62.5313	in ²
C _{bottom} =	14.0687	in	r _x =	10.4250	in	C _{bottom} =	13.9872	in	r _x =	10.3685	in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.0000	3.4375	10.3125	9.0000	8.7500	229.6875	238.6875	
	Vertical Leg	3.7500	0.6875	2.5781	0.0781	11.5000	495.9375	496.0156	
1 (Right)	Horizontal Leg	3.0000	20.9375	62.8125	9.0000	8.7500	229.6875	238.6875	
	Vertical Leg	3.7500	23.6875	88.8281	0.0781	11.5000	495.9375	496.0156	
2 (Left)	Horizontal Leg	3.0000	3.4375	10.3125	9.0000	8.7500	229.6875	238.6875	
	Vertical Leg	3.7500	0.6875	2.5781	0.0781	11.5000	495.9375	496.0156	
2 (Right)	Horizontal Leg	3.0000	20.9375	62.8125	9.0000	8.7500	229.6875	238.6875	
	Vertical Leg	3.7500	23.6875	88.8281	0.0781	11.5000	495.9375	496.0156	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.4375	10.3125	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.9375	62.8125	9.0000	8.7500	229.6875	238.6875	
Total		64.56		786.86	460.23		6620.83	7081.07	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	2.5000	0.1563	-0.3906	0.4375	-0.1709	-0.0008	11.7500	-53.9307	-53.9315
2	2.5000	0.1563	-0.3906	23.9375	-9.3506	-0.0008	11.7500	-53.9307	-53.9315
3	2.5000	0.1563	-0.3906	0.4375	-0.1709	-0.0008	11.7500	-53.9307	-53.9315
4	2.5000	0.1563	-0.3906	23.9375	-9.3506	-0.0008	11.7500	-53.9307	-53.9315
5	0.0938	2.5000	-0.2344	1.6875	-0.3955	-0.1221	10.5000	-25.8398	-25.9619
6	0.0938	2.5000	-0.2344	22.6875	-5.3174	-0.1221	10.5000	-25.8398	-25.9619
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.03		-24.76	-0.25		-267.40	-267.65

As-Built Section Properties				As-Inspected Section Properties							
x-bar =	12.1875	in	S _{right} =	581.01	in ³	x-bar =	12.1875	in	S _{right} =	559.05	in ³
I _y =	7081.07	in ⁴	S _{left} =	581.01	in ³	I _y =	6813.42	in ⁴	S _{left} =	559.05	in ³
C _{right} =	12.1875	in	A =	64.5625	in ²	C _{right} =	12.1875	in	A =	62.5313	in ²
C _{left} =	12.1875	in	r _y =	10.4727	in	C _{left} =	12.1875	in	r _y =	10.4384	in



Made By KMW
Checked By ADK

Date 1/31/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

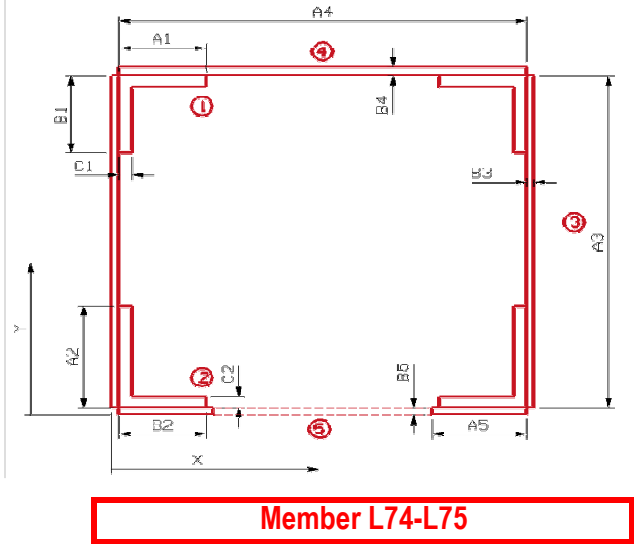
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.4375$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_f = 0.4375$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:
 $A_3 = b = 30.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.2500	30.2813	158.9766	0.0837	14.1278	1047.8762	1047.9599
	Vertical Leg	6.6172	26.2813	173.9080	31.5372	10.1278	678.7438	710.2810
2	Horizontal Leg	5.2500	0.7188	3.7734	0.0837	15.4347	1250.7031	1250.7869
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	11.4347	865.2090	896.7462
3	Plate	26.2500	15.5000	406.8750	1968.7500	0.6534	11.2078	1979.9578
4	Plate	8.8125	30.6875	270.4336	0.1033	14.5341	1861.5469	1861.6501
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	15.9034	1517.5134	1517.6384
Total		64.80		1046.69	2032.22		7232.80	9265.02
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.1250	2.5000	-0.3125	29.2500	-9.1406	-0.1628	13.3665	-55.8322
2	0.1250	2.5000	-0.3125	29.2500	-9.1406	-0.1628	13.3665	-55.8322
3	2.5000	0.1250	-0.3125	30.5000	-9.5313	-0.0004	14.6165	-66.7630
4	2.5000	0.1250	-0.3125	30.5000	-9.5313	-0.0004	14.6165	-66.7630
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.25	-37.34	-0.33		-245.19	-245.52



Made By KMW
Checked By ADK

Date 1/31/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.1534 in	S _{top} =	629.35 in ³	y-bar =	15.8835 in	S _{top} =	601.64 in ³
I _x =	9265.02 in ⁴	S _{bott.} =	573.56 in ³	I _x =	9019.50 in ⁴	S _{bott.} =	567.85 in ³
C _{top} =	14.7216 in	A =	64.7969 in ²	C _{top} =	14.9915 in	A =	63.5469 in ²
C _{bottom} =	16.1534 in	r _x =	11.9577 in	C _{bottom} =	15.8835 in	r _x =	11.9136 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.4375	9.0234	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	20.9375	54.9609	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.4375	9.0234	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	20.9375	54.9609	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	13.1250	0.2188	2.8711	0.2094	11.9688	1880.1691	1880.3784	
3 (Right)	Plate	13.1250	24.1563	317.0508	0.2094	11.9688	1880.1691	1880.3784	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.4375	10.3125	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.9375	62.8125	9.0000	8.7500	229.6875	238.6875	
Total		64.80		789.71	455.69		6783.39	7239.08	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	2.5000	0.1250	-0.3125	0.4375	-0.1367	-0.0004	11.7500	-43.1445	-43.1449
2	2.5000	0.1250	-0.3125	23.9375	-7.4805	-0.0004	11.7500	-43.1445	-43.1449
3	0.1250	2.5000	-0.3125	1.6875	-0.5273	-0.1628	10.5000	-34.4531	-34.6159
4	0.1250	2.5000	-0.3125	22.6875	-7.0898	-0.1628	10.5000	-34.4531	-34.6159
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.25		-15.23	-0.33		-155.20	-155.52

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	593.98 in ³	x-bar =	12.1875 in	S _{right} =	581.21 in ³
I _y =	7239.08 in ⁴	S _{left} =	593.98 in ³	I _y =	7083.56 in ⁴	S _{left} =	581.21 in ³
C _{right} =	12.1875 in	A =	64.7969 in ²	C _{right} =	12.1875 in	A =	63.5469 in ²
C _{left} =	12.1875 in	r _y =	10.5697 in	C _{left} =	12.1875 in	r _y =	10.5579 in



Made By KMW
Checked By ADK

Date 1/31/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

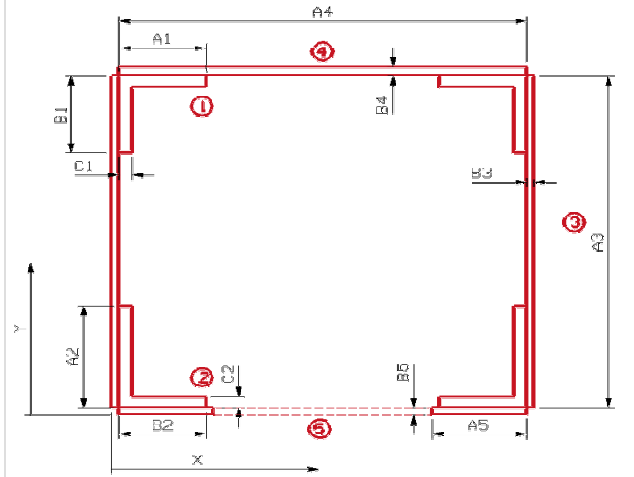
Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.4375$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.4375$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:
 $A_3 = b = 30.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member L75-L76

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.5000	30.2813	105.9844	0.0558	14.0455	690.4667	690.5225
	Vertical Leg	6.6172	26.2813	173.9080	31.5372	10.0455	667.7547	699.2919
2	Horizontal Leg	3.5000	0.7188	2.5156	0.0558	15.5170	842.7200	842.7758
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	11.5170	877.7116	909.2488
3	Plate	22.5000	15.5000	348.7500	1687.5000	0.7357	12.1797	1699.6797
4	Plate	8.8125	30.6875	270.4336	0.1033	14.4518	1840.5189	1840.6222
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	15.9857	1533.2643	1533.3893
Total		57.55		934.32	1750.91		6464.62	8215.53
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	23.5000	0.1250	-2.9375	30.8125	-90.5117	-0.0038	15.3609	-693.1203
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.94	-90.51	0.00		-693.12	-693.12



Made By KMW
Checked By ADK

Date 1/31/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.2357 in	S _{top} =	561.20 in ³	y-bar =	15.4516 in	S _{top} =	487.73 in ³
I _x =	8215.53 in ⁴	S _{bott.} =	506.01 in ³	I _x =	7522.41 in ⁴	S _{bott.} =	486.84 in ³
C _{top} =	14.6393 in	A =	57.5469 in ²	C _{top} =	15.4234 in	A =	54.6094 in ²
C _{bottom} =	16.2357 in	r _x =	11.9483 in	C _{bottom} =	15.4516 in	r _x =	11.7367 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.7500	2.3750	4.1563	2.3333	9.7500	166.3594	168.6927	
	Vertical Leg	3.3086	0.5938	1.9645	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	1.7500	21.8750	38.2813	2.3333	9.7500	166.3594	168.6927	
	Vertical Leg	3.3086	23.6563	78.2689	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	1.7500	2.3750	4.1563	2.3333	9.7500	166.3594	168.6927	
	Vertical Leg	3.3086	0.5938	1.9645	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	1.7500	21.8750	38.2813	2.3333	9.7500	166.3594	168.6927	
	Vertical Leg	3.3086	23.6563	78.2689	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	11.2500	0.1875	2.1094	0.1318	11.9375	1603.1689	1603.3008	
3 (Right)	Plate	11.2500	24.0625	270.7031	0.1318	11.9375	1603.1689	1603.3008	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.3750	10.1250	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.8750	62.6250	9.0000	8.7500	229.6875	238.6875	
Total		57.55		697.76	433.37		6090.92	6524.29	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1250	23.5000	-2.9375	12.1250	-35.6172	-135.1862	0.0000	0.0000	-135.1862
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.94		-35.62	-135.19		0.00	-135.19

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	538.09 in ³	x-bar =	12.1250 in	S _{right} =	526.94 in ³
I _y =	6524.29 in ⁴	S _{left} =	538.09 in ³	I _y =	6389.10 in ⁴	S _{left} =	526.94 in ³
C _{right} =	12.1250 in	A =	57.5469 in ²	C _{right} =	12.1250 in	A =	54.6094 in ²
C _{left} =	12.1250 in	r _y =	10.6477 in	C _{left} =	12.1250 in	r _y =	10.8165 in



Made By KMW
Checked By ADK

Date 1/31/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.4375$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.4375$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 30.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member L76-L77

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.5000	30.2813	105.9844	0.0558	14.0455	690.4667	690.5225
	Vertical Leg	6.6172	26.2813	173.9080	31.5372	10.0455	667.7547	699.2919
2	Horizontal Leg	3.5000	0.7188	2.5156	0.0558	15.5170	842.7200	842.7758
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	11.5170	877.7116	909.2488
3	Plate	22.5000	15.5000	348.7500	1687.5000	0.7357	12.1797	1699.6797
4	Plate	8.8125	30.6875	270.4336	0.1033	14.4518	1840.5189	1840.6222
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	15.9857	1533.2643	1533.3893
Total		57.55		934.32	1750.91		6464.62	8215.53
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.1250	2.5000	-0.3125	29.2500	-9.1406	-0.1628	13.1572	-54.0971
2	0.1250	2.5000	-0.3125	29.2500	-9.1406	-0.1628	13.1572	-54.0971
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.63	-18.28	-0.33		-108.19	-108.52



Made By KMW
Checked By ADK

Date 1/31/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.2357 in	S _{top} =	561.20 in ³	y-bar =	16.0928 in	S _{top} =	548.43 in ³
I _x =	8215.53 in ⁴	S _{bott.} =	506.01 in ³	I _x =	8107.01 in ⁴	S _{bott.} =	503.76 in ³
C _{top} =	14.6393 in	A =	57.5469 in ²	C _{top} =	14.7822 in	A =	56.9219 in ²
C _{bottom} =	16.2357 in	r _x =	11.9483 in	C _{bottom} =	16.0928 in	r _x =	11.9341 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.7500	2.3750	4.1563	2.3333	9.7500	166.3594	168.6927	
	Vertical Leg	3.3086	0.5938	1.9645	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	1.7500	21.8750	38.2813	2.3333	9.7500	166.3594	168.6927	
	Vertical Leg	3.3086	23.6563	78.2689	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	1.7500	2.3750	4.1563	2.3333	9.7500	166.3594	168.6927	
	Vertical Leg	3.3086	0.5938	1.9645	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	1.7500	21.8750	38.2813	2.3333	9.7500	166.3594	168.6927	
	Vertical Leg	3.3086	23.6563	78.2689	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	11.2500	0.1875	2.1094	0.1318	11.9375	1603.1689	1603.3008	
3 (Right)	Plate	11.2500	24.0625	270.7031	0.1318	11.9375	1603.1689	1603.3008	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.3750	10.1250	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.8750	62.6250	9.0000	8.7500	229.6875	238.6875	
Total		57.55		697.76	433.37		6090.92	6524.29	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	2.5000	0.1250	-0.3125	0.3750	-0.1172	-0.0004	11.7500	-43.1445	-43.1449
2	2.5000	0.1250	-0.3125	23.8750	-7.4609	-0.0004	11.7500	-43.1445	-43.1449
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.63		-7.58	0.00		-86.29	-86.29

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	538.09 in ³	x-bar =	12.1250 in	S _{right} =	530.97 in ³
I _y =	6524.29 in ⁴	S _{left} =	538.09 in ³	I _y =	6438.00 in ⁴	S _{left} =	530.97 in ³
C _{right} =	12.1250 in	A =	57.5469 in ²	C _{right} =	12.1250 in	A =	56.9219 in ²
C _{left} =	12.1250 in	r _y =	10.6477 in	C _{left} =	12.1250 in	r _y =	10.6350 in

South Truss

Member L77-L78



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.4375$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_f = 0.4375$ in

Top Cover Plate:

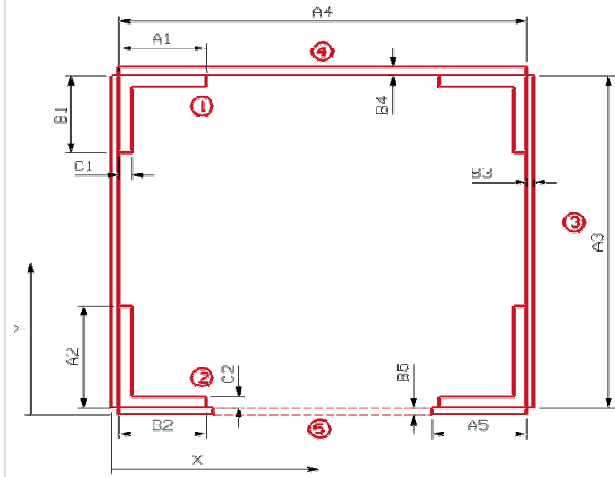
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 30.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.2500	30.2813	158.9766	0.0837	14.1278	1047.8762	1047.9599
	Vertical Leg	6.6172	26.2813	173.9080	31.5372	10.1278	678.7438	710.2810
2	Horizontal Leg	5.2500	0.7188	3.7734	0.0837	15.4347	1250.7031	1250.7869
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	11.4347	865.2090	896.7462
3	Plate	26.2500	15.5000	406.8750	1968.7500	0.6534	11.2078	1979.9578
4	Plate	8.8125	30.6875	270.4336	0.1033	14.5341	1861.5469	1861.6501
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	15.9034	1517.5134	1517.6384
Total		64.80		1046.69	2032.22		7232.80	9265.02
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00	0.00	0.00	0.00



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.1534 in	S _{top} =	629.35 in ³	y-bar =	16.1534 in	S _{top} =	629.35 in ³
I _x =	9265.02 in ⁴	S _{bott.} =	573.56 in ³	I _x =	9265.02 in ⁴	S _{bott.} =	573.56 in ³
C _{top} =	14.7216 in	A =	64.7969 in ²	C _{top} =	14.7216 in	A =	64.7969 in ²
C _{bottom} =	16.1534 in	r _x =	11.9577 in	C _{bottom} =	16.1534 in	r _x =	11.9577 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.4375	9.0234	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	20.9375	54.9609	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.4375	9.0234	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	20.9375	54.9609	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	13.1250	0.2188	2.8711	0.2094	11.9688	1880.1691	1880.3784	
3 (Right)	Plate	13.1250	24.1563	317.0508	0.2094	11.9688	1880.1691	1880.3784	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.4375	10.3125	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.9375	62.8125	9.0000	8.7500	229.6875	238.6875	
Total		64.80		789.71	455.69		6783.39	7239.08	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	593.98 in ³	x-bar =	12.1875 in	S _{right} =	593.98 in ³
I _y =	7239.08 in ⁴	S _{left} =	593.98 in ³	I _y =	7239.08 in ⁴	S _{left} =	593.98 in ³
C _{right} =	12.1875 in	A =	64.7969 in ²	C _{right} =	12.1875 in	A =	64.7969 in ²
C _{left} =	12.1875 in	r _y =	10.5697 in	C _{left} =	12.1875 in	r _y =	10.5697 in



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

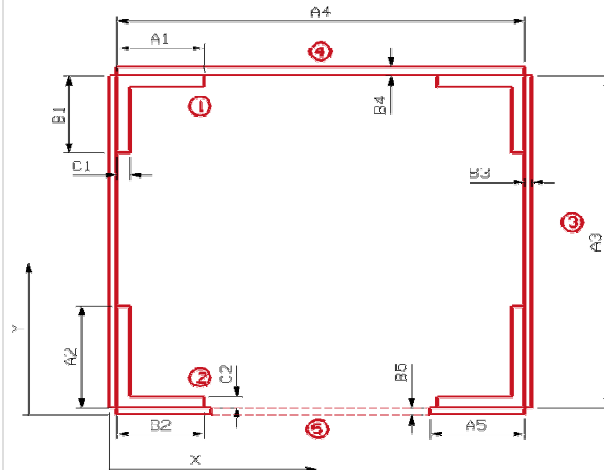
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6875$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6875$ in

Top Cover Plate:
 $A_4 = b = 22.0000$ in
 $B_4 = t = 0.4375$ in

Web Plate:
 $A_3 = b = 30.0000$ in
 $B_3 = t = 0.8750$ in

Perforated Cover Plate
 $A_5 = b = 5.2500$ in
 $B_5 = t = 0.5625$ in



Member L78-L79

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	8.2500	30.2188	249.3047	0.3250	14.1189	1644.5893	1644.9143
	Vertical Leg	10.0547	26.2188	263.6213	44.8042	10.1189	1029.5269	1074.3311
2	Horizontal Leg	8.2500	0.9063	7.4766	0.3250	15.1936	1904.4679	1904.7929
	Vertical Leg	10.0547	4.9063	49.3308	44.8042	11.1936	1259.8124	1304.6166
3	Plate	52.5000	15.5625	817.0313	3937.5000	0.5373	15.1575	3952.6575
4	Plate	9.6250	30.7813	296.2695	0.1535	14.6814	2074.6145	2074.7680
5	Perforated Plate	5.9063	0.2813	1.6611	0.1557	15.8186	1477.9043	1478.0600
Total		104.64		1684.70	4028.07		9406.07	13434.14
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00	0.00	0.00	0.00



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.0998 in	S _{top} =	901.61 in ³	y-bar =	16.0998 in	S _{top} =	901.61 in ³
I _x =	13434.14 in ⁴	S _{bott.} =	834.43 in ³	I _x =	13434.14 in ⁴	S _{bott.} =	834.43 in ³
C _{top} =	14.9002 in	A =	104.6406 in ²	C _{top} =	14.9002 in	A =	104.6406 in ²
C _{bottom} =	16.0998 in	r _x =	11.3306 in	C _{bottom} =	16.0998 in	r _x =	11.3306 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	3.8750	15.9844	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.2188	6.1271	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	19.8750	81.9844	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.5313	113.2723	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	3.8750	15.9844	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.2188	6.1271	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	19.8750	81.9844	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.5313	113.2723	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	26.2500	0.4375	11.4844	1.6748	11.4375	3433.9307	3435.6055	
3 (Right)	Plate	26.2500	23.3125	611.9531	1.6748	11.4375	3433.9307	3435.6055	
4	Plate	9.6250	11.8750	114.2969	388.2083	0.0000	0.0000	388.2083	
5 (Left)	Perforated Plate	2.9531	3.5000	10.3359	6.7830	8.3750	207.1340	213.9170	
5 (Right)	Perforated Plate	2.9531	20.2500	59.8008	6.7830	8.3750	207.1340	213.9170	
Total		104.64		1242.61	455.42		10621.66	11077.08	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	11.8750 in	S _{right} =	932.81 in ³	x-bar =	11.8750 in	S _{right} =	932.81 in ³
I _y =	11077.08 in ⁴	S _{left} =	932.81 in ³	I _y =	11077.08 in ⁴	S _{left} =	932.81 in ³
C _{right} =	11.8750 in	A =	104.6406 in ²	C _{right} =	11.8750 in	A =	104.6406 in ²
C _{left} =	11.8750 in	r _y =	10.2887 in	C _{left} =	11.8750 in	r _y =	10.2887 in



Made By KMW
Checked By ADK

Date 1/31/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

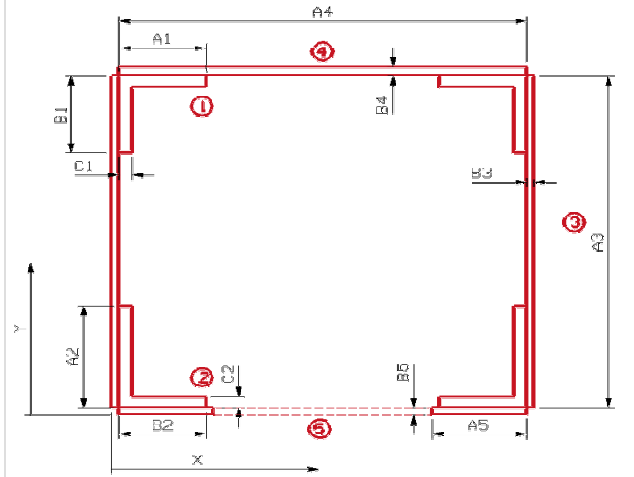
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.6250$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_f = 0.6250$ in

Top Cover Plate:
 $A_4 = b = 22.0000$ in
 $B_4 = t = 0.5000$ in

Web Plates:**
 $A_3 = b = 30.0000$ in
 $B_3 = t = 1.4375$ in

Perforated Cover Plate
 $A_5 = b = 5.2500$ in
 $B_5 = t = 0.6250$ in



Member L79-L80

**There are 2 web plates, thickness shown is total of both

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	7.5000	30.3125	227.3438	0.2441	14.1974	1511.7532	1511.9974	
	Vertical Leg	9.2188	26.3125	242.5684	41.7845	10.1974	958.6360	1000.4205	
2	Horizontal Leg	7.5000	0.9375	7.0313	0.2441	15.1776	1727.6891	1727.9332	
	Vertical Leg	9.2188	4.9375	45.5176	41.7845	11.1776	1151.7723	1193.5567	
3	Plate	86.2500	15.6250	1347.6563	6468.7500	0.4901	20.7143	6489.4643	
4	Plate	11.0000	30.8750	339.6250	0.2292	14.7599	2396.4118	2396.6410	
5	Perforated Plate	6.5625	0.3125	2.0508	0.2136	15.8026	1638.7949	1639.0085	
Total		137.25		2211.79	6553.25		9405.77	15959.02	
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)	
1	22.0000	0.2500	-5.5000	31.0000	-170.5000	-0.0286	15.6915	-1354.2288	-1354.2575
2	4.0000	0.0625	-0.2500	30.8438	-7.7109	-0.0001	15.5353	-60.3361	-60.3361
3	0.2500	7.5000	-1.8750	26.2500	-49.2188	-8.7891	10.9415	-224.4686	-233.2577
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-7.63	-227.43	-8.82		-1639.03	-1647.85	



Made By KMW
Checked By ADK

Date 1/31/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.1151 in	S _{top} =	1063.23 in ³	y-bar =	15.3085 in	S _{top} =	904.82 in ³
I _x =	15959.02 in ⁴	S _{bottom} =	990.32 in ³	I _x =	14311.17 in ⁴	S _{bottom} =	934.85 in ³
C _{top} =	15.0099 in	A =	137.2500 in ²	C _{top} =	15.8165 in	A =	129.6250 in ²
C _{bottom} =	16.1151 in	r _x =	10.7832 in	C _{bottom} =	15.3085 in	r _x =	10.5073 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.7500	4.4375	16.6406	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.7500	8.0664	0.1500	10.6875	526.4951	526.6451	
1 (Right)	Horizontal Leg	3.7500	20.4375	76.6406	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	23.1250	106.5918	0.1500	10.6875	526.4951	526.6451	
2 (Left)	Horizontal Leg	3.7500	4.4375	16.6406	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.7500	8.0664	0.1500	10.6875	526.4951	526.6451	
2 (Right)	Horizontal Leg	3.7500	20.4375	76.6406	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	23.1250	106.5918	0.1500	10.6875	526.4951	526.6451	
3 (Left)	Plate	43.1250	0.7188	30.9961	7.4261	11.7188	5922.3175	5929.7437	
3 (Right)	Plate	43.1250	24.1563	1041.7383	7.4261	11.7188	5922.3175	5929.7437	
4	Plate	11.0000	12.4375	136.8125	443.6667	0.0000	0.0000	443.6667	
5 (Left)	Perforated Plate	3.2813	4.0625	13.3301	7.5366	8.3750	230.1489	237.6855	
5 (Right)	Perforated Plate	3.2813	20.8125	68.2910	7.5366	8.3750	230.1489	237.6855	
Total		137.25		1707.05	519.19		15370.91	15890.11	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.2500	22.0000	-5.5000	12.4375	-68.4063	-221.8333	0.1781	-0.1745	-222.0078
2	0.0625	4.0000	-0.2500	12.4375	-3.1094	-0.3333	0.1781	-0.0079	-0.3413
3	7.5000	0.2500	-1.8750	0.1250	-0.2344	-0.0098	12.4906	-292.5282	-292.5380
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-7.63		-71.75	-222.18		-292.71	-514.89

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.4375 in	S _{right} =	1277.60 in ³	x-bar =	12.6156 in	S _{right} =	1254.16 in ³
I _y =	15890.11 in ⁴	S _{left} =	1277.60 in ³	I _y =	15375.22 in ⁴	S _{left} =	1218.75 in ³
C _{right} =	12.4375 in	A =	137.2500 in ²	C _{right} =	12.2594 in	A =	129.6250 in ²
C _{left} =	12.4375 in	r _y =	10.7599 in	C _{left} =	12.6156 in	r _y =	10.8910 in



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_l = 0.6875$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_l = 0.6875$ in

Top Cover Plate: PL

$A_6 = b = 22.0000$ in
 $B_6 = t = 0.6250$ in

Side Plate 1: PL

$A_3 = b = 14.0000$ in
 $B_3 = t = 0.6875$ in

Web Plate 1: PL

$A_4 = b = 30.0000$ in
 $B_4 = t = 0.7500$ in

Side Plate 2: PL**

$A_8 = b = 0.0000$ in
 $B_8 = t = 0.0000$ in

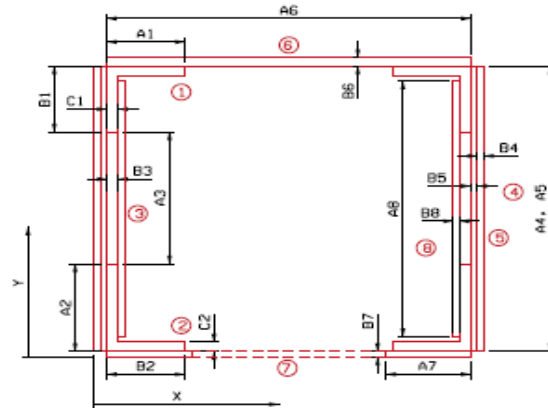
Web Plate 2: PL

$A_5 = b = 30.0000$ in
 $B_5 = t = 0.7500$ in

Perforated Bottom Cover Plate: PL

$A_7 = b = 5.2500$ in
 $B_7 = t = 0.7500$ in

**No interior side plate



Member L80-L81

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	8.2500	30.4063	250.8516	0.3250	14.1221	1645.3184	1645.6433
	Vertical Leg	10.0547	26.4063	265.5066	44.8042	10.1221	1030.1637	1074.9680
2	Horizontal Leg	8.2500	1.0938	9.0234	0.3250	15.1904	1903.6835	1904.0085
	Vertical Leg	10.0547	5.0938	51.2161	44.8042	11.1904	1259.1081	1303.9124
3	Plate	19.2500	15.7500	303.1875	314.4167	0.5342	5.4932	319.9099
4	Plate	45.0000	15.7500	708.7500	3375.0000	0.5342	12.8412	3387.8412
5	Plate	45.0000	15.7500	708.7500	3375.0000	0.5342	12.8412	3387.8412
6	Plate	13.7500	31.0625	427.1094	0.4476	14.7783	3002.9780	3003.4256
7	Perforated Plate	7.8750	0.3750	2.9531	0.3691	15.9092	1993.1812	1993.5504
8	Plate	0.0000	15.7500	0.0000	0.0000	0.5342	0.0000	0.0000
Total		167.48		2727.35	7155.49		10865.61	18021.10
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.2842 in	S _{top} = 1194.18 in ³			y-bar = 16.2842 in	S _{top} = 1194.18 in ³		
I _x = 18021.10 in ⁴	S _{bottom} = 1106.66 in ³			I _x = 18021.10 in ⁴	S _{bottom} = 1106.66 in ³		
C _{top} = 15.0908 in	A = 167.4844 in ²			C _{top} = 15.0908 in	A = 167.4844 in ²		
C _{bottom} = 16.2842 in	r _x = 10.3730 in			C _{bottom} = 16.2842 in	r _x = 10.3730 in		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y, gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	4.5000	18.5625	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.8438	9.2692	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	20.5000	84.5625	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	23.1563	116.4144	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	4.5000	18.5625	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.8438	9.2692	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	20.5000	84.5625	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	23.1563	116.4144	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	9.6250	1.8438	17.7461	0.3791	10.6563	1092.9733	1093.3524	
3 (Right)	Plate	9.6250	23.1563	222.8789	0.3791	10.6563	1092.9733	1093.3524	
4 (Left)	Plate	22.5000	0.3750	8.4375	1.0547	12.1250	3307.8516	3308.9063	
4 (Right)	Plate	22.5000	24.6250	554.0625	1.0547	12.1250	3307.8516	3308.9063	
5 (Left)	Plate	22.5000	1.1250	25.3125	1.0547	11.3750	2911.2891	2912.3438	
5 (Right)	Plate	22.5000	23.8750	537.1875	1.0547	11.3750	2911.2891	2912.3438	
6	Plate	13.7500	12.5000	171.8750	554.5833	0.0000	0.0000	554.5833	
7 (Left)	Perforated Plate	3.9375	4.1250	16.2422	9.0439	8.3750	276.1787	285.2227	
7 (Right)	Perforated Plate	3.9375	20.8750	82.1953	9.0439	8.3750	276.1787	285.2227	
8 (Left)	Plate	0.0000	2.1875	0.0000	0.0000	10.3125	0.0000	0.0000	
8 (Right)	Plate	0.0000	22.8125	0.0000	0.0000	10.3125	0.0000	0.0000	
Total		167.48		2093.55	615.37		18516.12	19144.06	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 12.5000 in	S _{right} = 1531.52 in ³			x-bar = 12.5000 in	S _{right} = 1531.52 in ³		
I _y = 19144.06 in ⁴	S _{left} = 1531.52 in ³			I _y = 19144.06 in ⁴	S _{left} = 1531.52 in ³		
C _{right} = 12.5000 in	A = 167.4844 in ²			C _{right} = 12.5000 in	A = 167.4844 in ²		
C _{left} = 12.5000 in	r _y = 10.6913 in			C _{left} = 12.5000 in	r _y = 10.6913 in		



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_l = 0.6875$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_l = 0.6875$ in

Top Cover Plate: PL

$A_6 = b = 22.0000$ in
 $B_6 = t = 0.5625$ in

Side Plate 1: PL

$A_3 = b = 14.0000$ in
 $B_3 = t = 0.6875$ in

Web Plate 1: PL

$A_4 = b = 30.0000$ in
 $B_4 = t = 0.7500$ in

Side Plate 2: PL

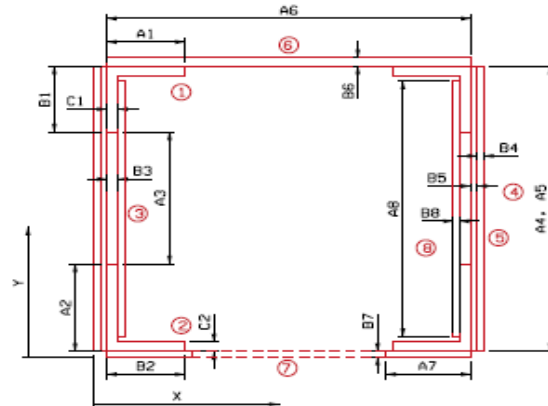
$A_8 = b = 28.0000$ in
 $B_8 = t = 0.3750$ in

Web Plate 2: PL

$A_5 = b = 30.0000$ in
 $B_5 = t = 0.6875$ in

Perforated Bottom Cover Plate: PL

$A_7 = b = 5.2500$ in
 $B_7 = t = 0.6875$ in



Member L81-L82

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	8.2500	30.3438	250.3359	0.3250	14.2275	1669.9682	1670.2931
	Vertical Leg	10.0547	26.3438	264.8782	44.8042	10.2275	1051.7281	1096.5323
2	Horizontal Leg	8.2500	1.0313	8.5078	0.3250	15.0850	1877.3591	1877.6841
	Vertical Leg	10.0547	5.0313	50.5876	44.8042	11.0850	1235.5028	1280.3071
3	Plate	19.2500	15.6875	301.9844	314.4167	0.4288	3.5395	317.9561
4	Plate	45.0000	15.6875	705.9375	3375.0000	0.4288	8.2741	3383.2741
5	Plate	41.2500	15.6875	647.1094	3093.7500	0.4288	7.5846	3101.3346
6	Plate	12.3750	30.9688	383.2383	0.3263	14.8525	2729.8671	2730.1934
7	Perforated Plate	7.2188	0.3438	2.4814	0.2843	15.7725	1795.8321	1796.1164
8	Plate	21.0000	15.6875	329.4375	1372.0000	0.4288	3.8612	1375.8612
Total		182.70		2944.50	8246.04		10383.52	18629.55
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.1163 in	$S_{top} = 1231.00 \text{ in}^3$			y-bar = 16.1163 in	$S_{top} = 1231.00 \text{ in}^3$		
$I_x = 18629.55 \text{ in}^4$	$S_{bottom} = 1155.94 \text{ in}^3$			$I_x = 18629.55 \text{ in}^4$	$S_{bottom} = 1155.94 \text{ in}^3$		
$C_{top} = 15.1337 \text{ in}$	$A = 182.7031 \text{ in}^2$			$C_{top} = 15.1337 \text{ in}$	$A = 182.7031 \text{ in}^2$		
$C_{bottom} = 16.1163 \text{ in}$	$r_x = 10.0978 \text{ in}$			$C_{bottom} = 16.1163 \text{ in}$	$r_x = 10.0978 \text{ in}$		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I_o	d	Ad^2	$I_{y, gross}$	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	4.4375	18.3047	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.7813	8.9550	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	20.4375	84.3047	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	23.0938	116.1002	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	4.4375	18.3047	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.7813	8.9550	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	20.4375	84.3047	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	23.0938	116.1002	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	9.6250	1.7813	17.1445	0.3791	10.6563	1092.9733	1093.3524	
3 (Right)	Plate	9.6250	23.0938	222.2773	0.3791	10.6563	1092.9733	1093.3524	
4 (Left)	Plate	22.5000	0.3750	8.4375	1.0547	12.0625	3273.8379	3274.8926	
4 (Right)	Plate	22.5000	24.5000	551.2500	1.0547	12.0625	3273.8379	3274.8926	
5 (Left)	Plate	20.6250	1.0938	22.5586	0.8124	11.3438	2654.0387	2654.8511	
5 (Right)	Plate	20.6250	23.7813	490.4883	0.8124	11.3438	2654.0387	2654.8511	
6	Plate	12.3750	12.4375	153.9141	499.1250	0.0000	0.0000	499.1250	
7 (Left)	Perforated Plate	3.6094	4.0625	14.6631	8.2903	8.3750	253.1638	261.4541	
7 (Right)	Perforated Plate	3.6094	20.8125	75.1201	8.2903	8.3750	253.1638	261.4541	
8 (Left)	Plate	10.5000	2.3125	24.2813	0.1230	10.1250	1076.4141	1076.5371	
8 (Right)	Plate	10.5000	22.5625	236.9063	0.1230	10.1250	1076.4141	1076.5371	
Total		182.70		2272.37	558.16		20040.39	20611.12	
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 12.4375 in	$S_{right} = 1657.18 \text{ in}^3$			x-bar = 12.4375 in	$S_{right} = 1657.18 \text{ in}^3$		
$I_y = 20611.12 \text{ in}^4$	$S_{left} = 1657.18 \text{ in}^3$			$I_y = 20611.12 \text{ in}^4$	$S_{left} = 1657.18 \text{ in}^3$		
$C_{right} = 12.4375 \text{ in}$	$A = 182.7031 \text{ in}^2$			$C_{right} = 12.4375 \text{ in}$	$A = 182.7031 \text{ in}^2$		
$C_{left} = 12.4375 \text{ in}$	$r_y = 10.6213 \text{ in}$			$C_{left} = 12.4375 \text{ in}$	$r_y = 10.6213 \text{ in}$		



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_l = 0.7500$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_l = 0.7500$ in

Top Cover Plate: PL

$A_6 = b = 22.0000$ in
 $B_6 = t = 0.6250$ in

Side Plate 1: PL

$A_3 = b = 14.0000$ in
 $B_3 = t = 0.7500$ in

Web Plate 1: PL

$A_4 = b = 30.0000$ in
 $B_4 = t = 0.8125$ in

Side Plate 2: PL**

$A_8 = b = 0.0000$ in
 $B_8 = t = 0.0000$ in

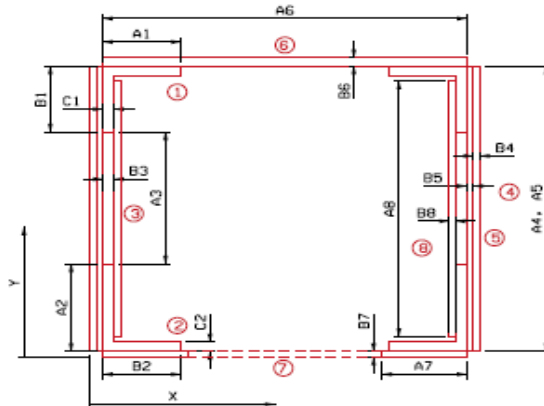
Web Plate 2: PL

$A_5 = b = 30.0000$ in
 $B_5 = t = 0.7500$ in

Perforated Bottom Cover Plate: PL

$A_7 = b = 5.2500$ in
 $B_7 = t = 0.7500$ in

**No interior side plate



Member L82-L83

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	9.0000	30.3750	273.3750	0.4219	14.1170	1793.6112	1794.0330
	Vertical Leg	10.8750	26.3750	286.8281	47.6348	10.1170	1113.0998	1160.7346
2	Horizontal Leg	9.0000	1.1250	10.1250	0.4219	15.1330	2061.0649	2061.4868
	Vertical Leg	10.8750	5.1250	55.7344	47.6348	11.1330	1347.8838	1395.5186
3	Plate	21.0000	15.7500	330.7500	343.0000	0.5080	5.4190	348.4190
4	Plate	48.7500	15.7500	767.8125	3656.2500	0.5080	12.5798	3668.8298
5	Plate	45.0000	15.7500	708.7500	3375.0000	0.5080	11.6122	3386.6122
6	Plate	13.7500	31.0625	427.1094	0.4476	14.8045	3013.6381	3014.0857
7	Perforated Plate	7.8750	0.3750	2.9531	0.3691	15.8830	1986.6199	1986.9890
8	Plate	0.0000	15.7500	0.0000	0.0000	0.5080	0.0000	0.0000
Total		176.13		2863.44	7471.18		11345.53	18816.71
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.2580 in	$S_{top} = 1244.74 \text{ in}^3$			y-bar = 16.2580 in	$S_{top} = 1244.74 \text{ in}^3$		
$I_x = 18816.71 \text{ in}^4$	$S_{bottom} = 1157.38 \text{ in}^3$			$I_x = 18816.71 \text{ in}^4$	$S_{bottom} = 1157.38 \text{ in}^3$		
$C_{top} = 15.1170 \text{ in}$	$A = 176.1250 \text{ in}^2$			$C_{top} = 15.1170 \text{ in}$	$A = 176.1250 \text{ in}^2$		
$C_{bottom} = 16.2580 \text{ in}$	$r_x = 10.3362 \text{ in}$			$C_{bottom} = 16.2580 \text{ in}$	$r_x = 10.3362 \text{ in}$		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I_o	d	Ad^2	$I_{y, gross}$	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.5000	4.5625	20.5313	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	1.9375	10.5352	0.2549	10.6250	613.8428	614.0977	
1 (Right)	Horizontal Leg	4.5000	20.5625	92.5313	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	23.1875	126.0820	0.2549	10.6250	613.8428	614.0977	
2 (Left)	Horizontal Leg	4.5000	4.5625	20.5313	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	1.9375	10.5352	0.2549	10.6250	613.8428	614.0977	
2 (Right)	Horizontal Leg	4.5000	20.5625	92.5313	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	23.1875	126.0820	0.2549	10.6250	613.8428	614.0977	
3 (Left)	Plate	10.5000	1.9375	20.3438	0.4922	10.6250	1185.3516	1185.8438	
3 (Right)	Plate	10.5000	23.1875	243.4688	0.4922	10.6250	1185.3516	1185.8438	
4 (Left)	Plate	24.3750	0.4063	9.9023	1.3409	12.1563	3602.0013	3603.3423	
4 (Right)	Plate	24.3750	24.7188	602.5195	1.3409	12.1563	3602.0013	3603.3423	
5 (Left)	Plate	22.5000	1.1875	26.7188	1.0547	11.3750	2911.2891	2912.3438	
5 (Right)	Plate	22.5000	23.9375	538.5938	1.0547	11.3750	2911.2891	2912.3438	
6	Plate	13.7500	12.5625	172.7344	554.5833	0.0000	0.0000	554.5833	
7 (Left)	Perforated Plate	3.9375	4.1875	16.4883	9.0439	8.3750	276.1787	285.2227	
7 (Right)	Perforated Plate	3.9375	20.9375	82.4414	9.0439	8.3750	276.1787	285.2227	
8 (Left)	Plate	0.0000	2.3125	0.0000	0.0000	10.2500	0.0000	0.0000	
8 (Right)	Plate	0.0000	22.8125	0.0000	0.0000	10.2500	0.0000	0.0000	
Total		176.13		2212.57	619.71		19557.01	20190.48	
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 12.5625 in	$S_{right} = 1607.20 \text{ in}^3$			x-bar = 12.5625 in	$S_{right} = 1607.20 \text{ in}^3$		
$I_y = 20190.48 \text{ in}^4$	$S_{left} = 1607.20 \text{ in}^3$			$I_y = 20190.48 \text{ in}^4$	$S_{left} = 1607.20 \text{ in}^3$		
$C_{right} = 12.5625 \text{ in}$	$A = 176.1250 \text{ in}^2$			$C_{right} = 12.5625 \text{ in}$	$A = 176.1250 \text{ in}^2$		
$C_{left} = 12.5625 \text{ in}$	$r_y = 10.7069 \text{ in}$			$C_{left} = 12.5625 \text{ in}$	$r_y = 10.7069 \text{ in}$		



Made By KMW
Checked By ADK

Date 1/31/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

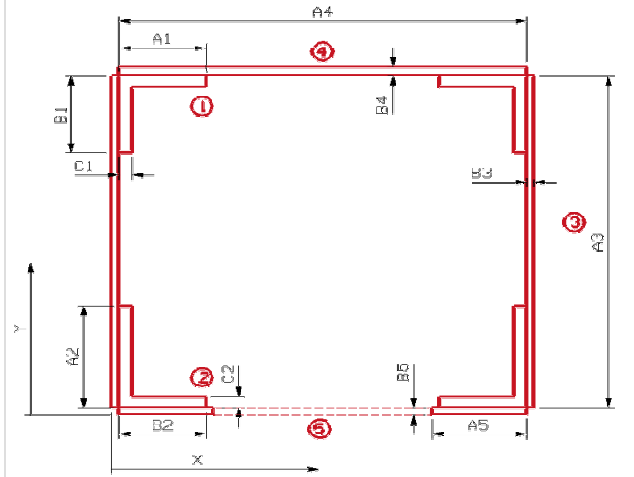
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.6250$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_f = 0.6250$ in

Top Cover Plate:
 $A_4 = b = 22.0000$ in
 $B_4 = t = 0.5000$ in

Web Plates:**
 $A_3 = b = 30.0000$ in
 $B_3 = t = 1.4375$ in

Perforated Cover Plate
 $A_5 = b = 5.2500$ in
 $B_5 = t = 0.6250$ in



Member L83-L84

**There are 2 web plates, thickness shown is total of both

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	7.5000	30.3125	227.3438	0.2441	14.1974	1511.7532	1511.9974
	Vertical Leg	9.2188	26.3125	242.5684	41.7845	10.1974	958.6360	1000.4205
2	Horizontal Leg	7.5000	0.9375	7.0313	0.2441	15.1776	1727.6891	1727.9332
	Vertical Leg	9.2188	4.9375	45.5176	41.7845	11.1776	1151.7723	1193.5567
3	Plate	86.2500	15.6250	1347.6563	6468.7500	0.4901	20.7143	6489.4643
4	Plate	11.0000	30.8750	339.6250	0.2292	14.7599	2396.4118	2396.6410
5	Perforated Plate	6.5625	0.3125	2.0508	0.2136	15.8026	1638.7949	1639.0085
Total		137.25		2211.79	6553.25		9405.77	15959.02
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.1250	2.5000	-0.3125	29.3750	-9.1797	-0.1628	13.3876	-56.0083
2	0.1250	2.5000	-0.3125	29.3750	-9.1797	-0.1628	13.3876	-56.0083
3	2.5000	0.1250	-0.3125	30.6250	-9.5703	-0.0004	14.6376	-66.9556
4	2.5000	0.1250	-0.3125	30.6250	-9.5703	-0.0004	14.6376	-66.9556
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.25	-37.50	-0.33		-245.93	-246.25



Made By KMW
Checked By ADK

Date 1/31/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.1151 in	S _{top} =	1063.23 in ³	y-bar =	15.9874 in	S _{top} =	1038.00 in ³
I _x =	15959.02 in ⁴	S _{bott.} =	990.32 in ³	I _x =	15712.77 in ⁴	S _{bott.} =	982.82 in ³
C _{top} =	15.0099 in	A =	137.2500 in ²	C _{top} =	15.1376 in	A =	136.0000 in ²
C _{bottom} =	16.1151 in	r _x =	10.7832 in	C _{bottom} =	15.9874 in	r _x =	10.7487 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.7500	4.4375	16.6406	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.7500	8.0664	0.1500	10.6875	526.4951	526.6451	
1 (Right)	Horizontal Leg	3.7500	20.4375	76.6406	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	23.1250	106.5918	0.1500	10.6875	526.4951	526.6451	
2 (Left)	Horizontal Leg	3.7500	4.4375	16.6406	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.7500	8.0664	0.1500	10.6875	526.4951	526.6451	
2 (Right)	Horizontal Leg	3.7500	20.4375	76.6406	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	23.1250	106.5918	0.1500	10.6875	526.4951	526.6451	
3 (Left)	Plate	43.1250	0.7188	30.9961	7.4261	11.7188	5922.3175	5929.7437	
3 (Right)	Plate	43.1250	24.1563	1041.7383	7.4261	11.7188	5922.3175	5929.7437	
4	Plate	11.0000	12.4375	136.8125	443.6667	0.0000	0.0000	443.6667	
5 (Left)	Perforated Plate	3.2813	4.0625	13.3301	7.5366	8.3750	230.1489	237.6855	
5 (Right)	Perforated Plate	3.2813	20.8125	68.2910	7.5366	8.3750	230.1489	237.6855	
Total		137.25		1707.05	519.19		15370.91	15890.11	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	2.5000	0.1250	-0.3125	0.7188	-0.2246	-0.0004	11.7188	-42.9153	-42.9158
2	2.5000	0.1250	-0.3125	24.1563	-7.5488	-0.0004	11.7188	-42.9153	-42.9158
3	0.1250	2.5000	-0.3125	2.6875	-0.8398	-0.1628	9.7500	-29.7070	-29.8698
4	0.1250	2.5000	-0.3125	22.1875	-6.9336	-0.1628	9.7500	-29.7070	-29.8698
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.25		-15.55	-0.33		-145.24	-145.57

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.4375 in	S _{right} =	1277.60 in ³	x-bar =	12.4375 in	S _{right} =	1265.89 in ³
I _y =	15890.11 in ⁴	S _{left} =	1277.60 in ³	I _y =	15744.53 in ⁴	S _{left} =	1265.89 in ³
C _{right} =	12.4375 in	A =	137.2500 in ²	C _{right} =	12.4375 in	A =	136.0000 in ²
C _{left} =	12.4375 in	r _y =	10.7599 in	C _{left} =	12.4375 in	r _y =	10.7596 in



Made By KMW
Checked By ADK

Date 1/31/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

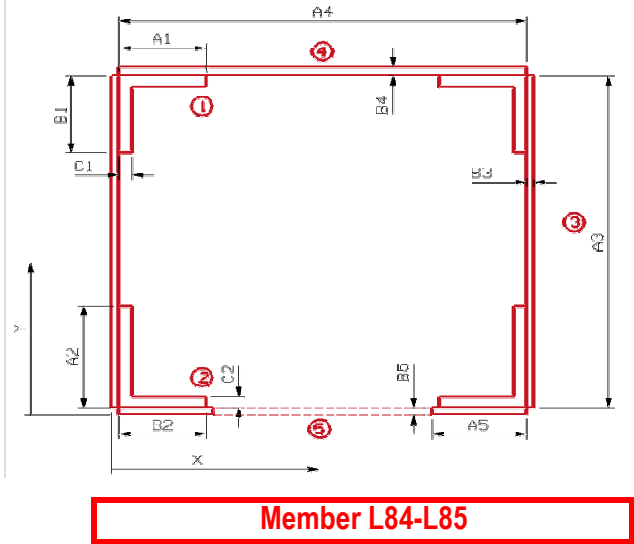
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6250$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6250$ in

Top Cover Plate:
 $A_4 = b = 22.0000$ in
 $B_4 = t = 0.5000$ in

Web Plates:**
 $A_3 = b = 30.0000$ in
 $B_3 = t = 1.3125$ in

Perforated Cover Plate
 $A_5 = b = 5.2500$ in
 $B_5 = t = 0.6250$ in



**There are 2 web plates, thickness shown is total of both

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x, gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	7.5000	30.3125	227.3438	0.2441	14.1691	1505.7266	1505.9707	
	Vertical Leg	9.2188	26.3125	242.5684	41.7845	10.1691	953.3174	995.1019	
2	Horizontal Leg	7.5000	0.9375	7.0313	0.2441	15.2059	1734.1443	1734.3884	
	Vertical Leg	9.2188	4.9375	45.5176	41.7845	11.2059	1157.6176	1199.4021	
3	Plate	78.7500	15.6250	1230.4688	5906.2500	0.5184	21.1627	5927.4127	
4	Plate	11.0000	30.8750	339.6250	0.2292	14.7316	2387.2221	2387.4513	
5	Perforated Plate	6.5625	0.3125	2.0508	0.2136	15.8309	1644.6756	1644.8892	
Total		129.75		2094.61	5990.75		9403.87	15394.62	
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x, loss}	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)	
1	0.0625	30.0000	-1.8750	15.6250	-29.2969	-140.6250	0.2798	-0.1468	-140.7718
2	22.0000	0.0625	-1.3750	31.0938	-42.7539	-0.0004	15.1889	-317.2178	-317.2182
3	8.0000	0.1875	-1.5000	22.9688	-34.4531	-0.0044	7.0639	-74.8488	-74.8532
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-4.75	-106.50	-140.63		-392.21	-532.84	



Made By KMW
Checked By ADK

Date 1/31/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.1434 in	S _{top} =	1027.57 in ³	y-bar =	15.9048 in	S _{top} =	976.45 in ³
I _x =	15394.62 in ⁴	S _{bott.} =	953.62 in ³	I _x =	14861.77 in ⁴	S _{bott.} =	934.42 in ³
C _{top} =	14.9816 in	A =	129.7500 in ²	C _{top} =	15.2202 in	A =	125.0000 in ²
C _{bottom} =	16.1434 in	r _x =	10.8926 in	C _{bottom} =	15.9048 in	r _x =	10.9039 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.7500	4.3125	16.1719	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.6250	7.4902	0.1500	10.6875	526.4951	526.6451	
1 (Right)	Horizontal Leg	3.7500	20.3125	76.1719	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	23.0000	106.0156	0.1500	10.6875	526.4951	526.6451	
2 (Left)	Horizontal Leg	3.7500	4.3125	16.1719	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.6250	7.4902	0.1500	10.6875	526.4951	526.6451	
2 (Right)	Horizontal Leg	3.7500	20.3125	76.1719	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	23.0000	106.0156	0.1500	10.6875	526.4951	526.6451	
3 (Left)	Plate	39.3750	0.6563	25.8398	5.6525	11.6563	5349.8090	5355.4614	
3 (Right)	Plate	39.3750	23.9688	943.7695	5.6525	11.6563	5349.8090	5355.4614	
4	Plate	11.0000	12.3125	135.4375	443.6667	0.0000	0.0000	443.6667	
5 (Left)	Perforated Plate	3.2813	3.9375	12.9199	7.5366	8.3750	230.1489	237.6855	
5 (Right)	Perforated Plate	3.2813	20.6875	67.8809	7.5366	8.3750	230.1489	237.6855	
Total		129.75		1597.55	515.65		14225.90	14741.54	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	30.0000	0.0625	-1.8750	0.0313	-0.0586	-0.0006	12.3815	-287.4389	-287.4396
2	0.0625	22.0000	-1.3750	12.3125	-16.9297	-55.4583	0.1002	-0.0138	-55.4721
3	0.1875	8.0000	-1.5000	19.3125	-28.9688	-8.0000	6.8998	-71.4105	-79.4105
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-4.75		-45.96	-63.46		-358.86	-422.32

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3125 in	S _{right} =	1197.28 in ³	x-bar =	12.4127 in	S _{right} =	1172.53 in ³
I _y =	14741.54 in ⁴	S _{left} =	1197.28 in ³	I _y =	14319.22 in ⁴	S _{left} =	1153.59 in ³
C _{right} =	12.3125 in	A =	129.7500 in ²	C _{right} =	12.2123 in	A =	125.0000 in ²
C _{left} =	12.3125 in	r _y =	10.6590 in	C _{left} =	12.4127 in	r _y =	10.7030 in



Made By KMW
Checked By ADK

Date 2/1/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

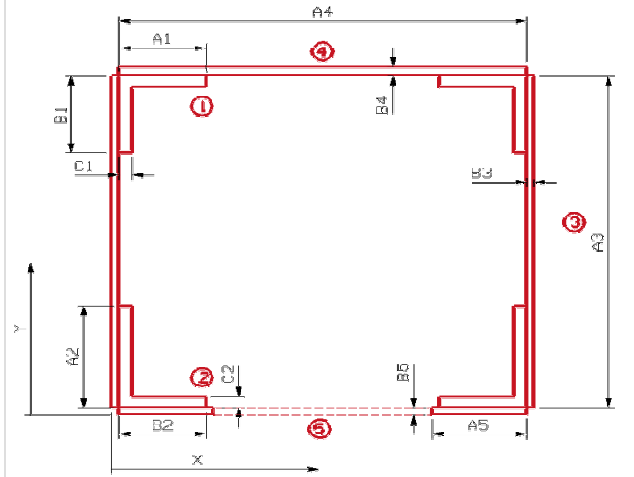
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6250$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6250$ in

Top Cover Plate:
 $A_4 = b = 22.0000$ in
 $B_4 = t = 0.5000$ in

Web Plates:**
 $A_3 = b = 30.0000$ in
 $B_3 = t = 1.3750$ in

Perforated Cover Plate
 $A_5 = b = 5.2500$ in
 $B_5 = t = 0.6250$ in



**There are 2 web plates, thickness shown is total of both

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	7.5000	30.3125	227.3438	0.2441	14.1837	1508.8231	1509.0672
	Vertical Leg	9.2188	26.3125	242.5684	41.7845	10.1837	956.0496	997.8340
2	Horizontal Leg	7.5000	0.9375	7.0313	0.2441	15.1913	1730.8245	1731.0687
	Vertical Leg	9.2188	4.9375	45.5176	41.7845	11.1913	1154.6110	1196.3954
3	Plate	82.5000	15.6250	1289.0625	6187.5000	0.5038	20.9424	6208.4424
4	Plate	11.0000	30.8750	339.6250	0.2292	14.7462	2391.9438	2392.1730
5	Perforated Plate	6.5625	0.3125	2.0508	0.2136	15.8163	1641.6513	1641.8650
Total		133.50		2153.20	6272.00		9404.85	15676.85
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	3.0000	0.0625	-0.1875	31.0938	-5.8301	15.0071	-42.2273	-42.2273
2	3.0000	0.0625	-0.1875	31.0938	-5.8301	15.0071	-42.2273	-42.2273
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.38	-11.66	0.00		-84.45	-84.45



Made By KMW
Checked By ADK

Date 2/1/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.1288 in	S _{top} =	1045.39 in ³	y-bar =	16.0867 in	S _{top} =	1036.84 in ³
I _x =	15676.85 in ⁴	S _{bott.} =	971.98 in ³	I _x =	15592.39 in ⁴	S _{bott.} =	969.27 in ³
C _{top} =	14.9962 in	A =	133.5000 in ²	C _{top} =	15.0383 in	A =	133.1250 in ²
C _{bottom} =	16.1288 in	r _x =	10.8365 in	C _{bottom} =	16.0867 in	r _x =	10.8225 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.7500	4.3750	16.4063	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.6875	7.7783	0.1500	10.6875	526.4951	526.6451	
1 (Right)	Horizontal Leg	3.7500	20.3750	76.4063	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	23.0625	106.3037	0.1500	10.6875	526.4951	526.6451	
2 (Left)	Horizontal Leg	3.7500	4.3750	16.4063	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.6875	7.7783	0.1500	10.6875	526.4951	526.6451	
2 (Right)	Horizontal Leg	3.7500	20.3750	76.4063	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	23.0625	106.3037	0.1500	10.6875	526.4951	526.6451	
3 (Left)	Plate	41.2500	0.6875	28.3594	6.4990	11.6875	5634.6533	5641.1523	
3 (Right)	Plate	41.2500	24.0625	992.5781	6.4990	11.6875	5634.6533	5641.1523	
4	Plate	11.0000	12.3750	136.1250	443.6667	0.0000	0.0000	443.6667	
5 (Left)	Perforated Plate	3.2813	4.0000	13.1250	7.5366	8.3750	230.1489	237.6855	
5 (Right)	Perforated Plate	3.2813	20.7500	68.0859	7.5366	8.3750	230.1489	237.6855	
Total		133.50		1652.06	517.34		14795.58	15312.92	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0625	3.0000	-0.1875	2.8750	-0.5391	-0.1406	9.5000	-16.9219	-17.0625
2	0.0625	3.0000	-0.1875	21.8750	-4.1016	-0.1406	9.5000	-16.9219	-17.0625
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.38		-4.64	-0.28		-33.84	-34.13

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3750 in	S _{right} =	1237.41 in ³	x-bar =	12.3750 in	S _{right} =	1234.65 in ³
I _y =	15312.92 in ⁴	S _{left} =	1237.41 in ³	I _y =	15278.80 in ⁴	S _{left} =	1234.65 in ³
C _{right} =	12.3750 in	A =	133.5000 in ²	C _{right} =	12.3750 in	A =	133.1250 in ²
C _{left} =	12.3750 in	r _y =	10.7100 in	C _{left} =	12.3750 in	r _y =	10.7131 in



Made By KMW
Checked By ADK

Date 2/1/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

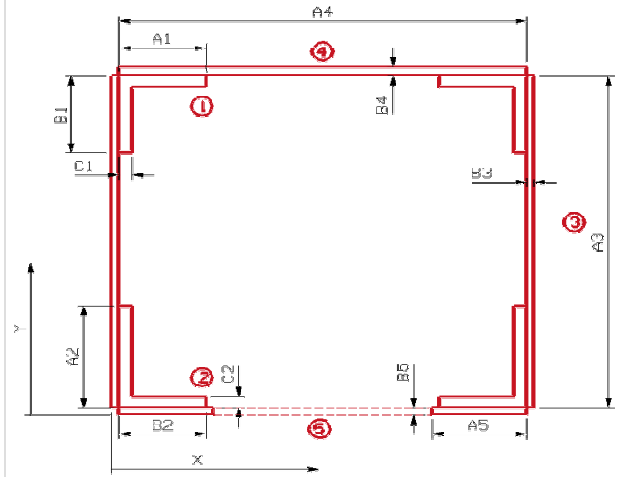
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6875$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6875$ in

Top Cover Plate:
 $A_4 = b = 22.0000$ in
 $B_4 = t = 0.5625$ in

Web Plates:**
 $A_3 = b = 30.0000$ in
 $B_3 = t = 1.4375$ in

Perforated Cover Plate
 $A_5 = b = 5.2500$ in
 $B_5 = t = 0.6875$ in



Member L86-L87

**There are 2 web plates, thickness shown is total of both

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	8.2500	30.3438	250.3359	0.3250	14.1063	1641.6474	1641.9724
	Vertical Leg	10.0547	26.3438	264.8782	44.8042	10.1063	1026.9577	1071.7619
2	Horizontal Leg	8.2500	1.0313	8.5078	0.3250	15.2062	1907.6365	1907.9614
	Vertical Leg	10.0547	5.0313	50.5876	44.8042	11.2062	1262.6579	1307.4621
3	Plate	86.2500	15.6875	1353.0469	6468.7500	0.5500	26.0863	6494.8363
4	Plate	12.3750	30.9688	383.2383	0.3263	14.7313	2685.5119	2685.8382
5	Perforated Plate	7.2188	0.3438	2.4814	0.2843	15.8937	1823.5274	1823.8117
Total		142.45		2313.08	6559.62		10374.02	16933.64
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	3.0000	0.0625	-0.1875	31.2188	-5.8535	-0.0001	15.0208	-42.3048
2	3.0000	0.0625	-0.1875	31.2188	-5.8535	-0.0001	15.0208	-42.3048
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.38	-11.71	0.00		-84.61	-84.61



Made By KMW
Checked By ADK

Date 2/1/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.2375 in	S _{top} =	1127.97 in ³	y-bar =	16.1979 in	S _{top} =	1119.38 in ³
I _x =	16933.64 in ⁴	S _{bott.} =	1042.88 in ³	I _x =	16849.03 in ⁴	S _{bott.} =	1040.20 in ³
C _{top} =	15.0125 in	A =	142.4531 in ²	C _{top} =	15.0521 in	A =	142.0781 in ²
C _{bottom} =	16.2375 in	r _x =	10.9028 in	C _{bottom} =	16.1979 in	r _x =	10.8899 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	4.4375	18.3047	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.7813	8.9550	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	20.4375	84.3047	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	23.0938	116.1002	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	4.4375	18.3047	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.7813	8.9550	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	20.4375	84.3047	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	23.0938	116.1002	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	43.1250	0.7188	30.9961	7.4261	11.7188	5922.3175	5929.7437	
3 (Right)	Plate	43.1250	24.1563	1041.7383	7.4261	11.7188	5922.3175	5929.7437	
4	Plate	12.3750	12.4375	153.9141	499.1250	0.0000	0.0000	499.1250	
5 (Left)	Perforated Plate	3.6094	4.0625	14.6631	8.2903	8.3750	253.1638	261.4541	
5 (Right)	Perforated Plate	3.6094	20.8125	75.1201	8.2903	8.3750	253.1638	261.4541	
Total		142.45		1771.76	580.85		15690.50	16271.35	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0625	3.0000	-0.1875	2.9375	-0.5508	-0.1406	9.5000	-16.9219	-17.0625
2	0.0625	3.0000	-0.1875	21.9375	-4.1133	-0.1406	9.5000	-16.9219	-17.0625
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.38		-4.66	-0.28		-33.84	-34.13

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.4375 in	S _{right} =	1308.25 in ³	x-bar =	12.4375 in	S _{right} =	1305.51 in ³
I _y =	16271.35 in ⁴	S _{left} =	1308.25 in ³	I _y =	16237.22 in ⁴	S _{left} =	1305.51 in ³
C _{right} =	12.4375 in	A =	142.4531 in ²	C _{right} =	12.4375 in	A =	142.0781 in ²
C _{left} =	12.4375 in	r _y =	10.6875 in	C _{left} =	12.4375 in	r _y =	10.6904 in



Made By KMW
Checked By ADK

Date 2/1/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

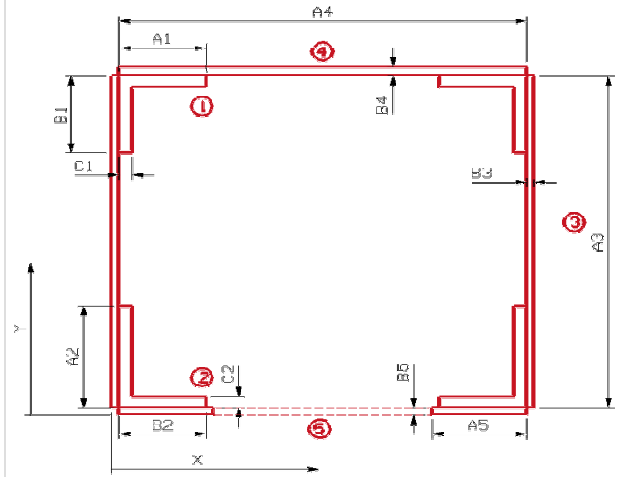
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.7500$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.7500$ in

Top Cover Plate:
 $A_4 = b = 22.0000$ in
 $B_4 = t = 0.6250$ in

Web Plates:**
 $A_3 = b = 30.0000$ in
 $B_3 = t = 1.5000$ in

Perforated Cover Plate
 $A_5 = b = 5.2500$ in
 $B_5 = t = 0.7500$ in



Member L87-L88

**There are 2 web plates, thickness shown is total of both

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	9.0000	30.3750	273.3750	0.4219	14.0340	1772.5682	1772.9901
	Vertical Leg	10.8750	26.3750	286.8281	47.6348	10.0340	1094.8987	1142.5335
2	Horizontal Leg	9.0000	1.1250	10.1250	0.4219	15.2160	2083.7510	2084.1729
	Vertical Leg	10.8750	5.1250	55.7344	47.6348	11.2160	1368.0703	1415.7050
3	Plate	90.0000	15.7500	1417.5000	6750.0000	0.5910	31.4396	6781.4396
4	Plate	13.7500	31.0625	427.1094	0.4476	14.7215	2979.9189	2980.3664
5	Perforated Plate	7.8750	0.3750	2.9531	0.3691	15.9660	2007.4513	2007.8204
Total		151.38		2473.63	6846.93		11338.10	18185.03
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.2500	2.0000	-0.5000	29.7500	-14.8750	-0.1667	13.3557	-89.1870
2	0.2500	2.0000	-0.5000	17.7500	-8.8750	-0.1667	1.3557	-0.9189
3	0.2500	10.0000	-2.5000	5.7500	-14.3750	-20.8333	10.6443	-283.2543
4	6.0000	0.1250	-0.7500	31.3125	-23.4844	-0.0010	14.9182	-166.9139
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-4.25	-61.61	-21.17		-540.27	-561.44



Made By KMW
Checked By ADK

Date 2/1/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.3410 in	S _{top} =	1209.60 in ³	y-bar =	16.3943 in	S _{top} =	1176.42 in ³
I _x =	18185.03 in ⁴	S _{bottom} =	1112.84 in ³	I _x =	17623.59 in ⁴	S _{bottom} =	1074.98 in ³
C _{top} =	15.0340 in	A =	151.3750 in ²	C _{top} =	14.9807 in	A =	147.1250 in ²
C _{bottom} =	16.3410 in	r _x =	10.9605 in	C _{bottom} =	16.3943 in	r _x =	10.9447 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.5000	4.5000	20.2500	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	1.8750	10.1953	0.2549	10.6250	613.8428	614.0977	
1 (Right)	Horizontal Leg	4.5000	20.5000	92.2500	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	23.1250	125.7422	0.2549	10.6250	613.8428	614.0977	
2 (Left)	Horizontal Leg	4.5000	4.5000	20.2500	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	1.8750	10.1953	0.2549	10.6250	613.8428	614.0977	
2 (Right)	Horizontal Leg	4.5000	20.5000	92.2500	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	23.1250	125.7422	0.2549	10.6250	613.8428	614.0977	
3 (Left)	Plate	45.0000	0.7500	33.7500	8.4375	11.7500	6212.8125	6221.2500	
3 (Right)	Plate	45.0000	24.2500	1091.2500	8.4375	11.7500	6212.8125	6221.2500	
4	Plate	13.7500	12.5000	171.8750	554.5833	0.0000	0.0000	554.5833	
5 (Left)	Perforated Plate	3.9375	4.1250	16.2422	9.0439	8.3750	276.1787	285.2227	
5 (Right)	Perforated Plate	3.9375	20.8750	82.1953	9.0439	8.3750	276.1787	285.2227	
Total		151.38		1892.19	644.57		16585.35	17229.92	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	2.0000	0.2500	-0.5000	0.1250	-0.0625	-0.0026	12.6286	-79.7409	-79.7435
2	2.0000	0.2500	-0.5000	0.1250	-0.0625	-0.0026	12.6286	-79.7409	-79.7435
3	10.0000	0.2500	-2.5000	0.1250	-0.3125	-0.0130	12.6286	-398.7045	-398.7176
4	0.1250	6.0000	-0.7500	20.5000	-15.3750	-2.2500	7.7464	-45.0049	-47.2549
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-4.25		-15.81	-2.27		-603.19	-605.46

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.5000 in	S _{right} =	1378.39 in ³	x-bar =	12.7536 in	S _{right} =	1357.50 in ³
I _y =	17229.92 in ⁴	S _{left} =	1378.39 in ³	I _y =	16624.46 in ⁴	S _{left} =	1303.51 in ³
C _{right} =	12.5000 in	A =	151.3750 in ²	C _{right} =	12.2464 in	A =	147.1250 in ²
C _{left} =	12.5000 in	r _y =	10.6688 in	C _{left} =	12.7536 in	r _y =	10.6299 in



Made By KMW
Checked By ADK

Date 2/1/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_l = 0.7500$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_l = 0.7500$ in

Top Cover Plate: PL

$A_6 = b = 22.0000$ in
 $B_6 = t = 0.6250$ in

Side Plate 1: PL

$A_3 = b = 14.0000$ in
 $B_3 = t = 0.7500$ in

Web Plate 1: PL

$A_4 = b = 30.0000$ in
 $B_4 = t = 0.7500$ in

Side Plate 2: PL**

$A_8 = b = 0.0000$ in
 $B_8 = t = 0.0000$ in

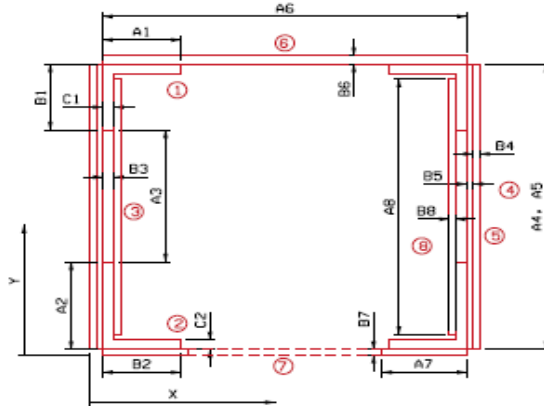
Web Plate 2: PL

$A_5 = b = 30.0000$ in
 $B_5 = t = 0.7500$ in

Perforated Bottom Cover Plate: PL

$A_7 = b = 5.2500$ in
 $B_7 = t = 0.7500$ in

**No interior side plate



Member L88-L89

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg		9.0000	30.3750	273.3750	0.4219	14.1060	1790.8041	1791.2260
	Vertical Leg		10.8750	26.3750	286.8281	47.6348	10.1060	1110.6694	1158.3041
2	Horizontal Leg		9.0000	1.1250	10.1250	0.4219	15.1440	2064.0763	2064.4982
	Vertical Leg		10.8750	5.1250	55.7344	47.6348	11.1440	1350.5611	1398.1959
3	Plate		21.0000	15.7500	330.7500	343.0000	0.5190	5.6574	348.6574
4	Plate		45.0000	15.7500	708.7500	3375.0000	0.5190	12.1229	3387.1229
5	Plate		45.0000	15.7500	708.7500	3375.0000	0.5190	12.1229	3387.1229
6	Plate		13.7500	31.0625	427.1094	0.4476	14.7935	3009.1406	3009.5882
7	Perforated Plate		7.8750	0.3750	2.9531	0.3691	15.8940	1989.3854	1989.7545
8	Plate		0.0000	15.7500	0.0000	0.0000	0.5190	0.0000	0.0000
Total			172.38		2804.38	7189.93		11344.54	18534.47
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1250	4.0000	-0.5000	10.7500	-5.3750	-0.6667	5.5351	-15.3186	-15.9853
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.50		-5.38	-0.67		-15.32	-15.99



Made By KMW
Checked By ADK

Date 2/1/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.2690 in	S _{top} = 1226.96 in ³			y-bar = 16.2851 in	S _{top} = 1227.21 in ³		
I _x = 18534.47 in ⁴	S _{bottom} = 1139.25 in ³			I _x = 18518.48 in ⁴	S _{bottom} = 1137.14 in ³		
C _{top} = 15.1060 in	A = 172.3750 in ²			C _{top} = 15.0899 in	A = 171.8750 in ²		
C _{bottom} = 16.2690 in	r _x = 10.3694 in			C _{bottom} = 16.2851 in	r _x = 10.3800 in		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1 (Left)	Horizontal Leg	4.5000	4.5000	20.2500	13.5000	8.0000	288.0000	301.5000
	Vertical Leg	5.4375	1.8750	10.1953	0.2549	10.6250	613.8428	614.0977
1 (Right)	Horizontal Leg	4.5000	20.5000	92.2500	13.5000	8.0000	288.0000	301.5000
	Vertical Leg	5.4375	23.1250	125.7422	0.2549	10.6250	613.8428	614.0977
2 (Left)	Horizontal Leg	4.5000	4.5000	20.2500	13.5000	8.0000	288.0000	301.5000
	Vertical Leg	5.4375	1.8750	10.1953	0.2549	10.6250	613.8428	614.0977
2 (Right)	Horizontal Leg	4.5000	20.5000	92.2500	13.5000	8.0000	288.0000	301.5000
	Vertical Leg	5.4375	23.1250	125.7422	0.2549	10.6250	613.8428	614.0977
3 (Left)	Plate	10.5000	1.8750	19.6875	0.4922	10.6250	1185.3516	1185.8438
3 (Right)	Plate	10.5000	23.1250	242.8125	0.4922	10.6250	1185.3516	1185.8438
4 (Left)	Plate	22.5000	0.3750	8.4375	1.0547	12.1250	3307.8516	3308.9063
4 (Right)	Plate	22.5000	24.6250	554.0625	1.0547	12.1250	3307.8516	3308.9063
5 (Left)	Plate	22.5000	1.1250	25.3125	1.0547	11.3750	2911.2891	2912.3438
5 (Right)	Plate	22.5000	23.8750	537.1875	1.0547	11.3750	2911.2891	2912.3438
6	Plate	13.7500	12.5000	171.8750	554.5833	0.0000	0.0000	554.5833
7 (Left)	Perforated Plate	3.9375	4.1250	16.2422	9.0439	8.3750	276.1787	285.2227
7 (Right)	Perforated Plate	3.9375	20.8750	82.1953	9.0439	8.3750	276.1787	285.2227
8 (Left)	Plate	0.0000	2.2500	0.0000	0.0000	10.2500	0.0000	0.0000
8 (Right)	Plate	0.0000	22.7500	0.0000	0.0000	10.2500	0.0000	0.0000
Total		172.38		2154.69	619.14		18968.71	19601.61
Section Losses		A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	4.0000	0.1250	-0.5000	0.0625	-0.0313	-0.0007	12.4737	-77.7964
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.50	-0.03	0.00		-77.80	-77.80

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 12.5000 in	S _{right} = 1568.13 in ³			x-bar = 12.5362 in	S _{right} = 1566.44 in ³		
I _y = 19601.61 in ⁴	S _{left} = 1568.13 in ³			I _y = 19523.81 in ⁴	S _{left} = 1557.40 in ³		
C _{right} = 12.5000 in	A = 172.3750 in ²			C _{right} = 12.4638 in	A = 171.8750 in ²		
C _{left} = 12.5000 in	r _y = 10.6637 in			C _{left} = 12.5362 in	r _y = 10.6580 in		



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_l = 0.7500$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_l = 0.7500$ in

Top Cover Plate: PL

$A_6 = b = 22.0000$ in
 $B_6 = t = 0.6250$ in

Side Plate 1: PL

$A_3 = b = 14.0000$ in
 $B_3 = t = 0.7500$ in

Web Plate 1: PL

$A_4 = b = 30.0000$ in
 $B_4 = t = 0.7500$ in

Side Plate 2: PL

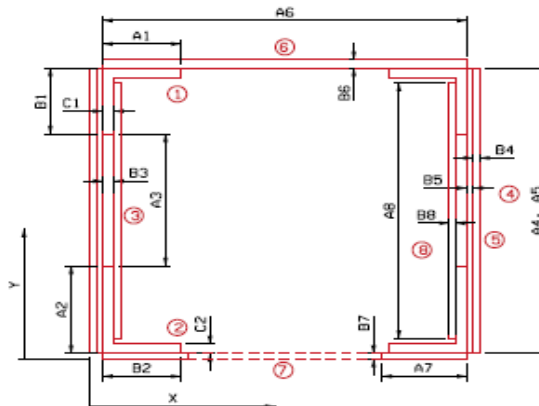
$A_8 = b = 28.0000$ in
 $B_8 = t = 0.3750$ in

Web Plate 2: PL

$A_5 = b = 30.0000$ in
 $B_5 = t = 0.7500$ in

Perforated Bottom Cover Plate: PL

$A_7 = b = 5.2500$ in
 $B_7 = t = 0.7500$ in



Member L89-L90

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg		9.0000	30.3750	273.3750	0.4219	14.1623	1805.1444	1805.5663
	Vertical Leg		10.8750	26.3750	286.8281	47.6348	10.1623	1123.0934	1170.7282
2	Horizontal Leg		9.0000	1.1250	10.1250	0.4219	15.0877	2048.7400	2049.1619
	Vertical Leg		10.8750	5.1250	55.7344	47.6348	11.0877	1336.9336	1384.5683
3	Plate		21.0000	15.7500	330.7500	343.0000	0.4627	4.4953	347.4953
4	Plate		45.0000	15.7500	708.7500	3375.0000	0.4627	9.6328	3384.6328
5	Plate		45.0000	15.7500	708.7500	3375.0000	0.4627	9.6328	3384.6328
6	Plate		13.7500	31.0625	427.1094	0.4476	14.8498	3032.1151	3032.5627
7	Perforated Plate		7.8750	0.3750	2.9531	0.3691	15.8377	1975.3003	1975.6694
8	Plate		21.0000	15.7500	330.7500	1372.0000	0.4627	4.4953	1376.4953
Total			193.38		3135.13	8561.93		11349.58	19911.51
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.2127 in	S _{top} = 1313.22 in ³			y-bar = 16.2127 in	S _{top} = 1313.22 in ³		
I _x = 19911.51 in ⁴	S _{bottom} = 1228.15 in ³			I _x = 19911.51 in ⁴	S _{bottom} = 1228.15 in ³		
C _{top} = 15.1623 in	A = 193.3750 in ²			C _{top} = 15.1623 in	A = 193.3750 in ²		
C _{bottom} = 16.2127 in	r _x = 10.1473 in			C _{bottom} = 16.2127 in	r _x = 10.1473 in		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y, gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.5000	4.5000	20.2500	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	1.8750	10.1953	0.2549	10.6250	613.8428	614.0977	
1 (Right)	Horizontal Leg	4.5000	20.5000	92.2500	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	23.1250	125.7422	0.2549	10.6250	613.8428	614.0977	
2 (Left)	Horizontal Leg	4.5000	4.5000	20.2500	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	1.8750	10.1953	0.2549	10.6250	613.8428	614.0977	
2 (Right)	Horizontal Leg	4.5000	20.5000	92.2500	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	23.1250	125.7422	0.2549	10.6250	613.8428	614.0977	
3 (Left)	Plate	10.5000	1.8750	19.6875	0.4922	10.6250	1185.3516	1185.8438	
3 (Right)	Plate	10.5000	23.1250	242.8125	0.4922	10.6250	1185.3516	1185.8438	
4 (Left)	Plate	22.5000	0.3750	8.4375	1.0547	12.1250	3307.8516	3308.9063	
4 (Right)	Plate	22.5000	24.6250	554.0625	1.0547	12.1250	3307.8516	3308.9063	
5 (Left)	Plate	22.5000	1.1250	25.3125	1.0547	11.3750	2911.2891	2912.3438	
5 (Right)	Plate	22.5000	23.8750	537.1875	1.0547	11.3750	2911.2891	2912.3438	
6	Plate	13.7500	12.5000	171.8750	554.5833	0.0000	0.0000	554.5833	
7 (Left)	Perforated Plate	3.9375	4.1250	16.2422	9.0439	8.3750	276.1787	285.2227	
7 (Right)	Perforated Plate	3.9375	20.8750	82.1953	9.0439	8.3750	276.1787	285.2227	
8 (Left)	Plate	10.5000	2.4375	25.5938	0.1230	10.0625	1063.1660	1063.2891	
8 (Right)	Plate	10.5000	22.5625	236.9063	0.1230	10.0625	1063.1660	1063.2891	
Total		193.38		2417.19	619.39		21095.04	21728.18	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 12.5000 in	S _{right} = 1738.25 in ³			x-bar = 12.5000 in	S _{right} = 1738.25 in ³		
I _y = 21728.18 in ⁴	S _{left} = 1738.25 in ³			I _y = 21728.18 in ⁴	S _{left} = 1738.25 in ³		
C _{right} = 12.5000 in	A = 193.3750 in ²			C _{right} = 12.5000 in	A = 193.3750 in ²		
C _{left} = 12.5000 in	r _y = 10.6001 in			C _{left} = 12.5000 in	r _y = 10.6001 in		



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_l = 0.6875$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_l = 0.6875$ in

Top Cover Plate: PL

$A_6 = b = 22.0000$ in
 $B_6 = t = 0.6250$ in

Side Plate 1: PL

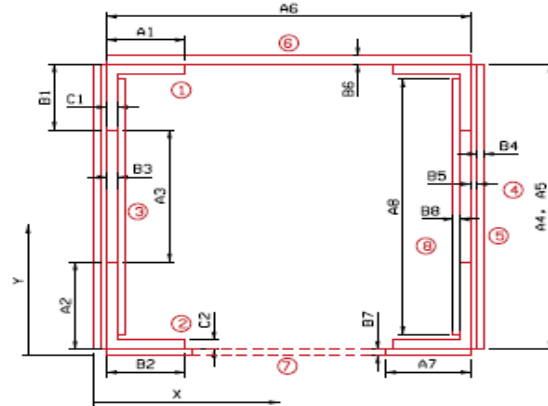
$A_3 = b = 14.0000$ in
 $B_3 = t = 0.6875$ in

Web Plate 1: PL

$A_4 = b = 30.0000$ in
 $B_4 = t = 0.7500$ in

Side Plate 2: PL **

$A_8 = b = 28.0000$ in
 $B_8 = t = 1.3750$ in



Member L90-L91

Web Plate 2: PL

$A_5 = b = 30.0000$ in
 $B_5 = t = 0.7500$ in

Perforated Bottom Cover Plate: PL

$A_7 = b = 5.2500$ in
 $B_7 = t = 0.7500$ in

**2 inside side plates, so thickness shown is the total thickness for both

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	8.2500	30.4063	250.8516	0.3250	14.2903	1684.7549	1685.0798
	Vertical Leg	10.0547	26.4063	265.5066	44.8042	10.2903	1064.6939	1109.4981
2	Horizontal Leg	8.2500	1.0938	9.0234	0.3250	15.0222	1861.7483	1862.0732
	Vertical Leg	10.0547	5.0938	51.2161	44.8042	11.0222	1221.5326	1266.3368
3	Plate	19.2500	15.7500	303.1875	314.4167	0.3659	2.5779	316.9946
4	Plate	45.0000	15.7500	708.7500	3375.0000	0.3659	6.0263	3381.0263
5	Plate	45.0000	15.7500	708.7500	3375.0000	0.3659	6.0263	3381.0263
6	Plate	13.7500	31.0625	427.1094	0.4476	14.9466	3071.7417	3072.1893
7	Perforated Plate	7.8750	0.3750	2.9531	0.3691	15.7409	1951.2476	1951.6167
8	Plate	77.0000	15.7500	1212.7500	5030.6667	0.3659	10.3117	5040.9784
Total		244.48		3940.10	12186.16		10880.66	23066.82
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.1159 in	S _{top} = 1511.68 in ³			y-bar = 16.1159 in	S _{top} = 1511.68 in ³		
I _x = 23066.82 in ⁴	S _{bottom} = 1431.30 in ³			I _x = 23066.82 in ⁴	S _{bottom} = 1431.30 in ³		
C _{top} = 15.2591 in	A = 244.4844 in ²			C _{top} = 15.2591 in	A = 244.4844 in ²		
C _{bottom} = 16.1159 in	r _x = 9.7133 in			C _{bottom} = 16.1159 in	r _x = 9.7133 in		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y, gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	4.5000	18.5625	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.8438	9.2692	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	20.5000	84.5625	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	23.1563	116.4144	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	4.5000	18.5625	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.8438	9.2692	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	20.5000	84.5625	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	23.1563	116.4144	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	9.6250	1.8438	17.7461	0.3791	10.6563	1092.9733	1093.3524	
3 (Right)	Plate	9.6250	23.1563	222.8789	0.3791	10.6563	1092.9733	1093.3524	
4 (Left)	Plate	22.5000	0.3750	8.4375	1.0547	12.1250	3307.8516	3308.9063	
4 (Right)	Plate	22.5000	24.6250	554.0625	1.0547	12.1250	3307.8516	3308.9063	
5 (Left)	Plate	22.5000	1.1250	25.3125	1.0547	11.3750	2911.2891	2912.3438	
5 (Right)	Plate	22.5000	23.8750	537.1875	1.0547	11.3750	2911.2891	2912.3438	
6	Plate	13.7500	12.5000	171.8750	554.5833	0.0000	0.0000	554.5833	
7 (Left)	Perforated Plate	3.9375	4.1250	16.2422	9.0439	8.3750	276.1787	285.2227	
7 (Right)	Perforated Plate	3.9375	20.8750	82.1953	9.0439	8.3750	276.1787	285.2227	
8 (Left)	Plate	38.5000	2.8750	110.6875	6.0658	9.6250	3566.6641	3572.7298	
8 (Right)	Plate	38.5000	22.1250	851.8125	6.0658	9.6250	3566.6641	3572.7298	
Total		244.48		3056.05	627.50		25649.45	26289.52	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 12.5000 in	S _{right} = 2103.16 in ³			x-bar = 12.5000 in	S _{right} = 2103.16 in ³		
I _y = 26289.52 in ⁴	S _{left} = 2103.16 in ³			I _y = 26289.52 in ⁴	S _{left} = 2103.16 in ³		
C _{right} = 12.5000 in	A = 244.4844 in ²			C _{right} = 12.5000 in	A = 244.4844 in ²		
C _{left} = 12.5000 in	r _y = 10.3697 in			C _{left} = 12.5000 in	r _y = 10.3697 in		



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_l = 0.6875$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_l = 0.6875$ in

Top Cover Plate: PL

$A_6 = b = 22.0000$ in
 $B_6 = t = 0.6250$ in

Side Plate 1: PL

$A_3 = b = 14.0000$ in
 $B_3 = t = 0.6875$ in

Web Plate 1: PL

$A_4 = b = 30.0000$ in
 $B_4 = t = 0.7500$ in

Side Plate 2: PL

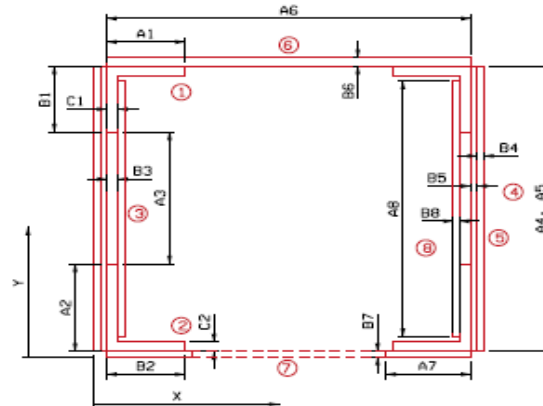
$A_8 = b = 28.0000$ in
 $B_8 = t = 0.6250$ in

Web Plate 2: PL

$A_5 = b = 30.0000$ in
 $B_5 = t = 0.7500$ in

Perforated Bottom Cover Plate: PL

$A_7 = b = 5.2500$ in
 $B_7 = t = 0.7500$ in



Member L91-L92

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg		8.2500	30.4063	250.8516	0.3250	14.2144	1666.9044	1667.2294
	Vertical Leg		10.0547	26.4063	265.5066	44.8042	10.2144	1049.0444	1093.8486
2	Horizontal Leg		8.2500	1.0938	9.0234	0.3250	15.0981	1880.6104	1880.9354
	Vertical Leg		10.0547	5.0938	51.2161	44.8042	11.0981	1238.4151	1283.2193
3	Plate		19.2500	15.7500	303.1875	314.4167	0.4419	3.7583	318.1750
4	Plate		45.0000	15.7500	708.7500	3375.0000	0.4419	8.7856	3383.7856
5	Plate		45.0000	15.7500	708.7500	3375.0000	0.4419	8.7856	3383.7856
6	Plate		13.7500	31.0625	427.1094	0.4476	14.8706	3040.6211	3041.0687
7	Perforated Plate		7.8750	0.3750	2.9531	0.3691	15.8169	1970.1116	1970.4808
8	Plate		35.0000	15.7500	551.2500	2286.6667	0.4419	6.8333	2293.4999
Total			202.48		3278.60	9442.16		10873.87	20316.03
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.1919 in	S _{top} = 1338.06 in ³			y-bar = 16.1919 in	S _{top} = 1338.06 in ³		
I _x = 20316.03 in ⁴	S _{bottom} = 1254.71 in ³			I _x = 20316.03 in ⁴	S _{bottom} = 1254.71 in ³		
C _{top} = 15.1831 in	A = 202.4844 in ²			C _{top} = 15.1831 in	A = 202.4844 in ²		
C _{bottom} = 16.1919 in	r _x = 10.0167 in			C _{bottom} = 16.1919 in	r _x = 10.0167 in		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y, gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	4.5000	18.5625	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.8438	9.2692	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	20.5000	84.5625	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	23.1563	116.4144	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	4.5000	18.5625	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.8438	9.2692	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	20.5000	84.5625	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	23.1563	116.4144	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	9.6250	1.8438	17.7461	0.3791	10.6563	1092.9733	1093.3524	
3 (Right)	Plate	9.6250	23.1563	222.8789	0.3791	10.6563	1092.9733	1093.3524	
4 (Left)	Plate	22.5000	0.3750	8.4375	1.0547	12.1250	3307.8516	3308.9063	
4 (Right)	Plate	22.5000	24.6250	554.0625	1.0547	12.1250	3307.8516	3308.9063	
5 (Left)	Plate	22.5000	1.1250	25.3125	1.0547	11.3750	2911.2891	2912.3438	
5 (Right)	Plate	22.5000	23.8750	537.1875	1.0547	11.3750	2911.2891	2912.3438	
6	Plate	13.7500	12.5000	171.8750	554.5833	0.0000	0.0000	554.5833	
7 (Left)	Perforated Plate	3.9375	4.1250	16.2422	9.0439	8.3750	276.1787	285.2227	
7 (Right)	Perforated Plate	3.9375	20.8750	82.1953	9.0439	8.3750	276.1787	285.2227	
8 (Left)	Plate	17.5000	2.5000	43.7500	0.5697	10.0000	1750.0000	1750.5697	
8 (Right)	Plate	17.5000	22.5000	393.7500	0.5697	10.0000	1750.0000	1750.5697	
Total		202.48		2531.05	616.51		22016.12	22645.20	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 12.5000 in	S _{right} = 1811.62 in ³			x-bar = 12.5000 in	S _{right} = 1811.62 in ³		
I _y = 22645.20 in ⁴	S _{left} = 1811.62 in ³			I _y = 22645.20 in ⁴	S _{left} = 1811.62 in ³		
C _{right} = 12.5000 in	A = 202.4844 in ²			C _{right} = 12.5000 in	A = 202.4844 in ²		
C _{left} = 12.5000 in	r _y = 10.5753 in			C _{left} = 12.5000 in	r _y = 10.5753 in		



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.7500$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.7500$ in

Top Cover Plate:

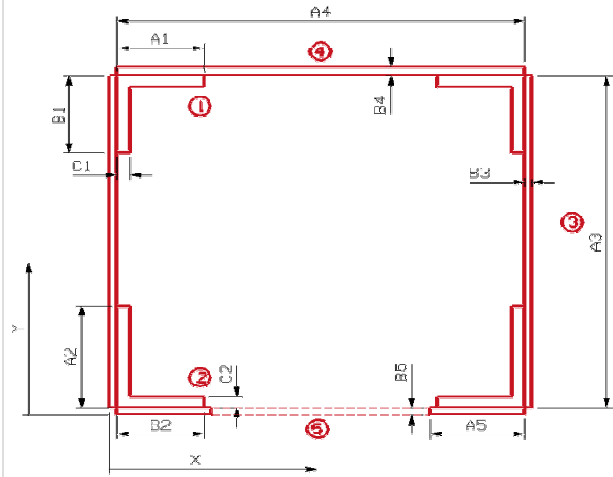
$A_4 = b = 22.0000$ in
 $B_4 = t = 0.6250$ in

Web Plates:**

$A_3 = b = 30.0000$ in
 $B_3 = t = 1.5000$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.7500$ in



Member L92-L93

**There are 2 web plates, thickness shown is total of both

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	9.0000	30.3750	273.3750	0.4219	14.0340	1772.5682	1772.9901
	Vertical Leg	10.8750	26.3750	286.8281	47.6348	10.0340	1094.8987	1142.5335
2	Horizontal Leg	9.0000	1.1250	10.1250	0.4219	15.2160	2083.7510	2084.1729
	Vertical Leg	10.8750	5.1250	55.7344	47.6348	11.2160	1368.0703	1415.7050
3	Plate	90.0000	15.7500	1417.5000	6750.0000	0.5910	31.4396	6781.4396
4	Plate	13.7500	31.0625	427.1094	0.4476	14.7215	2979.9189	2980.3664
5	Perforated Plate	7.8750	0.3750	2.9531	0.3691	15.9660	2007.4513	2007.8204
Total		151.38		2473.63	6846.93		11338.10	18185.03
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.3410 in	S _{top} =	1209.60 in ³	y-bar =	16.3410 in	S _{top} =	1209.60 in ³
I _x =	18185.03 in ⁴	S _{bott.} =	1112.84 in ³	I _x =	18185.03 in ⁴	S _{bott.} =	1112.84 in ³
C _{top} =	15.0340 in	A =	151.3750 in ²	C _{top} =	15.0340 in	A =	151.3750 in ²
C _{bottom} =	16.3410 in	r _x =	10.9605 in	C _{bottom} =	16.3410 in	r _x =	10.9605 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.5000	4.5000	20.2500	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	1.8750	10.1953	0.2549	10.6250	613.8428	614.0977	
1 (Right)	Horizontal Leg	4.5000	20.5000	92.2500	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	23.1250	125.7422	0.2549	10.6250	613.8428	614.0977	
2 (Left)	Horizontal Leg	4.5000	4.5000	20.2500	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	1.8750	10.1953	0.2549	10.6250	613.8428	614.0977	
2 (Right)	Horizontal Leg	4.5000	20.5000	92.2500	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	23.1250	125.7422	0.2549	10.6250	613.8428	614.0977	
3 (Left)	Plate	45.0000	0.7500	33.7500	8.4375	11.7500	6212.8125	6221.2500	
3 (Right)	Plate	45.0000	24.2500	1091.2500	8.4375	11.7500	6212.8125	6221.2500	
4	Plate	13.7500	12.5000	171.8750	554.5833	0.0000	0.0000	554.5833	
5 (Left)	Perforated Plate	3.9375	4.1250	16.2422	9.0439	8.3750	276.1787	285.2227	
5 (Right)	Perforated Plate	3.9375	20.8750	82.1953	9.0439	8.3750	276.1787	285.2227	
Total		151.38		1892.19	644.57		16585.35	17229.92	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.5000 in	S _{right} =	1378.39 in ³	x-bar =	12.5000 in	S _{right} =	1378.39 in ³
I _y =	17229.92 in ⁴	S _{left} =	1378.39 in ³	I _y =	17229.92 in ⁴	S _{left} =	1378.39 in ³
C _{right} =	12.5000 in	A =	151.3750 in ²	C _{right} =	12.5000 in	A =	151.3750 in ²
C _{left} =	12.5000 in	r _y =	10.6688 in	C _{left} =	12.5000 in	r _y =	10.6688 in



Made By KMW
Checked By ADK

Date 2/1/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

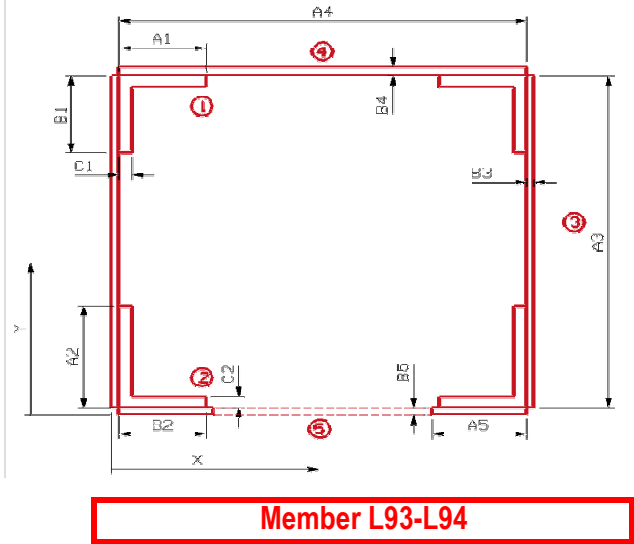
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.6250$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_f = 0.6250$ in

Top Cover Plate:
 $A_4 = b = 22.0000$ in
 $B_4 = t = 0.5000$ in

Web Plates:**
 $A_3 = b = 30.0000$ in
 $B_3 = t = 1.3750$ in

Perforated Cover Plate
 $A_5 = b = 5.2500$ in
 $B_5 = t = 0.6250$ in



**There are 2 web plates, thickness shown is total of both

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	7.5000	30.3125	227.3438	0.2441	14.1837	1508.8231	1509.0672	
	Vertical Leg	9.2188	26.3125	242.5684	41.7845	10.1837	956.0496	997.8340	
2	Horizontal Leg	7.5000	0.9375	7.0313	0.2441	15.1913	1730.8245	1731.0687	
	Vertical Leg	9.2188	4.9375	45.5176	41.7845	11.1913	1154.6110	1196.3954	
3	Plate	82.5000	15.6250	1289.0625	6187.5000	0.5038	20.9424	6208.4424	
4	Plate	11.0000	30.8750	339.6250	0.2292	14.7462	2391.9438	2392.1730	
5	Perforated Plate	6.5625	0.3125	2.0508	0.2136	15.8163	1641.6513	1641.8650	
Total		133.50		2153.20	6272.00		9404.85	15676.85	
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	
1	0.2500	24.0000	-6.0000	12.6250	-75.7500	-288.0000	3.6687	-80.7570	-368.7570
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-6.00	-75.75	-288.00		-80.76	-368.76	



Made By KMW
Checked By ADK

Date 2/1/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.1288 in	S _{top} =	1045.39 in ³	y-bar =	16.2937 in	S _{top} =	1032.15 in ³
I _x =	15676.85 in ⁴	S _{bott.} =	971.98 in ³	I _x =	15308.09 in ⁴	S _{bott.} =	939.51 in ³
C _{top} =	14.9962 in	A =	133.5000 in ²	C _{top} =	14.8313 in	A =	127.5000 in ²
C _{bottom} =	16.1288 in	r _x =	10.8365 in	C _{bottom} =	16.2937 in	r _x =	10.9573 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.7500	4.3750	16.4063	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.6875	7.7783	0.1500	10.6875	526.4951	526.6451	
1 (Right)	Horizontal Leg	3.7500	20.3750	76.4063	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	23.0625	106.3037	0.1500	10.6875	526.4951	526.6451	
2 (Left)	Horizontal Leg	3.7500	4.3750	16.4063	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.6875	7.7783	0.1500	10.6875	526.4951	526.6451	
2 (Right)	Horizontal Leg	3.7500	20.3750	76.4063	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	23.0625	106.3037	0.1500	10.6875	526.4951	526.6451	
3 (Left)	Plate	41.2500	0.6875	28.3594	6.4990	11.6875	5634.6533	5641.1523	
3 (Right)	Plate	41.2500	24.0625	992.5781	6.4990	11.6875	5634.6533	5641.1523	
4	Plate	11.0000	12.3750	136.1250	443.6667	0.0000	0.0000	443.6667	
5 (Left)	Perforated Plate	3.2813	4.0000	13.1250	7.5366	8.3750	230.1489	237.6855	
5 (Right)	Perforated Plate	3.2813	20.7500	68.0859	7.5366	8.3750	230.1489	237.6855	
Total		133.50		1652.06	517.34		14795.58	15312.92	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	24.0000	0.2500	-6.0000	0.1250	-0.7500	-0.0313	12.8265	-987.1101	-987.1413
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-6.00		-0.75	-0.03		-987.11	-987.14

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3750 in	S _{right} =	1237.41 in ³	x-bar =	12.9515 in	S _{right} =	1214.20 in ³
I _y =	15312.92 in ⁴	S _{left} =	1237.41 in ³	I _y =	14325.78 in ⁴	S _{left} =	1106.11 in ³
C _{right} =	12.3750 in	A =	133.5000 in ²	C _{right} =	11.7985 in	A =	127.5000 in ²
C _{left} =	12.3750 in	r _y =	10.7100 in	C _{left} =	12.9515 in	r _y =	10.6000 in

South Truss

Member L94-L95



Made By KMW
Checked By ADK

Date 2/1/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.6250$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_f = 0.6250$ in

Top Cover Plate:

$A_4 = b = 22.0000$ in
 $B_4 = t = 0.5000$ in

Web Plate:

$A_3 = b = 30.0000$ in
 $B_3 = t = 0.8125$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.6250$ in



Member L94-L95

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg		7.5000	30.3125	227.3438	0.2441	14.0132	1472.7727	1473.0168
	Vertical Leg		9.2188	26.3125	242.5684	41.7845	10.0132	924.3098	966.0943
2	Horizontal Leg		7.5000	0.9375	7.0313	0.2441	15.3618	1769.8874	1770.1316
	Vertical Leg		9.2188	4.9375	45.5176	41.7845	11.3618	1190.0537	1231.8381
3	Plate		48.7500	15.6250	761.7188	3656.2500	0.6743	22.1659	3678.4159
4	Plate		11.0000	30.8750	339.6250	0.2292	14.5757	2336.9604	2337.1896
5	Perforated Plate		6.5625	0.3125	2.0508	0.2136	15.9868	1677.2298	1677.4434
Total			99.75		1625.86	3740.75		9393.38	13134.13
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.2500	30.0000	-7.5000	15.6250	-117.1875	-562.5000	0.1863	-0.2603	-562.7603
2	0.1250	20.0000	-2.5000	15.6250	-39.0625	-83.3333	0.1863	-0.0868	-83.4201
3	14.0000	0.2500	-3.5000	31.0000	-108.5000	-0.0182	15.1887	-807.4366	-807.4548
4	0.2500	3.0000	-0.7500	26.1250	-19.5938	-0.5625	10.3137	-79.7791	-80.3416
5	5.2500	0.0625	-0.3281	0.0313	-0.0103	-0.0001	15.7801	-81.7065	-81.7067
6	5.2500	0.0625	-0.3281	0.0313	-0.0103	-0.0001	15.7801	-81.7065	-81.7067
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-14.91		-284.36	-646.41		-1050.98	-1697.39



Made By KMW
Checked By ADK

Date 2/1/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.2993 in	S _{top} =	885.90 in ³	y-bar =	15.8113 in	S _{top} =	746.83 in ³
I _x =	13134.13 in ⁴	S _{bott.} =	805.81 in ³	I _x =	11436.74 in ⁴	S _{bott.} =	723.33 in ³
C _{top} =	14.8257 in	A =	99.7500 in ²	C _{top} =	15.3137 in	A =	84.8438 in ²
C _{bottom} =	16.2993 in	r _x =	11.4748 in	C _{bottom} =	15.8113 in	r _x =	11.6102 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.7500	3.8125	14.2969	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.1250	5.1855	0.1500	10.6875	526.4951	526.6451	
1 (Right)	Horizontal Leg	3.7500	19.8125	74.2969	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	22.5000	103.7109	0.1500	10.6875	526.4951	526.6451	
2 (Left)	Horizontal Leg	3.7500	3.8125	14.2969	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.1250	5.1855	0.1500	10.6875	526.4951	526.6451	
2 (Right)	Horizontal Leg	3.7500	19.8125	74.2969	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	22.5000	103.7109	0.1500	10.6875	526.4951	526.6451	
3 (Left)	Plate	24.3750	0.4063	9.9023	1.3409	11.4063	3171.2494	3172.5903	
3 (Right)	Plate	24.3750	23.2188	565.9570	1.3409	11.4063	3171.2494	3172.5903	
4	Plate	11.0000	11.8125	129.9375	443.6667	0.0000	0.0000	443.6667	
5 (Left)	Perforated Plate	3.2813	3.4375	11.2793	7.5366	8.3750	230.1489	237.6855	
5 (Right)	Perforated Plate	3.2813	20.1875	66.2402	7.5366	8.3750	230.1489	237.6855	
Total		99.75		1178.30	507.02		9868.78	10375.80	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	30.0000	0.2500	-7.5000	0.1250	-0.9375	-0.0391	13.1212	-1291.2445	-1291.2836
2	20.0000	0.1250	-2.5000	0.3125	-0.7813	-0.0033	12.9337	-418.2016	-418.2049
3	0.2500	14.0000	-3.5000	7.8125	-27.3438	-57.1667	5.4337	-103.3379	-160.5046
4	3.0000	0.2500	-0.7500	23.5000	-17.6250	-0.0039	10.2538	-78.8553	-78.8592
5	0.0625	5.2500	-0.3281	3.4375	-1.1279	-0.7537	9.8087	-31.5691	-32.3228
6	0.0625	5.2500	-0.3281	20.1875	-6.6240	-0.7537	6.9413	-15.8096	-16.5633
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-14.91		-54.44	-58.72		-1939.02	-1997.74

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	11.8125 in	S _{right} =	878.37 in ³	x-bar =	13.2462 in	S _{right} =	807.23 in ³
I _y =	10375.80 in ⁴	S _{left} =	878.37 in ³	I _y =	8378.06 in ⁴	S _{left} =	632.49 in ³
C _{right} =	11.8125 in	A =	99.7500 in ²	C _{right} =	10.3788 in	A =	84.8438 in ²
C _{left} =	11.8125 in	r _y =	10.1989 in	C _{left} =	13.2462 in	r _y =	9.9371 in



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

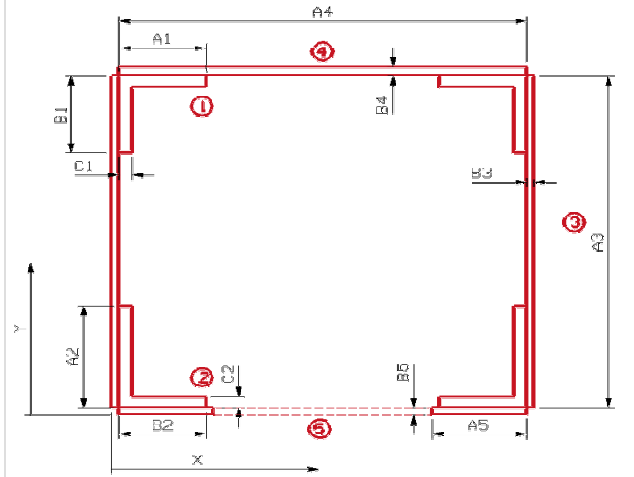
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.4375$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_f = 0.4375$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:
 $A_3 = b = 30.0000$ in
 $B_3 = t = 0.6250$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member L95-L96

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.2500	30.2813	158.9766	0.0837	14.2245	1062.2646	1062.3484
	Vertical Leg	6.6172	26.2813	173.9080	31.5372	10.2245	691.7621	723.2993
2	Horizontal Leg	5.2500	0.7188	3.7734	0.0837	15.3380	1235.0864	1235.1701
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	11.3380	850.6425	882.1797
3	Plate	37.5000	15.5000	581.2500	2812.5000	0.5568	11.6243	2824.1243
4	Plate	8.8125	30.6875	270.4336	0.1033	14.6307	1886.3910	1886.4943
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	15.8068	1499.1219	1499.2469
Total		76.05		1221.07	2875.97		7236.89	10112.86
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.0568 in	S _{top} =	682.46 in ³	y-bar =	16.0568 in	S _{top} =	682.46 in ³
I _x =	10112.86 in ⁴	S _{bott.} =	629.82 in ³	I _x =	10112.86 in ⁴	S _{bott.} =	629.82 in ³
C _{top} =	14.8182 in	A =	76.0469 in ²	C _{top} =	14.8182 in	A =	76.0469 in ²
C _{bottom} =	16.0568 in	r _x =	11.5318 in	C _{bottom} =	16.0568 in	r _x =	11.5318 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.6250	9.5156	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.8438	2.7916	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	21.1250	55.4531	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.9063	79.0961	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.6250	9.5156	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.8438	2.7916	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	21.1250	55.4531	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.9063	79.0961	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	18.7500	0.3125	5.8594	0.6104	12.0625	2728.1982	2728.8086	
3 (Right)	Plate	18.7500	24.4375	458.2031	0.6104	12.0625	2728.1982	2728.8086	
4	Plate	8.8125	12.3750	109.0547	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.6250	10.8750	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	21.1250	63.3750	9.0000	8.7500	229.6875	238.6875	
Total		76.05		941.08	456.49		8479.45	8935.94	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3750 in	S _{right} =	722.10 in ³	x-bar =	12.3750 in	S _{right} =	722.10 in ³
I _y =	8935.94 in ⁴	S _{left} =	722.10 in ³	I _y =	8935.94 in ⁴	S _{left} =	722.10 in ³
C _{right} =	12.3750 in	A =	76.0469 in ²	C _{right} =	12.3750 in	A =	76.0469 in ²
C _{left} =	12.3750 in	r _y =	10.8400 in	C _{left} =	12.3750 in	r _y =	10.8400 in



Made By KMW
Checked By ADK

Date 2/1/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:
 $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:
 $A_3 = b = 30.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L96-L97

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	2.5000	30.2188	75.5469	0.0203	13.4018	449.0206	449.0409	
	Vertical Leg	2.3047	28.2188	65.0354	2.6115	11.4018	299.6118	302.2233	
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	16.2857	663.0601	663.0804	
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	14.2857	470.3435	472.9550	
3	Plate	22.5000	15.3750	345.9375	1687.5000	1.4420	46.7825	1734.2825	
4	Plate	8.8125	30.5625	269.3320	0.1033	13.7455	1665.0349	1665.1382	
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	16.6295	1244.4238	1244.4765	
Total		45.42		763.86	1692.92		4838.28	6531.20	
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	
1	0.1250	30.0000	-3.7500	15.3750	-57.6563	-281.2500	0.8139	-2.4840	-283.7340
2	23.5000	0.2500	-5.8750	30.6250	-179.9219	-0.0306	16.0639	-1516.0328	-1516.0634
3	1.0000	0.1250	-0.1250	30.4375	-3.8047	-0.0002	15.8764	-31.5074	-31.5076
4	0.1250	30.0000	-3.7500	15.3750	-57.6563	-281.2500	0.8139	-2.4840	-283.7340
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-13.50		-299.04	-562.53		-1552.51	-2115.04



Made By KMW
Checked By ADK

Date 2/1/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.8170 in	S _{top} =	468.76 in ³	y-bar =	14.5611 in	S _{top} =	272.79 in ³
I _x =	6531.20 in ⁴	S _{bott.} =	388.37 in ³	I _x =	4416.16 in ⁴	S _{bott.} =	303.28 in ³
C _{top} =	13.9330 in	A =	45.4219 in ²	C _{top} =	16.1889 in	A =	31.9219 in ²
C _{bottom} =	16.8170 in	r _x =	11.9912 in	C _{bottom} =	14.5611 in	r _x =	11.7619 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	11.2500	0.1875	2.1094	0.1318	11.9375	1603.1689	1603.3008	
3 (Right)	Plate	11.2500	24.0625	270.7031	0.1318	11.9375	1603.1689	1603.3008	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.3750	7.5938	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.8750	46.9688	6.7500	8.7500	172.2656	179.0156	
Total		45.42		550.74	426.03		4645.75	5071.78	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	30.0000	0.1250	-3.7500	0.0625	-0.2344	-0.0049	12.0596	-545.3740	-545.3789
2	0.2500	23.5000	-5.8750	12.1250	-71.2344	-270.3724	0.0029	-0.0001	-270.3724
3	0.1250	1.0000	-0.1250	12.8750	-1.6094	-0.0104	0.7529	-0.0709	-0.0813
4	30.0000	0.1250	-3.7500	24.1875	-90.7031	-0.0049	12.0654	-545.9054	-545.9103
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-13.50		-163.78	-270.39		-1091.35	-1361.74

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	418.29 in ³	x-bar =	12.1221 in	S _{right} =	305.91 in ³
I _y =	5071.78 in ⁴	S _{left} =	418.29 in ³	I _y =	3710.03 in ⁴	S _{left} =	306.06 in ³
C _{right} =	12.1250 in	A =	45.4219 in ²	C _{right} =	12.1279 in	A =	31.9219 in ²
C _{left} =	12.1250 in	r _y =	10.5669 in	C _{left} =	12.1221 in	r _y =	10.7806 in



Made By KMW
Checked By ADK

Date 2/3/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

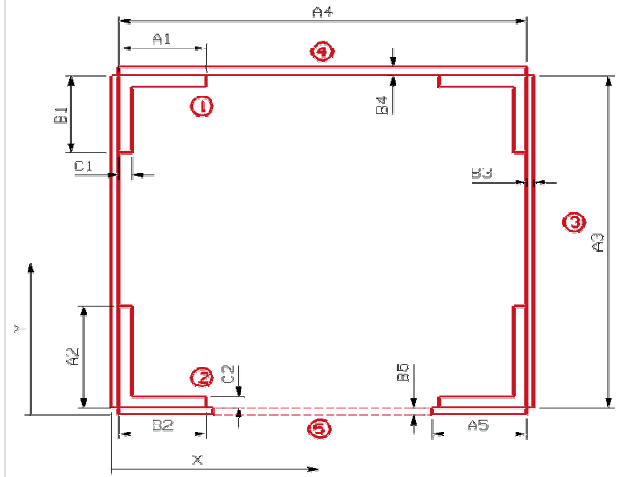
Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:
 $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:
 $A_3 = b = 30.0000$ in
 $B_3 = t = 0.5000$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L97-L98

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	30.2188	75.5469	0.0203	13.6062	462.8183	462.8387
	Vertical Leg	2.3047	28.2188	65.0354	2.6115	11.6062	310.4477	313.0592
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	16.0813	646.5245	646.5449
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	14.0813	456.9836	459.5951
3	Plate	30.0000	15.3750	461.2500	2250.0000	1.2376	45.9496	2295.9496
4	Plate	8.8125	30.5625	269.3320	0.1033	13.9499	1714.9100	1715.0133
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	16.4251	1214.0275	1214.0803
Total		52.92		879.17	2255.42		4851.66	7107.08
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	23.5000	0.2500	-5.8750	30.6250	-179.9219	-0.0306	15.7622	-1459.6268
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-5.88	-179.92	-0.03		-1459.63	-1459.66



Made By KMW
Checked By ADK

Date 2/3/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.6126 in	S _{top} =	502.71 in ³	y-bar =	14.8628 in	S _{top} =	355.47 in ³
I _x =	7107.08 in ⁴	S _{bott.} =	427.81 in ³	I _x =	5647.42 in ⁴	S _{bott.} =	379.97 in ³
C _{top} =	14.1374 in	A =	52.9219 in ²	C _{top} =	15.8872 in	A =	47.0469 in ²
C _{bottom} =	16.6126 in	r _x =	11.5885 in	C _{bottom} =	14.8628 in	r _x =	10.9562 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.5000	3.1250	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.6563	0.7562	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	22.0000	27.5000	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.8438	27.4762	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.5000	3.1250	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.6563	0.7562	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	22.0000	27.5000	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.8438	27.4762	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	15.0000	0.2500	3.7500	0.3125	12.0000	2160.0000	2160.3125	
3 (Right)	Plate	15.0000	24.2500	363.7500	0.3125	12.0000	2160.0000	2160.3125	
4	Plate	8.8125	12.2500	107.9531	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.5000	7.8750	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	21.0000	47.2500	6.7500	8.7500	172.2656	179.0156	
Total		52.92		648.29	426.39		5759.41	6185.80	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.2500	23.5000	-5.8750	12.2500	-71.9688	-270.3724	0.0000	0.0000	-270.3724
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-5.88		-71.97	-270.37		0.00	-270.37

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2500 in	S _{right} =	504.96 in ³	x-bar =	12.2500 in	S _{right} =	482.89 in ³
I _y =	6185.80 in ⁴	S _{left} =	504.96 in ³	I _y =	5915.43 in ⁴	S _{left} =	482.89 in ³
C _{right} =	12.2500 in	A =	52.9219 in ²	C _{right} =	12.2500 in	A =	47.0469 in ²
C _{left} =	12.2500 in	r _y =	10.8114 in	C _{left} =	12.2500 in	r _y =	11.2132 in



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.5000$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.4375$ in

Web Plate:

$A_3 = b = 30.0000$ in
 $B_3 = t = 0.6875$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5625$ in



Member L98-L99

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	6.0000	30.3125	181.8750	0.1250	14.1248	1197.0569	1197.1819
	Vertical Leg	7.5000	26.3125	197.3438	35.1563	10.1248	768.8341	803.9904
2	Horizontal Leg	6.0000	0.8125	4.8750	0.1250	15.3752	1418.3839	1418.5089
	Vertical Leg	7.5000	4.8125	36.0938	35.1563	11.3752	970.4668	1005.6231
3	Plate	41.2500	15.5625	641.9531	3093.7500	0.6252	16.1245	3109.8745
4	Plate	10.2813	30.7813	316.4697	0.1640	14.5935	2189.6100	2189.7740
5	Perforated Plate	6.7500	0.2813	1.8984	0.1780	15.9065	1707.8560	1708.0340
Total		85.28		1380.51	3164.65		8268.33	11432.99
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.1877 in	$S_{top} = 771.86 \text{ in}^3$			y-bar = 16.1877 in	$S_{top} = 771.86 \text{ in}^3$		
$I_x = 11432.99 \text{ in}^4$	$S_{bott.} = 706.28 \text{ in}^3$			$I_x = 11432.99 \text{ in}^4$	$S_{bott.} = 706.28 \text{ in}^3$		
$C_{top} = 14.8123 \text{ in}$	$A = 85.2813 \text{ in}^2$			$C_{top} = 14.8123 \text{ in}$	$A = 85.2813 \text{ in}^2$		
$C_{bottom} = 16.1877 \text{ in}$	$r_x = 11.5785 \text{ in}$			$C_{bottom} = 16.1877 \text{ in}$	$r_x = 11.5785 \text{ in}$		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I_o	d	Ad^2	$I_{y,gross}$	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.0000	3.6875	11.0625	9.0000	8.7500	229.6875	238.6875	
	Vertical Leg	3.7500	0.9375	3.5156	0.0781	11.5000	495.9375	496.0156	
1 (Right)	Horizontal Leg	3.0000	21.1875	63.5625	9.0000	8.7500	229.6875	238.6875	
	Vertical Leg	3.7500	23.9375	89.7656	0.0781	11.5000	495.9375	496.0156	
2 (Left)	Horizontal Leg	3.0000	3.6875	11.0625	9.0000	8.7500	229.6875	238.6875	
	Vertical Leg	3.7500	0.9375	3.5156	0.0781	11.5000	495.9375	496.0156	
2 (Right)	Horizontal Leg	3.0000	21.1875	63.5625	9.0000	8.7500	229.6875	238.6875	
	Vertical Leg	3.7500	23.9375	89.7656	0.0781	11.5000	495.9375	496.0156	
3 (Left)	Plate	20.6250	0.3438	7.0898	0.8124	12.0938	3016.5875	3017.3999	
3 (Right)	Plate	20.6250	24.5313	505.9570	0.8124	12.0938	3016.5875	3017.3999	
4	Plate	10.2813	12.4375	127.8730	473.1517	0.0000	0.0000	473.1517	
5 (Left)	Perforated Plate	3.3750	3.6875	12.4453	10.1250	8.7500	258.3984	268.5234	
5 (Right)	Perforated Plate	3.3750	21.1875	71.5078	10.1250	8.7500	258.3984	268.5234	
Total		85.28		1060.69	531.34		9452.47	9983.81	
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 12.4375 in	$S_{right} = 802.72 \text{ in}^3$			x-bar = 12.4375 in	$S_{right} = 802.72 \text{ in}^3$		
$I_y = 9983.81 \text{ in}^4$	$S_{left} = 802.72 \text{ in}^3$			$I_y = 9983.81 \text{ in}^4$	$S_{left} = 802.72 \text{ in}^3$		
$C_{right} = 12.4375 \text{ in}$	$A = 85.2813 \text{ in}^2$			$C_{right} = 12.4375 \text{ in}$	$A = 85.2813 \text{ in}^2$		
$C_{left} = 12.4375 \text{ in}$	$r_y = 10.8199 \text{ in}$			$C_{left} = 12.4375 \text{ in}$	$r_y = 10.8199 \text{ in}$		



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6875$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6875$ in

Top Cover Plate:

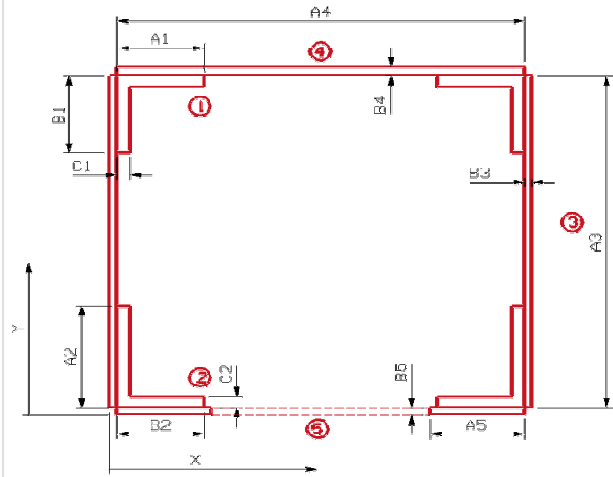
$A_4 = b = 22.0000$ in
 $B_4 = t = 0.5000$ in

Web Plate:

$A_3 = b = 30.0000$ in
 $B_3 = t = 0.9375$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.6250$ in



Member L99-L100

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	8.2500	30.2813	249.8203	0.3250	14.0471	1627.9021	1628.2271
	Vertical Leg	10.0547	26.2813	264.2498	44.8042	10.0471	1014.9658	1059.7700
2	Horizontal Leg	8.2500	0.9688	7.9922	0.3250	15.2654	1922.5136	1922.8385
	Vertical Leg	10.0547	4.9688	49.9592	44.8042	11.2654	1276.0291	1320.8333
3	Plate	56.2500	15.6250	878.9063	4218.7500	0.6091	20.8712	4239.6212
4	Plate	11.0000	30.8750	339.6250	0.2292	14.6409	2357.9045	2358.1337
5	Perforated Plate	6.5625	0.3125	2.0508	0.2136	15.9216	1663.5834	1663.7971
Total		110.42		1792.60	4309.45		9883.77	14193.22
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.2341 in	$S_{top} = 953.15 \text{ in}^3$			y-bar = 16.2341 in	$S_{top} = 953.15 \text{ in}^3$		
$I_x = 14193.22 \text{ in}^4$	$S_{bott.} = 874.28 \text{ in}^3$			$I_x = 14193.22 \text{ in}^4$	$S_{bott.} = 874.28 \text{ in}^3$		
$C_{top} = 14.8909 \text{ in}$	$A = 110.4219 \text{ in}^2$			$C_{top} = 14.8909 \text{ in}$	$A = 110.4219 \text{ in}^2$		
$C_{bottom} = 16.2341 \text{ in}$	$r_x = 11.3374 \text{ in}$			$C_{bottom} = 16.2341 \text{ in}$	$r_x = 11.3374 \text{ in}$		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I_o	d	Ad^2	$I_{y,gross}$	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	3.9375	16.2422	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.2813	6.4413	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	19.9375	82.2422	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.5938	113.5865	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	3.9375	16.2422	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.2813	6.4413	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	19.9375	82.2422	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.5938	113.5865	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	28.1250	0.4688	13.1836	2.0599	11.4688	3699.3439	3701.4038	
3 (Right)	Plate	28.1250	23.4063	658.3008	2.0599	11.4688	3699.3439	3701.4038	
4	Plate	11.0000	11.9375	131.3125	443.6667	0.0000	0.0000	443.6667	
5 (Left)	Perforated Plate	3.2813	3.5625	11.6895	7.5366	8.3750	230.1489	237.6855	
5 (Right)	Perforated Plate	3.2813	20.3125	66.6504	7.5366	8.3750	230.1489	237.6855	
Total		110.42		1318.16	513.15		11198.52	11711.67	
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 11.9375 in	$S_{right} = 981.08 \text{ in}^3$			x-bar = 11.9375 in	$S_{right} = 981.08 \text{ in}^3$		
$I_y = 11711.67 \text{ in}^4$	$S_{left} = 981.08 \text{ in}^3$			$I_y = 11711.67 \text{ in}^4$	$S_{left} = 981.08 \text{ in}^3$		
$C_{right} = 11.9375 \text{ in}$	$A = 110.4219 \text{ in}^2$			$C_{right} = 11.9375 \text{ in}$	$A = 110.4219 \text{ in}^2$		
$C_{left} = 11.9375 \text{ in}$	$r_y = 10.2987 \text{ in}$			$C_{left} = 11.9375 \text{ in}$	$r_y = 10.2987 \text{ in}$		



Made By NRF
Checked By CTG

Date 1/25/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6875$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6875$ in

Top Cover Plate:

$A_4 = b = 22.0000$ in
 $B_4 = t = 0.5000$ in

Web Plate:

$A_3 = b = 30.0000$ in
 $B_3 = t = 1.0000$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.6250$ in



Member L100-L101

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	8.2500	30.2813	249.8203	0.3250	14.0671	1632.5426	1632.8676
	Vertical Leg	10.0547	26.2813	264.2498	44.8042	10.0671	1019.0121	1063.8163
2	Horizontal Leg	8.2500	0.9688	7.9922	0.3250	15.2454	1917.4775	1917.8025
	Vertical Leg	10.0547	4.9688	49.9592	44.8042	11.2454	1271.5007	1316.3049
3	Plate	60.0000	15.6250	937.5000	4500.0000	0.5891	20.8242	4520.8242
4	Plate	11.0000	30.8750	339.6250	0.2292	14.6609	2364.3532	2364.5824
5	Perforated Plate	6.5625	0.3125	2.0508	0.2136	15.9016	1659.4051	1659.6188
Total		114.17		1851.20	4590.70		9885.12	14475.82
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By NRF
Checked By CTG

Date 1/25/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.2141 in	S _{top} =	970.82 in ³	y-bar =	16.2141 in	S _{top} =	970.82 in ³
I _x =	14475.82 in ⁴	S _{bott.} =	892.79 in ³	I _x =	14475.82 in ⁴	S _{bott.} =	892.79 in ³
C _{top} =	14.9109 in	A =	114.1719 in ²	C _{top} =	14.9109 in	A =	114.1719 in ²
C _{bottom} =	16.2141 in	r _x =	11.2601 in	C _{bottom} =	16.2141 in	r _x =	11.2601 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	4.0000	16.5000	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.3438	6.7555	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	20.0000	82.5000	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.6563	113.9008	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	4.0000	16.5000	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.3438	6.7555	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	20.0000	82.5000	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.6563	113.9008	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	30.0000	0.5000	15.0000	2.5000	11.5000	3967.5000	3970.0000	
3 (Right)	Plate	30.0000	23.5000	705.0000	2.5000	11.5000	3967.5000	3970.0000	
4	Plate	11.0000	12.0000	132.0000	443.6667	0.0000	0.0000	443.6667	
5 (Left)	Perforated Plate	3.2813	3.6250	11.8945	7.5366	8.3750	230.1489	237.6855	
5 (Right)	Perforated Plate	3.2813	20.3750	66.8555	7.5366	8.3750	230.1489	237.6855	
Total		114.17		1370.06	514.03		11734.83	12248.86	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.0000 in	S _{right} =	1020.74 in ³	x-bar =	12.0000 in	S _{right} =	1020.74 in ³
I _y =	12248.86 in ⁴	S _{left} =	1020.74 in ³	I _y =	12248.86 in ⁴	S _{left} =	1020.74 in ³
C _{right} =	12.0000 in	A =	114.1719 in ²	C _{right} =	12.0000 in	A =	114.1719 in ²
C _{left} =	12.0000 in	r _y =	10.3578 in	C _{left} =	12.0000 in	r _y =	10.3578 in



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.5000$ in

Top Cover Plate:

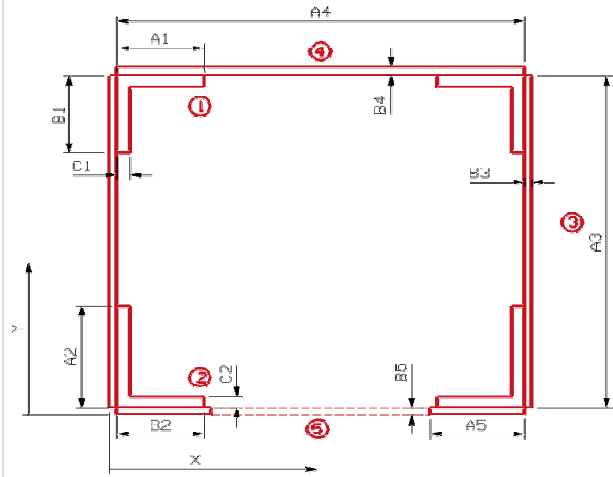
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.4375$ in

Web Plate:

$A_3 = b = 30.0000$ in
 $B_3 = t = 0.7500$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5625$ in



Member L101-L102

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	6.0000	30.3125	181.8750	0.1250	14.1511	1201.5246	1201.6496
	Vertical Leg	7.5000	26.3125	197.3438	35.1563	10.1511	772.8388	807.9950
2	Horizontal Leg	6.0000	0.8125	4.8750	0.1250	15.3489	1413.5293	1413.6543
	Vertical Leg	7.5000	4.8125	36.0938	35.1563	11.3489	965.9787	1001.1349
3	Plate	45.0000	15.5625	700.3125	3375.0000	0.5989	16.1398	3391.1398
4	Plate	10.2813	30.7813	316.4697	0.1640	14.6199	2197.5195	2197.6835
5	Perforated Plate	6.7500	0.2813	1.8984	0.1780	15.8801	1702.2058	1702.3838
Total		89.03		1438.87	3445.90		8269.74	11715.64
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.1614	in	$S_{top} = 789.54 \text{ in}^3$	y-bar =	16.1614	in	$S_{top} = 789.54 \text{ in}^3$
$I_x =$	11715.64	in^4	$S_{bott.} = 724.92 \text{ in}^3$	$I_x =$	11715.64	in^4	$S_{bott.} = 724.92 \text{ in}^3$
$C_{top} =$	14.8386	in	$A = 89.0313 \text{ in}^2$	$C_{top} =$	14.8386	in	$A = 89.0313 \text{ in}^2$
$C_{bottom} =$	16.1614	in	$r_x = 11.4713 \text{ in}$	$C_{bottom} =$	16.1614	in	$r_x = 11.4713 \text{ in}$

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I_o	d	Ad^2	$I_{y,gross}$	
Element	Description	(in^2)	(in)	(in^3)	(in^4)	(in)	(in^4)	(in^4)	
1 (Left)	Horizontal Leg	3.0000	3.7500	11.2500	9.0000	8.7500	229.6875	238.6875	
	Vertical Leg	3.7500	1.0000	3.7500	0.0781	11.5000	495.9375	496.0156	
1 (Right)	Horizontal Leg	3.0000	21.2500	63.7500	9.0000	8.7500	229.6875	238.6875	
	Vertical Leg	3.7500	24.0000	90.0000	0.0781	11.5000	495.9375	496.0156	
2 (Left)	Horizontal Leg	3.0000	3.7500	11.2500	9.0000	8.7500	229.6875	238.6875	
	Vertical Leg	3.7500	1.0000	3.7500	0.0781	11.5000	495.9375	496.0156	
2 (Right)	Horizontal Leg	3.0000	21.2500	63.7500	9.0000	8.7500	229.6875	238.6875	
	Vertical Leg	3.7500	24.0000	90.0000	0.0781	11.5000	495.9375	496.0156	
3 (Left)	Plate	22.5000	0.3750	8.4375	1.0547	12.1250	3307.8516	3308.9063	
3 (Right)	Plate	22.5000	24.6250	554.0625	1.0547	12.1250	3307.8516	3308.9063	
4	Plate	10.2813	12.5000	128.5156	473.1517	0.0000	0.0000	473.1517	
5 (Left)	Perforated Plate	3.3750	3.7500	12.6563	10.1250	8.7500	258.3984	268.5234	
5 (Right)	Perforated Plate	3.3750	21.2500	71.7188	10.1250	8.7500	258.3984	268.5234	
Total		89.03		1112.89	531.82		10035.00	10566.82	
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y,loss}$
Loss #	b (in)	h (in)	(in^2)	(in)	(in^3)	(in^4)	(in)	(in^4)	(in^4)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.5000	in	$S_{right} = 845.35 \text{ in}^3$	x-bar =	12.5000	in	$S_{right} = 845.35 \text{ in}^3$
$I_y =$	10566.82	in^4	$S_{left} = 845.35 \text{ in}^3$	$I_y =$	10566.82	in^4	$S_{left} = 845.35 \text{ in}^3$
$C_{right} =$	12.5000	in	$A = 89.0313 \text{ in}^2$	$C_{right} =$	12.5000	in	$A = 89.0313 \text{ in}^2$
$C_{left} =$	12.5000	in	$r_y = 10.8943 \text{ in}$	$C_{left} =$	12.5000	in	$r_y = 10.8943 \text{ in}$



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 30.0000$ in
 $B_3 = t = 0.5000$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L102-L103

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	30.2188	75.5469	0.0203	13.6062	462.8183	462.8387
	Vertical Leg	2.3047	28.2188	65.0354	2.6115	11.6062	310.4477	313.0592
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	16.0813	646.5245	646.5449
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	14.0813	456.9836	459.5951
3	Plate	30.0000	15.3750	461.2500	2250.0000	1.2376	45.9496	2295.9496
4	Plate	8.8125	30.5625	269.3320	0.1033	13.9499	1714.9100	1715.0133
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	16.4251	1214.0275	1214.0803
Total		52.92		879.17	2255.42		4851.66	7107.08
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	16.6126	in	S _{top} =	502.71	in ³	y-bar =	16.6126	in	S _{top} =	502.71	in ³
I _x =	7107.08	in ⁴	S _{bott.} =	427.81	in ³	I _x =	7107.08	in ⁴	S _{bott.} =	427.81	in ³
C _{top} =	14.1374	in	A =	52.9219	in ²	C _{top} =	14.1374	in	A =	52.9219	in ²
C _{bottom} =	16.6126	in	r _x =	11.5885	in	C _{bottom} =	16.6126	in	r _x =	11.5885	in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.5000	3.1250	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.6563	0.7562	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	22.0000	27.5000	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.8438	27.4762	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.5000	3.1250	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.6563	0.7562	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	22.0000	27.5000	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.8438	27.4762	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	15.0000	0.2500	3.7500	0.3125	12.0000	2160.0000	2160.3125	
3 (Right)	Plate	15.0000	24.2500	363.7500	0.3125	12.0000	2160.0000	2160.3125	
4	Plate	8.8125	12.2500	107.9531	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.5000	7.8750	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	21.0000	47.2500	6.7500	8.7500	172.2656	179.0156	
Total		52.92		648.29	426.39		5759.41	6185.80	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.2500	in	S _{right} =	504.96	in ³	x-bar =	12.2500	in	S _{right} =	504.96	in ³
I _y =	6185.80	in ⁴	S _{left} =	504.96	in ³	I _y =	6185.80	in ⁴	S _{left} =	504.96	in ³
C _{right} =	12.2500	in	A =	52.9219	in ²	C _{right} =	12.2500	in	A =	52.9219	in ²
C _{left} =	12.2500	in	r _y =	10.8114	in	C _{left} =	12.2500	in	r _y =	10.8114	in



Made By KMW
Checked By ADK

Date 2/3/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

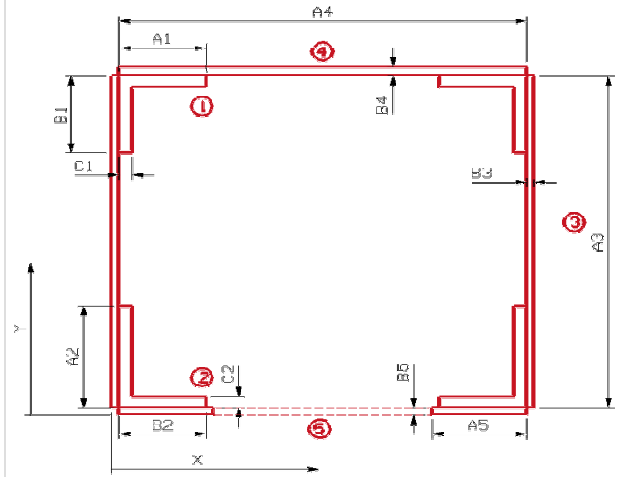
Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:
 $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:
 $A_3 = b = 30.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L103-L104

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	2.5000	30.2188	75.5469	0.0203	13.4018	449.0206	449.0409	
	Vertical Leg	2.3047	28.2188	65.0354	2.6115	11.4018	299.6118	302.2233	
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	16.2857	663.0601	663.0804	
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	14.2857	470.3435	472.9550	
3	Plate	22.5000	15.3750	345.9375	1687.5000	1.4420	46.7825	1734.2825	
4	Plate	8.8125	30.5625	269.3320	0.1033	13.7455	1665.0349	1665.1382	
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	16.6295	1244.4238	1244.4765	
Total		45.42		763.86	1692.92		4838.28	6531.20	
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	
1	0.2500	30.0000	-7.5000	15.3750	-115.3125	-562.5000	1.7271	-22.3724	-584.8724
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-7.50	-115.31	-562.50		-22.37	-584.87	



Made By KMW
Checked By ADK

Date 2/3/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.8170 in	S _{top} =	468.76 in ³	y-bar =	17.1021 in	S _{top} =	435.70 in ³
I _x =	6531.20 in ⁴	S _{bott.} =	388.37 in ³	I _x =	5946.32 in ⁴	S _{bott.} =	347.69 in ³
C _{top} =	13.9330 in	A =	45.4219 in ²	C _{top} =	13.6479 in	A =	37.9219 in ²
C _{bottom} =	16.8170 in	r _x =	11.9912 in	C _{bottom} =	17.1021 in	r _x =	12.5222 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	11.2500	0.1875	2.1094	0.1318	11.9375	1603.1689	1603.3008	
3 (Right)	Plate	11.2500	24.0625	270.7031	0.1318	11.9375	1603.1689	1603.3008	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.3750	7.5938	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.8750	46.9688	6.7500	8.7500	172.2656	179.0156	
Total		45.42		550.74	426.03		4645.75	5071.78	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	30.0000	0.2500	-7.5000	0.1250	-0.9375	-0.0391	14.3733	-1549.4382	-1549.4773
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-7.50		-0.94	-0.04		-1549.44	-1549.48

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	418.29 in ³	x-bar =	14.4983 in	S _{right} =	361.20 in ³
I _y =	5071.78 in ⁴	S _{left} =	418.29 in ³	I _y =	3522.30 in ⁴	S _{left} =	242.95 in ³
C _{right} =	12.1250 in	A =	45.4219 in ²	C _{right} =	9.7517 in	A =	37.9219 in ²
C _{left} =	12.1250 in	r _y =	10.5669 in	C _{left} =	14.4983 in	r _y =	9.6376 in



Made By KMW
Checked By ADK

Date 2/1/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.4375$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_f = 0.4375$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 30.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member L104-L105

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x, gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.2500	30.2813	158.9766	0.0837	14.0877	1041.9304	1042.0141
	Vertical Leg	6.6172	26.2813	173.9080	31.5372	10.0877	673.3745	704.9117
2	Horizontal Leg	5.2500	0.7188	3.7734	0.0837	15.4748	1257.2166	1257.3004
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	11.4748	871.2939	902.8311
3	Plate	22.5000	15.5000	348.7500	1687.5000	0.6936	10.8232	1698.3232
4	Plate	8.8125	30.6875	270.4336	0.1033	14.4939	1851.2790	1851.3823
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	15.9436	1525.1832	1525.3082
Total		61.05		988.57	1750.97		7231.10	8982.07
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	2.5000	0.0625	-0.1563	30.5000	-4.7656	-0.0001	14.5631	-33.1380
2	2.5000	0.0625	-0.1563	30.5000	-4.7656	-0.0001	14.5631	-33.1380
3	0.1250	2.5000	-0.3125	29.2500	-9.1406	-0.1628	13.3131	-55.5496
4	0.1250	2.5000	-0.3125	29.2500	-9.1406	-0.1628	13.3131	-55.5496
5	3.0000	0.0625	-0.1875	30.8438	-5.7832	-0.0001	14.9068	-41.6650
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.13	-33.60	-0.33		-218.71	-219.04



Made By KMW
Checked By ADK

Date 2/1/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.1936 in	S _{top} =	611.80 in ³	y-bar =	15.9369 in	S _{top} =	586.62 in ³
I _x =	8982.07 in ⁴	S _{bott.} =	554.67 in ³	I _x =	8763.03 in ⁴	S _{bott.} =	549.86 in ³
C _{top} =	14.6814 in	A =	61.0469 in ²	C _{top} =	14.9381 in	A =	59.9219 in ²
C _{bottom} =	16.1936 in	r _x =	12.1299 in	C _{bottom} =	15.9369 in	r _x =	12.0930 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.3750	8.8594	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.5938	1.9645	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	20.8750	54.7969	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.6563	78.2689	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.3750	8.8594	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.5938	1.9645	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	20.8750	54.7969	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.6563	78.2689	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	11.2500	0.1875	2.1094	0.1318	11.9375	1603.1689	1603.3008	
3 (Right)	Plate	11.2500	24.0625	270.7031	0.1318	11.9375	1603.1689	1603.3008	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.3750	10.1250	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.8750	62.6250	9.0000	8.7500	229.6875	238.6875	
Total		61.05		740.19	455.53		6229.39	6684.92	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0625	2.5000	-0.1563	1.6250	-0.2539	-0.0814	10.5133	-17.2702	-17.3516
2	0.0625	2.5000	-0.1563	22.6250	-3.5352	-0.0814	10.4867	-17.1830	-17.2643
3	2.5000	0.1250	-0.3125	0.3750	-0.1172	-0.0004	11.7633	-43.2422	-43.2427
4	2.5000	0.1250	-0.3125	23.8750	-7.4609	-0.0004	11.7367	-43.0469	-43.0473
5	0.0625	3.0000	-0.1875	7.8750	-1.4766	-0.1406	4.2633	-3.4079	-3.5486
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.13		-12.84	-0.30		-124.15	-124.45

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	551.33 in ³	x-bar =	12.1383 in	S _{right} =	541.66 in ³
I _y =	6684.92 in ⁴	S _{left} =	551.33 in ³	I _y =	6560.47 in ⁴	S _{left} =	540.48 in ³
C _{right} =	12.1250 in	A =	61.0469 in ²	C _{right} =	12.1117 in	A =	59.9219 in ²
C _{left} =	12.1250 in	r _y =	10.4645 in	C _{left} =	12.1383 in	r _y =	10.4634 in



Made By KMW
Checked By ADK

Date 2/1/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

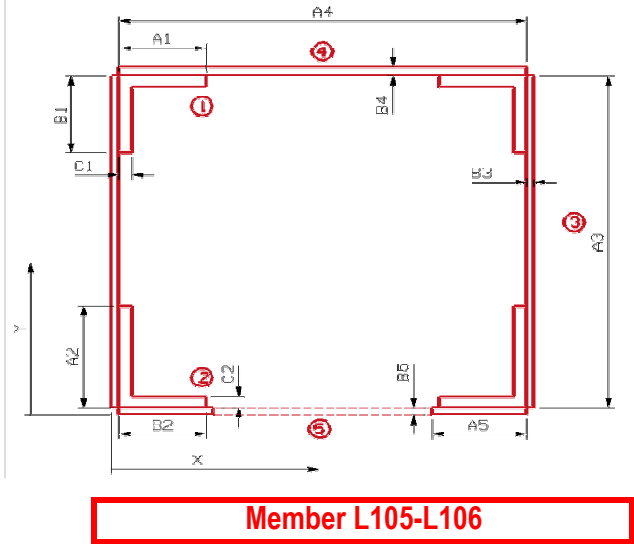
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6250$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6250$ in

Top Cover Plate:
 $A_4 = b = 22.0000$ in
 $B_4 = t = 0.5000$ in

Web Plate:
 $A_3 = b = 30.0000$ in
 $B_3 = t = 1.0000$ in

Perforated Cover Plate
 $A_5 = b = 5.2500$ in
 $B_5 = t = 0.6250$ in



X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	7.5000	30.3125	227.3438	0.2441	14.0815	1487.1730	1487.4171	
	Vertical Leg	9.2188	26.3125	242.5684	41.7845	10.0815	936.9700	978.7544	
2	Horizontal Leg	7.5000	0.9375	7.0313	0.2441	15.2935	1754.1747	1754.4189	
	Vertical Leg	9.2188	4.9375	45.5176	41.7845	11.2935	1175.7803	1217.5648	
3	Plate	60.0000	15.6250	937.5000	4500.0000	0.6060	22.0314	4522.0314	
4	Plate	11.0000	30.8750	339.6250	0.2292	14.6440	2358.9265	2359.1557	
5	Perforated Plate	6.5625	0.3125	2.0508	0.2136	15.9185	1662.9205	1663.1342	
Total		111.00		1801.64	4584.50		9397.98	13982.48	
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	
1	0.0625	16.0000	-1.0000	22.6250	-22.6250	-21.3333	6.5203	-42.5143	-63.8476
2	8.0000	0.0625	-0.5000	31.0938	-15.5469	-0.0002	14.9890	-112.3358	-112.3359
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.50	-38.17	-21.33		-154.85	-176.18	



Made By KMW
Checked By ADK

Date 2/1/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.2310 in	S _{top} =	938.80 in ³	y-bar =	16.1047 in	S _{top} =	919.18 in ³
I _x =	13982.48 in ⁴	S _{bott.} =	861.47 in ³	I _x =	13806.29 in ⁴	S _{bott.} =	857.28 in ³
C _{top} =	14.8940 in	A =	111.0000 in ²	C _{top} =	15.0203 in	A =	109.5000 in ²
C _{bottom} =	16.2310 in	r _x =	11.2236 in	C _{bottom} =	16.1047 in	r _x =	11.2288 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.7500	4.0000	15.0000	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.3125	6.0498	0.1500	10.6875	526.4951	526.6451	
1 (Right)	Horizontal Leg	3.7500	20.0000	75.0000	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	22.6875	104.5752	0.1500	10.6875	526.4951	526.6451	
2 (Left)	Horizontal Leg	3.7500	4.0000	15.0000	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.3125	6.0498	0.1500	10.6875	526.4951	526.6451	
2 (Right)	Horizontal Leg	3.7500	20.0000	75.0000	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	22.6875	104.5752	0.1500	10.6875	526.4951	526.6451	
3 (Left)	Plate	30.0000	0.5000	15.0000	2.5000	11.5000	3967.5000	3970.0000	
3 (Right)	Plate	30.0000	23.5000	705.0000	2.5000	11.5000	3967.5000	3970.0000	
4	Plate	11.0000	12.0000	132.0000	443.6667	0.0000	0.0000	443.6667	
5 (Left)	Perforated Plate	3.2813	3.6250	11.8945	7.5366	8.3750	230.1489	237.6855	
5 (Right)	Perforated Plate	3.2813	20.3750	66.8555	7.5366	8.3750	230.1489	237.6855	
Total		111.00		1332.00	509.34		11461.28	11970.62	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	16.0000	0.0625	-1.0000	0.0313	-0.0313	-0.0003	12.0461	-145.1083	-145.1086
2	0.0625	8.0000	-0.5000	19.0000	-9.5000	-2.6667	6.9227	-23.9616	-26.6283
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.50		-9.53	-2.67		-169.07	-171.74

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.0000 in	S _{right} =	997.55 in ³	x-bar =	12.0773 in	S _{right} =	989.62 in ³
I _y =	11970.62 in ⁴	S _{left} =	997.55 in ³	I _y =	11798.88 in ⁴	S _{left} =	976.94 in ³
C _{right} =	12.0000 in	A =	111.0000 in ²	C _{right} =	11.9227 in	A =	109.5000 in ²
C _{left} =	12.0000 in	r _y =	10.3848 in	C _{left} =	12.0773 in	r _y =	10.3804 in



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6875$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6875$ in

Top Cover Plate:

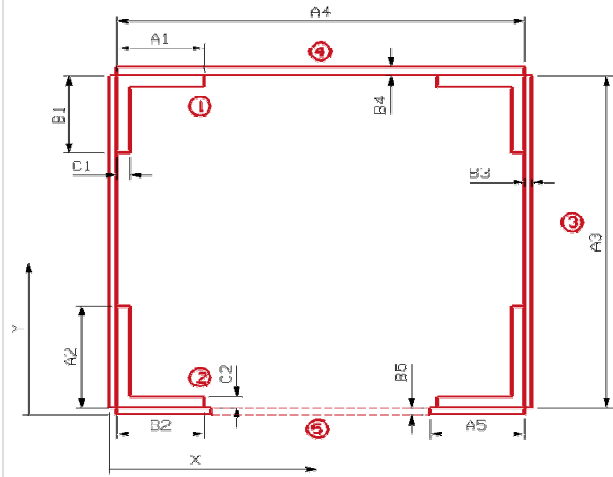
$A_4 = b = 22.0000$ in
 $B_4 = t = 0.6250$ in

Web Plates:**

$A_3 = b = 30.0000$ in
 $B_3 = t = 1.4375$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.7500$ in



Member L106-L107

**There are 2 web plates, thickness shown is total of both

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	8.2500	30.4063	250.8516	0.3250	14.0370	1625.5634	1625.8884
	Vertical Leg	10.0547	26.4063	265.5066	44.8042	10.0370	1012.9275	1057.7317
2	Horizontal Leg	8.2500	1.0938	9.0234	0.3250	15.2755	1925.0568	1925.3818
	Vertical Leg	10.0547	5.0938	51.2161	44.8042	11.2755	1278.3168	1323.1210
3	Plate	86.2500	15.7500	1358.4375	6468.7500	0.6192	33.0720	6501.8220
4	Plate	13.7500	31.0625	427.1094	0.4476	14.6933	2968.5184	2968.9660
5	Perforated Plate	7.8750	0.3750	2.9531	0.3691	15.9942	2014.5457	2014.9148
Total		144.48		2365.10	6559.83		10858.00	17417.83
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.3692 in	$S_{top} = 1160.74 \text{ in}^3$			y-bar = 16.3692 in	$S_{top} = 1160.74 \text{ in}^3$		
$I_x = 17417.83 \text{ in}^4$	$S_{bott.} = 1064.06 \text{ in}^3$			$I_x = 17417.83 \text{ in}^4$	$S_{bott.} = 1064.06 \text{ in}^3$		
$C_{top} = 15.0058 \text{ in}$	$A = 144.4844 \text{ in}^2$			$C_{top} = 15.0058 \text{ in}$	$A = 144.4844 \text{ in}^2$		
$C_{bottom} = 16.3692 \text{ in}$	$r_x = 10.9796 \text{ in}$			$C_{bottom} = 16.3692 \text{ in}$	$r_x = 10.9796 \text{ in}$		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I_o	d	Ad^2	$I_{y,gross}$	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	4.4375	18.3047	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.7813	8.9550	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	20.4375	84.3047	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	23.0938	116.1002	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	4.4375	18.3047	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.7813	8.9550	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	20.4375	84.3047	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	23.0938	116.1002	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	43.1250	0.7188	30.9961	7.4261	11.7188	5922.3175	5929.7437	
3 (Right)	Plate	43.1250	24.1563	1041.7383	7.4261	11.7188	5922.3175	5929.7437	
4	Plate	13.7500	12.4375	171.0156	554.5833	0.0000	0.0000	554.5833	
5 (Left)	Perforated Plate	3.9375	4.0625	15.9961	9.0439	8.3750	276.1787	285.2227	
5 (Right)	Perforated Plate	3.9375	20.8125	81.9492	9.0439	8.3750	276.1787	285.2227	
Total		144.48		1797.02	637.82		15736.53	16374.34	
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 12.4375 in	$S_{right} = 1316.53 \text{ in}^3$			x-bar = 12.4375 in	$S_{right} = 1316.53 \text{ in}^3$		
$I_y = 16374.34 \text{ in}^4$	$S_{left} = 1316.53 \text{ in}^3$			$I_y = 16374.34 \text{ in}^4$	$S_{left} = 1316.53 \text{ in}^3$		
$C_{right} = 12.4375 \text{ in}$	$A = 144.4844 \text{ in}^2$			$C_{right} = 12.4375 \text{ in}$	$A = 144.4844 \text{ in}^2$		
$C_{left} = 12.4375 \text{ in}$	$r_y = 10.6456 \text{ in}$			$C_{left} = 12.4375 \text{ in}$	$r_y = 10.6456 \text{ in}$		



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_l = 0.6875$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_l = 0.6875$ in

Top Cover Plate: PL

$A_6 = b = 22.0000$ in
 $B_6 = t = 0.6250$ in

Side Plate 1: PL

$A_3 = b = 14.0000$ in
 $B_3 = t = 0.6875$ in

Web Plate 1: PL

$A_4 = b = 30.0000$ in
 $B_4 = t = 0.7500$ in

Side Plate 2: PL**

$A_8 = b = 0.0000$ in
 $B_8 = t = 0.0000$ in

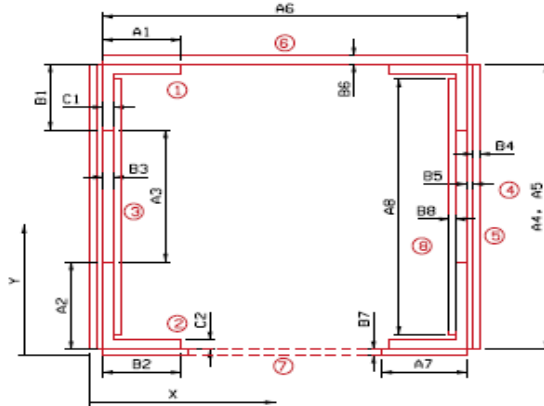
Web Plate 2: PL

$A_5 = b = 30.0000$ in
 $B_5 = t = 0.6875$ in

Perforated Bottom Cover Plate: PL

$A_7 = b = 5.2500$ in
 $B_7 = t = 0.7500$ in

**No interior side plate



Member L107-L108

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	8.2500	30.4063	250.8516	0.3250	14.1098	1642.4688	1642.7938
	Vertical Leg	10.0547	26.4063	265.5066	44.8042	10.1098	1027.6749	1072.4791
2	Horizontal Leg	8.2500	1.0938	9.0234	0.3250	15.2027	1906.7512	1907.0762
	Vertical Leg	10.0547	5.0938	51.2161	44.8042	11.2027	1261.8628	1306.6671
3	Plate	19.2500	15.7500	303.1875	314.4167	0.5464	5.7477	320.1644
4	Plate	45.0000	15.7500	708.7500	3375.0000	0.5464	13.4362	3388.4362
5	Plate	41.2500	15.7500	649.6875	3093.7500	0.5464	12.3165	3106.0665
6	Plate	13.7500	31.0625	427.1094	0.4476	14.7661	2998.0079	2998.4555
7	Perforated Plate	7.8750	0.3750	2.9531	0.3691	15.9214	1996.2480	1996.6172
8	Plate	0.0000	15.7500	0.0000	0.0000	0.5464	0.0000	0.0000
Total		163.73		2668.29	6874.24		10864.51	17738.76
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.2964 in	S _{top} = 1176.42 in ³			y-bar = 16.2964 in	S _{top} = 1176.42 in ³		
I _x = 17738.76 in ⁴	S _{bottom} = 1088.51 in ³			I _x = 17738.76 in ⁴	S _{bottom} = 1088.51 in ³		
C _{top} = 15.0786 in	A = 163.7344 in ²			C _{top} = 15.0786 in	A = 163.7344 in ²		
C _{bottom} = 16.2964 in	r _x = 10.4086 in			C _{bottom} = 16.2964 in	r _x = 10.4086 in		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y, gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	4.4375	18.3047	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.7813	8.9550	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	20.4375	84.3047	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	23.0938	116.1002	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	4.4375	18.3047	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.7813	8.9550	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	20.4375	84.3047	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	23.0938	116.1002	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	9.6250	1.7813	17.1445	0.3791	10.6563	1092.9733	1093.3524	
3 (Right)	Plate	9.6250	23.0938	222.2773	0.3791	10.6563	1092.9733	1093.3524	
4 (Left)	Plate	22.5000	0.3750	8.4375	1.0547	12.0625	3273.8379	3274.8926	
4 (Right)	Plate	22.5000	24.5000	551.2500	1.0547	12.0625	3273.8379	3274.8926	
5 (Left)	Plate	20.6250	1.0938	22.5586	0.8124	11.3438	2654.0387	2654.8511	
5 (Right)	Plate	20.6250	23.7813	490.4883	0.8124	11.3438	2654.0387	2654.8511	
6	Plate	13.7500	12.4375	171.0156	554.5833	0.0000	0.0000	554.5833	
7 (Left)	Perforated Plate	3.9375	4.0625	15.9961	9.0439	8.3750	276.1787	285.2227	
7 (Right)	Perforated Plate	3.9375	20.8125	81.9492	9.0439	8.3750	276.1787	285.2227	
8 (Left)	Plate	0.0000	2.1250	0.0000	0.0000	10.3125	0.0000	0.0000	
8 (Right)	Plate	0.0000	22.7500	0.0000	0.0000	10.3125	0.0000	0.0000	
Total		163.73		2036.45	614.88		17933.59	18561.05	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 12.4375 in	S _{right} = 1492.35 in ³			x-bar = 12.4375 in	S _{right} = 1492.35 in ³		
I _y = 18561.05 in ⁴	S _{left} = 1492.35 in ³			I _y = 18561.05 in ⁴	S _{left} = 1492.35 in ³		
C _{right} = 12.4375 in	A = 163.7344 in ²			C _{right} = 12.4375 in	A = 163.7344 in ²		
C _{left} = 12.4375 in	r _y = 10.6471 in			C _{left} = 12.4375 in	r _y = 10.6471 in		



Made By KMW
Checked By ADK

Date 2/1/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_l = 0.7500$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_l = 0.7500$ in

Top Cover Plate: PL

$A_6 = b = 22.0000$ in
 $B_6 = t = 0.6250$ in

Side Plate 1: PL

$A_3 = b = 14.0000$ in
 $B_3 = t = 0.7500$ in

Web Plate 1: PL

$A_4 = b = 30.0000$ in
 $B_4 = t = 0.8750$ in

Side Plate 2: PL**

$A_8 = b = 0.0000$ in
 $B_8 = t = 0.0000$ in

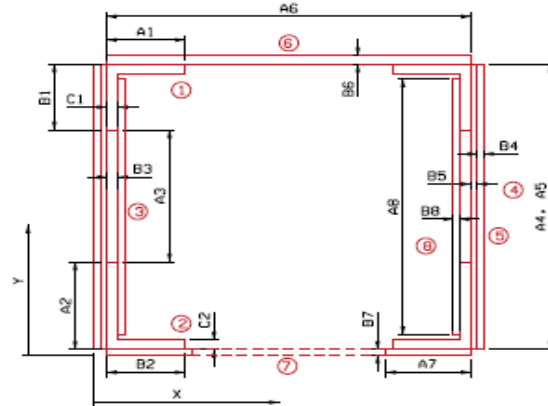
Web Plate 2: PL

$A_5 = b = 30.0000$ in
 $B_5 = t = 0.7500$ in

Perforated Bottom Cover Plate: PL

$A_7 = b = 5.2500$ in
 $B_7 = t = 0.7500$ in

**No interior side plate



Member L108-L109

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg		9.0000	30.3750	273.3750	0.4219	14.1276	1796.3033	1796.7251
	Vertical Leg		10.8750	26.3750	286.8281	47.6348	10.1276	1115.4314	1163.0661
2	Horizontal Leg		9.0000	1.1250	10.1250	0.4219	15.1224	2058.1812	2058.6031
	Vertical Leg		10.8750	5.1250	55.7344	47.6348	11.1224	1345.3207	1392.9554
3	Plate		21.0000	15.7500	330.7500	343.0000	0.4974	5.1954	348.1954
4	Plate		52.5000	15.7500	826.8750	3937.5000	0.4974	12.9885	3950.4885
5	Plate		45.0000	15.7500	708.7500	3375.0000	0.4974	11.1330	3386.1330
6	Plate		13.7500	31.0625	427.1094	0.4476	14.8151	3017.9513	3018.3989
7	Perforated Plate		7.8750	0.3750	2.9531	0.3691	15.8724	1983.9715	1984.3407
8	Plate		0.0000	15.7500	0.0000	0.0000	0.4974	0.0000	0.0000
Total			179.88		2922.50	7752.43		11346.48	19098.91
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.3125	2.0000	-0.6250	15.7500	-9.8438	-0.2083	0.3720	-0.0865	-0.2948
2	8.0000	0.1250	-1.0000	31.3125	-31.3125	-0.0013	15.1905	-230.7509	-230.7523
3	4.0000	0.1250	-0.5000	31.3125	-15.6563	-0.0007	15.1905	-115.3755	-115.3761
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.13		-56.81	-0.21		-346.21	-346.42



Made By KMW
Checked By ADK

Date 2/1/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.2474 in	$S_{top} = 1262.52 \text{ in}^3$			y-bar = 16.1220 in	$S_{top} = 1229.43 \text{ in}^3$		
$I_x = 19098.91 \text{ in}^4$	$S_{bottom} = 1175.51 \text{ in}^3$			$I_x = 18752.48 \text{ in}^4$	$S_{bottom} = 1163.16 \text{ in}^3$		
$C_{top} = 15.1276 \text{ in}$	$A = 179.8750 \text{ in}^2$			$C_{top} = 15.2530 \text{ in}$	$A = 177.7500 \text{ in}^2$		
$C_{bottom} = 16.2474 \text{ in}$	$r_x = 10.3043 \text{ in}$			$C_{bottom} = 16.1220 \text{ in}$	$r_x = 10.2713 \text{ in}$		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I_o	d	Ad^2	$I_{y, gross}$	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.5000	4.6250	20.8125	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	2.0000	10.8750	0.2549	10.6250	613.8428	614.0977	
1 (Right)	Horizontal Leg	4.5000	20.6250	92.8125	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	23.2500	126.4219	0.2549	10.6250	613.8428	614.0977	
2 (Left)	Horizontal Leg	4.5000	4.6250	20.8125	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	2.0000	10.8750	0.2549	10.6250	613.8428	614.0977	
2 (Right)	Horizontal Leg	4.5000	20.6250	92.8125	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	23.2500	126.4219	0.2549	10.6250	613.8428	614.0977	
3 (Left)	Plate	10.5000	2.0000	21.0000	0.4922	10.6250	1185.3516	1185.8438	
3 (Right)	Plate	10.5000	23.2500	244.1250	0.4922	10.6250	1185.3516	1185.8438	
4 (Left)	Plate	26.2500	0.4375	11.4844	1.6748	12.1875	3899.0479	3900.7227	
4 (Right)	Plate	26.2500	24.8125	651.3281	1.6748	12.1875	3899.0479	3900.7227	
5 (Left)	Plate	22.5000	1.2500	28.1250	1.0547	11.3750	2911.2891	2912.3438	
5 (Right)	Plate	22.5000	24.0000	540.0000	1.0547	11.3750	2911.2891	2912.3438	
6	Plate	13.7500	12.6250	173.5938	554.5833	0.0000	0.0000	554.5833	
7 (Left)	Perforated Plate	3.9375	4.2500	16.7344	9.0439	8.3750	276.1787	285.2227	
7 (Right)	Perforated Plate	3.9375	21.0000	82.6875	9.0439	8.3750	276.1787	285.2227	
8 (Left)	Plate	0.0000	2.3750	0.0000	0.0000	10.2500	0.0000	0.0000	
8 (Right)	Plate	0.0000	22.8750	0.0000	0.0000	10.2500	0.0000	0.0000	
Total		179.88		2270.92	620.38		20151.11	20785.24	
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	2.0000	0.3125	-0.6250	0.1563	-0.0977	-0.0051	12.5267	-98.0732	-98.0783
2	0.1250	8.0000	-1.0000	5.6250	-5.6250	-5.3333	7.0579	-49.8141	-55.1474
3	0.1250	4.0000	-0.5000	21.6250	-10.8125	-0.6667	8.9421	-39.9805	-40.6472
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.13		-16.54	-6.01		-187.87	-193.87

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 12.6250 in	$S_{right} = 1646.36 \text{ in}^3$			x-bar = 12.6829 in	$S_{right} = 1638.51 \text{ in}^3$		
$I_y = 20785.24 \text{ in}^4$	$S_{left} = 1646.36 \text{ in}^3$			$I_y = 20591.37 \text{ in}^4$	$S_{left} = 1623.55 \text{ in}^3$		
$C_{right} = 12.6250 \text{ in}$	$A = 179.8750 \text{ in}^2$			$C_{right} = 12.5671 \text{ in}$	$A = 177.7500 \text{ in}^2$		
$C_{left} = 12.6250 \text{ in}$	$r_y = 10.7496 \text{ in}$			$C_{left} = 12.6829 \text{ in}$	$r_y = 10.7631 \text{ in}$		



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_l = 0.7500$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_l = 0.7500$ in

Top Cover Plate: PL

$A_6 = b = 22.0000$ in
 $B_6 = t = 0.6250$ in

Side Plate 1: PL

$A_3 = b = 14.0000$ in
 $B_3 = t = 0.7500$ in

Web Plate 1: PL

$A_4 = b = 30.0000$ in
 $B_4 = t = 0.8125$ in

Side Plate 2: PL

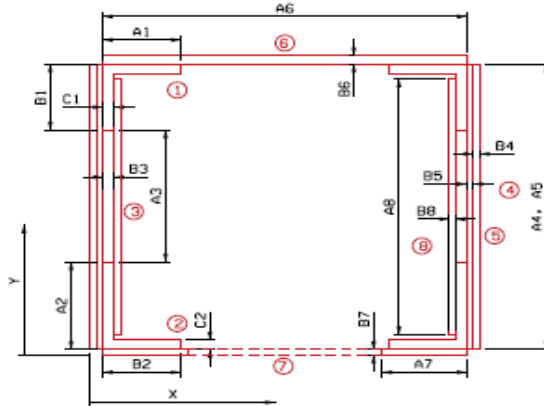
$A_8 = b = 28.0000$ in
 $B_8 = t = 0.3750$ in

Web Plate 2: PL

$A_5 = b = 30.0000$ in
 $B_5 = t = 0.7500$ in

Perforated Bottom Cover Plate: PL

$A_7 = b = 5.2500$ in
 $B_7 = t = 0.7500$ in



Member L109-L110

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg		9.0000	30.3750	273.3750	0.4219	14.1711	1807.3888	1807.8107
	Vertical Leg		10.8750	26.3750	286.8281	47.6348	10.1711	1125.0397	1172.6744
2	Horizontal Leg		9.0000	1.1250	10.1250	0.4219	15.0789	2046.3504	2046.7722
	Vertical Leg		10.8750	5.1250	55.7344	47.6348	11.0789	1334.8118	1382.4466
3	Plate		21.0000	15.7500	330.7500	343.0000	0.4539	4.3259	347.3259
4	Plate		48.7500	15.7500	767.8125	3656.2500	0.4539	10.0423	3666.2923
5	Plate		45.0000	15.7500	708.7500	3375.0000	0.4539	9.2698	3384.2698
6	Plate		13.7500	31.0625	427.1094	0.4476	14.8586	3035.7105	3036.1580
7	Perforated Plate		7.8750	0.3750	2.9531	0.3691	15.8289	1973.1054	1973.4745
8	Plate		21.0000	15.7500	330.7500	1372.0000	0.4539	4.3259	1376.3259
Total			197.13		3194.19	8843.18		11350.37	20193.55
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.2039 in	S _{top} = 1331.05 in ³			y-bar = 16.2039 in	S _{top} = 1331.05 in ³		
I _x = 20193.55 in ⁴	S _{bottom} = 1246.22 in ³			I _x = 20193.55 in ⁴	S _{bottom} = 1246.22 in ³		
C _{top} = 15.1711 in	A = 197.1250 in ²			C _{top} = 15.1711 in	A = 197.1250 in ²		
C _{bottom} = 16.2039 in	r _x = 10.1213 in			C _{bottom} = 16.2039 in	r _x = 10.1213 in		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y, gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.5000	4.5625	20.5313	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	1.9375	10.5352	0.2549	10.6250	613.8428	614.0977	
1 (Right)	Horizontal Leg	4.5000	20.5625	92.5313	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	23.1875	126.0820	0.2549	10.6250	613.8428	614.0977	
2 (Left)	Horizontal Leg	4.5000	4.5625	20.5313	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	1.9375	10.5352	0.2549	10.6250	613.8428	614.0977	
2 (Right)	Horizontal Leg	4.5000	20.5625	92.5313	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	23.1875	126.0820	0.2549	10.6250	613.8428	614.0977	
3 (Left)	Plate	10.5000	1.9375	20.3438	0.4922	10.6250	1185.3516	1185.8438	
3 (Right)	Plate	10.5000	23.1875	243.4688	0.4922	10.6250	1185.3516	1185.8438	
4 (Left)	Plate	24.3750	0.4063	9.9023	1.3409	12.1563	3602.0013	3603.3423	
4 (Right)	Plate	24.3750	24.7188	602.5195	1.3409	12.1563	3602.0013	3603.3423	
5 (Left)	Plate	22.5000	1.1875	26.7188	1.0547	11.3750	2911.2891	2912.3438	
5 (Right)	Plate	22.5000	23.9375	538.5938	1.0547	11.3750	2911.2891	2912.3438	
6	Plate	13.7500	12.5625	172.7344	554.5833	0.0000	0.0000	554.5833	
7 (Left)	Perforated Plate	3.9375	4.1875	16.4883	9.0439	8.3750	276.1787	285.2227	
7 (Right)	Perforated Plate	3.9375	20.9375	82.4414	9.0439	8.3750	276.1787	285.2227	
8 (Left)	Plate	10.5000	2.5000	26.2500	0.1230	10.0625	1063.1660	1063.2891	
8 (Right)	Plate	10.5000	22.6250	237.5625	0.1230	10.0625	1063.1660	1063.2891	
Total		197.13		2476.38	619.96		21683.34	22317.06	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 12.5625 in	S _{right} = 1776.48 in ³			x-bar = 12.5625 in	S _{right} = 1776.48 in ³		
I _y = 22317.06 in ⁴	S _{left} = 1776.48 in ³			I _y = 22317.06 in ⁴	S _{left} = 1776.48 in ³		
C _{right} = 12.5625 in	A = 197.1250 in ²			C _{right} = 12.5625 in	A = 197.1250 in ²		
C _{left} = 12.5625 in	r _y = 10.6401 in			C _{left} = 12.5625 in	r _y = 10.6401 in		



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_l = 0.7500$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_l = 0.7500$ in

Top Cover Plate: PL

$A_6 = b = 22.0000$ in
 $B_6 = t = 0.6250$ in

Side Plate 1: PL

$A_3 = b = 14.0000$ in
 $B_3 = t = 0.7500$ in

Web Plate 1: PL

$A_4 = b = 30.0000$ in
 $B_4 = t = 0.8125$ in

Side Plate 2: PL

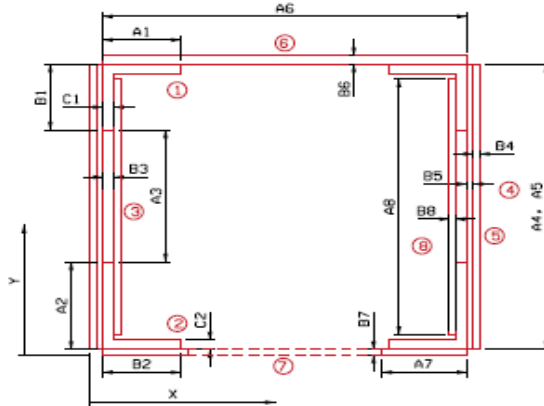
$A_8 = b = 28.0000$ in
 $B_8 = t = 0.5000$ in

Web Plate 2: PL

$A_5 = b = 30.0000$ in
 $B_5 = t = 0.7500$ in

Perforated Bottom Cover Plate: PL

$A_7 = b = 5.2500$ in
 $B_7 = t = 0.7500$ in



Member L110-L111

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	9.0000	30.3750	273.3750	0.4219	14.1867	1811.3612	1811.7830
	Vertical Leg	10.8750	26.3750	286.8281	47.6348	10.1867	1128.4855	1176.1203
2	Horizontal Leg	9.0000	1.1250	10.1250	0.4219	15.0633	2042.1281	2042.5499
	Vertical Leg	10.8750	5.1250	55.7344	47.6348	11.0633	1331.0640	1378.6988
3	Plate	21.0000	15.7500	330.7500	343.0000	0.4383	4.0343	347.0343
4	Plate	48.7500	15.7500	767.8125	3656.2500	0.4383	9.3654	3665.6154
5	Plate	45.0000	15.7500	708.7500	3375.0000	0.4383	8.6450	3383.6450
6	Plate	13.7500	31.0625	427.1094	0.4476	14.8742	3042.0736	3042.5212
7	Perforated Plate	7.8750	0.3750	2.9531	0.3691	15.8133	1969.2270	1969.5962
8	Plate	28.0000	15.7500	441.0000	1829.3333	0.4383	5.3791	1834.7124
Total		204.13		3304.44	9300.51		11351.76	20652.28
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.1883 in	$S_{top} = 1359.89 \text{ in}^3$			y-bar = 16.1883 in	$S_{top} = 1359.89 \text{ in}^3$		
$I_x = 20652.28 \text{ in}^4$	$S_{bott.} = 1275.75 \text{ in}^3$			$I_x = 20652.28 \text{ in}^4$	$S_{bott.} = 1275.75 \text{ in}^3$		
$C_{top} = 15.1867 \text{ in}$	A = 204.1250 in ²			$C_{top} = 15.1867 \text{ in}$	A = 204.1250 in ²		
$C_{bottom} = 16.1883 \text{ in}$	$r_x = 10.0586 \text{ in}$			$C_{bottom} = 16.1883 \text{ in}$	$r_x = 10.0586 \text{ in}$		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I_o	d	Ad^2	$I_{y, gross}$	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.5000	4.5625	20.5313	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	1.9375	10.5352	0.2549	10.6250	613.8428	614.0977	
1 (Right)	Horizontal Leg	4.5000	20.5625	92.5313	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	23.1875	126.0820	0.2549	10.6250	613.8428	614.0977	
2 (Left)	Horizontal Leg	4.5000	4.5625	20.5313	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	1.9375	10.5352	0.2549	10.6250	613.8428	614.0977	
2 (Right)	Horizontal Leg	4.5000	20.5625	92.5313	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	23.1875	126.0820	0.2549	10.6250	613.8428	614.0977	
3 (Left)	Plate	10.5000	1.9375	20.3438	0.4922	10.6250	1185.3516	1185.8438	
3 (Right)	Plate	10.5000	23.1875	243.4688	0.4922	10.6250	1185.3516	1185.8438	
4 (Left)	Plate	24.3750	0.4063	9.9023	1.3409	12.1563	3602.0013	3603.3423	
4 (Right)	Plate	24.3750	24.7188	602.5195	1.3409	12.1563	3602.0013	3603.3423	
5 (Left)	Plate	22.5000	1.1875	26.7188	1.0547	11.3750	2911.2891	2912.3438	
5 (Right)	Plate	22.5000	23.9375	538.5938	1.0547	11.3750	2911.2891	2912.3438	
6	Plate	13.7500	12.5625	172.7344	554.5833	0.0000	0.0000	554.5833	
7 (Left)	Perforated Plate	3.9375	4.1875	16.4883	9.0439	8.3750	276.1787	285.2227	
7 (Right)	Perforated Plate	3.9375	20.9375	82.4414	9.0439	8.3750	276.1787	285.2227	
8 (Left)	Plate	14.0000	2.5625	35.8750	0.2917	10.0000	1400.0000	1400.2917	
8 (Right)	Plate	14.0000	22.5625	315.8750	0.2917	10.0000	1400.0000	1400.2917	
Total		204.13		2564.32	620.29		22357.01	22991.06	
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 12.5625 in	$S_{right} = 1830.13 \text{ in}^3$			x-bar = 12.5625 in	$S_{right} = 1830.13 \text{ in}^3$		
$I_y = 22991.06 \text{ in}^4$	$S_{left} = 1830.13 \text{ in}^3$			$I_y = 22991.06 \text{ in}^4$	$S_{left} = 1830.13 \text{ in}^3$		
$C_{right} = 12.5625 \text{ in}$	A = 204.1250 in ²			$C_{right} = 12.5625 \text{ in}$	A = 204.1250 in ²		
$C_{left} = 12.5625 \text{ in}$	$r_y = 10.6128 \text{ in}$			$C_{left} = 12.5625 \text{ in}$	$r_y = 10.6128 \text{ in}$		



Made By KMW
Checked By ADK

Date 2/1/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_l = 0.6875$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_l = 0.6875$ in

Top Cover Plate: PL

$A_6 = b = 22.0000$ in
 $B_6 = t = 0.6250$ in

Side Plate 1: PL

$A_3 = b = 14.0000$ in
 $B_3 = t = 0.6875$ in

Web Plate 1: PL

$A_4 = b = 30.0000$ in
 $B_4 = t = 0.7500$ in

Side Plate 2: PL**

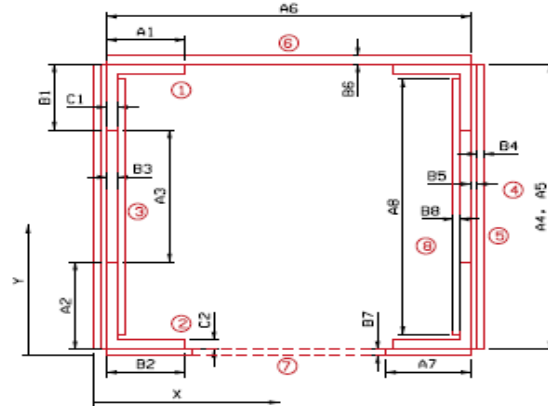
$A_8 = b = 0.0000$ in
 $B_8 = t = 0.0000$ in

Web Plate 2: PL

$A_5 = b = 30.0000$ in
 $B_5 = t = 0.7500$ in

Perforated Bottom Cover Plate: PL

$A_7 = b = 5.2500$ in
 $B_7 = t = 0.7500$ in



Member L111-L112

**No interior side plate

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg		8.2500	30.4063	250.8516	0.3250	14.1221	1645.3184	1645.6433
	Vertical Leg		10.0547	26.4063	265.5066	44.8042	10.1221	1030.1637	1074.9680
2	Horizontal Leg		8.2500	1.0938	9.0234	0.3250	15.1904	1903.6835	1904.0085
	Vertical Leg		10.0547	5.0938	51.2161	44.8042	11.1904	1259.1081	1303.9124
3	Plate		19.2500	15.7500	303.1875	314.4167	0.5342	5.4932	319.9099
4	Plate		45.0000	15.7500	708.7500	3375.0000	0.5342	12.8412	3387.8412
5	Plate		45.0000	15.7500	708.7500	3375.0000	0.5342	12.8412	3387.8412
6	Plate		13.7500	31.0625	427.1094	0.4476	14.7783	3002.9780	3003.4256
7	Perforated Plate		7.8750	0.3750	2.9531	0.3691	15.9092	1993.1812	1993.5504
8	Plate		0.0000	15.7500	0.0000	0.0000	0.5342	0.0000	0.0000
Total			167.48		2727.35	7155.49		10865.61	18021.10
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0625	4.0000	-0.2500	15.7500	-3.9375	-0.3333	0.5594	-0.0782	-0.4116
2	0.0625	5.0000	-0.3125	3.2500	-1.0156	-0.6510	13.0594	-53.2962	-53.9472
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.56		-4.95	-0.98		-53.37	-54.36



Made By KMW
Checked By ADK

Date 2/1/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.2842 in	$S_{top} = 1194.18 \text{ in}^3$			y-bar = 16.3094 in	$S_{top} = 1192.57 \text{ in}^3$		
$I_x = 18021.10 \text{ in}^4$	$S_{bottom} = 1106.66 \text{ in}^3$			$I_x = 17966.74 \text{ in}^4$	$S_{bottom} = 1101.62 \text{ in}^3$		
$C_{top} = 15.0908 \text{ in}$	$A = 167.4844 \text{ in}^2$			$C_{top} = 15.0656 \text{ in}$	$A = 166.9219 \text{ in}^2$		
$C_{bottom} = 16.2842 \text{ in}$	$r_x = 10.3730 \text{ in}$			$C_{bottom} = 16.3094 \text{ in}$	$r_x = 10.3748 \text{ in}$		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I_o	d	Ad^2	$I_{y, gross}$	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	4.5000	18.5625	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.8438	9.2692	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	20.5000	84.5625	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	23.1563	116.4144	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	4.5000	18.5625	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.8438	9.2692	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	20.5000	84.5625	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	23.1563	116.4144	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	9.6250	1.8438	17.7461	0.3791	10.6563	1092.9733	1093.3524	
3 (Right)	Plate	9.6250	23.1563	222.8789	0.3791	10.6563	1092.9733	1093.3524	
4 (Left)	Plate	22.5000	0.3750	8.4375	1.0547	12.1250	3307.8516	3308.9063	
4 (Right)	Plate	22.5000	24.6250	554.0625	1.0547	12.1250	3307.8516	3308.9063	
5 (Left)	Plate	22.5000	1.1250	25.3125	1.0547	11.3750	2911.2891	2912.3438	
5 (Right)	Plate	22.5000	23.8750	537.1875	1.0547	11.3750	2911.2891	2912.3438	
6	Plate	13.7500	12.5000	171.8750	554.5833	0.0000	0.0000	554.5833	
7 (Left)	Perforated Plate	3.9375	4.1250	16.2422	9.0439	8.3750	276.1787	285.2227	
7 (Right)	Perforated Plate	3.9375	20.8750	82.1953	9.0439	8.3750	276.1787	285.2227	
8 (Left)	Plate	0.0000	2.1875	0.0000	0.0000	10.3125	0.0000	0.0000	
8 (Right)	Plate	0.0000	22.8125	0.0000	0.0000	10.3125	0.0000	0.0000	
Total		167.48		2093.55	615.37		18516.12	19144.06	
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	4.0000	0.0625	-0.2500	0.0313	-0.0078	-0.0001	12.5108	-39.1298	-39.1299
2	5.0000	0.0625	-0.3125	0.0313	-0.0098	-0.0001	12.5108	-48.9123	-48.9124
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.56		-0.02	0.00		-88.04	-88.04

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 12.5000 in	$S_{right} = 1531.52 \text{ in}^3$			x-bar = 12.5420 in	$S_{right} = 1529.62 \text{ in}^3$		
$I_y = 19144.06 \text{ in}^4$	$S_{left} = 1531.52 \text{ in}^3$			$I_y = 19056.02 \text{ in}^4$	$S_{left} = 1519.37 \text{ in}^3$		
$C_{right} = 12.5000 \text{ in}$	$A = 167.4844 \text{ in}^2$			$C_{right} = 12.4580 \text{ in}$	$A = 166.9219 \text{ in}^2$		
$C_{left} = 12.5000 \text{ in}$	$r_y = 10.6913 \text{ in}$			$C_{left} = 12.5420 \text{ in}$	$r_y = 10.6846 \text{ in}$		



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.7500$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.7500$ in

Top Cover Plate:

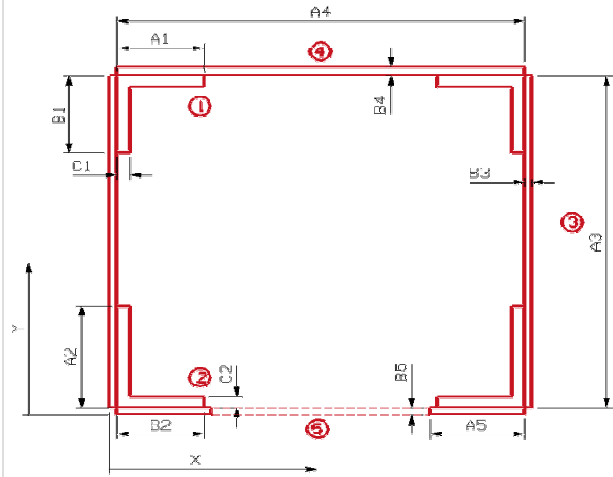
$A_4 = b = 22.0000$ in
 $B_4 = t = 0.6250$ in

Web Plates:**

$A_3 = b = 30.0000$ in
 $B_3 = t = 1.5625$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.7500$ in



Member L112-L113

**There are 2 web plates, thickness shown is total of both

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	9.0000	30.3750	273.3750	0.4219	14.0482	1776.1793	1776.6012
	Vertical Leg	10.8750	26.3750	286.8281	47.6348	10.0482	1098.0191	1145.6539
2	Horizontal Leg	9.0000	1.1250	10.1250	0.4219	15.2018	2079.8395	2080.2614
	Vertical Leg	10.8750	5.1250	55.7344	47.6348	11.2018	1364.5870	1412.2217
3	Plate	93.7500	15.7500	1476.5625	7031.2500	0.5768	31.1853	7062.4353
4	Plate	13.7500	31.0625	427.1094	0.4476	14.7357	2985.7059	2986.1535
5	Perforated Plate	7.8750	0.3750	2.9531	0.3691	15.9518	2003.8600	2004.2291
Total		155.13		2532.69	7128.18		11339.38	18467.56
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.3268 in	S _{top} =	1227.22 in ³	y-bar =	16.3268 in	S _{top} =	1227.22 in ³
I _x =	18467.56 in ⁴	S _{bott.} =	1131.12 in ³	I _x =	18467.56 in ⁴	S _{bott.} =	1131.12 in ³
C _{top} =	15.0482 in	A =	155.1250 in ²	C _{top} =	15.0482 in	A =	155.1250 in ²
C _{bottom} =	16.3268 in	r _x =	10.9110 in	C _{bottom} =	16.3268 in	r _x =	10.9110 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.5000	4.5625	20.5313	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	1.9375	10.5352	0.2549	10.6250	613.8428	614.0977	
1 (Right)	Horizontal Leg	4.5000	20.5625	92.5313	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	23.1875	126.0820	0.2549	10.6250	613.8428	614.0977	
2 (Left)	Horizontal Leg	4.5000	4.5625	20.5313	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	1.9375	10.5352	0.2549	10.6250	613.8428	614.0977	
2 (Right)	Horizontal Leg	4.5000	20.5625	92.5313	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	23.1875	126.0820	0.2549	10.6250	613.8428	614.0977	
3 (Left)	Plate	46.8750	0.7813	36.6211	9.5367	11.7813	6506.1493	6515.6860	
3 (Right)	Plate	46.8750	24.3438	1141.1133	9.5367	11.7813	6506.1493	6515.6860	
4	Plate	13.7500	12.5625	172.7344	554.5833	0.0000	0.0000	554.5833	
5 (Left)	Perforated Plate	3.9375	4.1875	16.4883	9.0439	8.3750	276.1787	285.2227	
5 (Right)	Perforated Plate	3.9375	20.9375	82.4414	9.0439	8.3750	276.1787	285.2227	
Total		155.13		1948.76	646.76		17172.03	17818.79	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.5625 in	S _{right} =	1418.41 in ³	x-bar =	12.5625 in	S _{right} =	1418.41 in ³
I _y =	17818.79 in ⁴	S _{left} =	1418.41 in ³	I _y =	17818.79 in ⁴	S _{left} =	1418.41 in ³
C _{right} =	12.5625 in	A =	155.1250 in ²	C _{right} =	12.5625 in	A =	155.1250 in ²
C _{left} =	12.5625 in	r _y =	10.7176 in	C _{left} =	12.5625 in	r _y =	10.7176 in



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.7500$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.7500$ in

Web Plate 1:

$A_3 = b = 30.0000$ in
 $B_3 = t = 0.9375$ in

Top Cover Plate:

$A_4 = b = 22.0000$ in
 $B_4 = t = 0.6250$ in

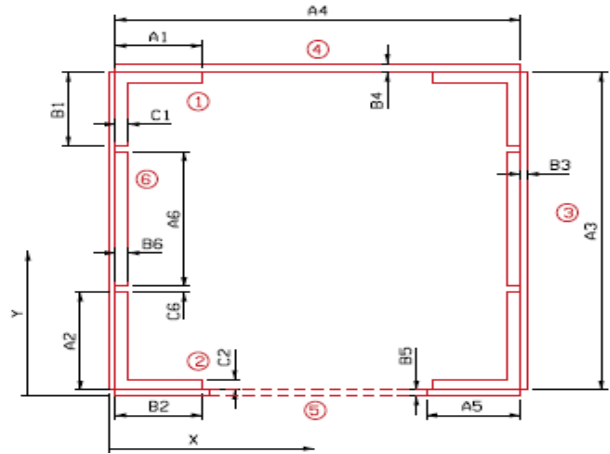
Web Plate 2:

$A_6 = b = 14.0000$ in
 $B_6 = t = 0.7500$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.7500$ in

$C_6 = \text{gap} = 0.0000$ in



Member L113-L114

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	9.0000	30.3750	273.3750	0.4219	13.9796	1758.8626	1759.2845
	Vertical Leg	10.8750	26.3750	286.8281	47.6348	9.9796	1083.0673	1130.7020
2	Horizontal Leg	9.0000	1.1250	10.1250	0.4219	15.2704	2098.6664	2099.0883
	Vertical Leg	10.8750	5.1250	55.7344	47.6348	11.2704	1381.3636	1428.9984
3	Plate	56.2500	15.7500	885.9375	4218.7500	0.6454	23.4305	4242.1805
4	Plate	13.7500	31.0625	427.1094	0.4476	14.6671	2957.9520	2958.3996
5	Perforated Plate	7.8750	0.3750	2.9531	0.3691	16.0204	2021.1444	2021.5135
6	Side Plates	21.0000	15.7500	330.7500	343.0000	0.6454	8.7474	351.7474
Total		138.63		2272.81	4658.68		11333.23	15991.91
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.3954 in	S _{top} =	1067.58 in ³	y-bar =	16.3954 in	S _{top} =	1067.58 in ³
I _x =	15991.91 in ⁴	S _{bott.} =	975.39 in ³	I _x =	15991.91 in ⁴	S _{bott.} =	975.39 in ³
C _{top} =	14.9796 in	A =	138.6250 in ²	C _{top} =	14.9796 in	A =	138.6250 in ²
C _{bottom} =	16.3954 in	r _x =	10.7406 in	C _{bottom} =	16.3954 in	r _x =	10.7406 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.5000	3.9375	17.7188	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	1.3125	7.1367	0.2549	10.6250	613.8428	614.0977	
1 (Right)	Horizontal Leg	4.5000	19.9375	89.7188	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	22.5625	122.6836	0.2549	10.6250	613.8428	614.0977	
2 (Left)	Horizontal Leg	4.5000	3.9375	17.7188	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	1.3125	7.1367	0.2549	10.6250	613.8428	614.0977	
2 (Right)	Horizontal Leg	4.5000	19.9375	89.7188	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	22.5625	122.6836	0.2549	10.6250	613.8428	614.0977	
3 (Left)	Plate	28.1250	0.4688	13.1836	2.0599	11.4688	3699.3439	3701.4038	
3 (Right)	Plate	28.1250	23.4063	658.3008	2.0599	11.4688	3699.3439	3701.4038	
4	Plate	13.7500	11.9375	164.1406	554.5833	0.0000	0.0000	554.5833	
5 (Left)	Perforated Plate	3.9375	3.5625	14.0273	9.0439	8.3750	276.1787	285.2227	
5 (Right)	Perforated Plate	3.9375	20.3125	79.9805	9.0439	8.3750	276.1787	285.2227	
6 (Left)	Plate	10.5000	1.3125	13.7813	0.4922	10.6250	1185.3516	1185.8438	
6 (Right)	Plate	10.5000	22.5625	236.9063	0.4922	10.6250	1185.3516	1185.8438	
Total		138.63		1654.84	632.80		13929.12	14561.91	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	11.9375 in	S _{right} =	1219.85 in ³	x-bar =	11.9375 in	S _{right} =	1219.85 in ³
I _y =	14561.91 in ⁴	S _{left} =	1219.85 in ³	I _y =	14561.91 in ⁴	S _{left} =	1219.85 in ³
C _{right} =	11.9375 in	A =	138.6250 in ²	C _{right} =	11.9375 in	A =	138.6250 in ²
C _{left} =	11.9375 in	r _y =	10.2492 in	C _{left} =	11.9375 in	r _y =	10.2492 in



Made By KMW
Checked By ADK

Date 2/1/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.8750$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.8750$ in

Web Plate 1:

$A_3 = b = 30.0000$ in
 $B_3 = t = 0.8750$ in

Top Cover Plate:

$A_4 = b = 22.0000$ in
 $B_4 = t = 0.6250$ in

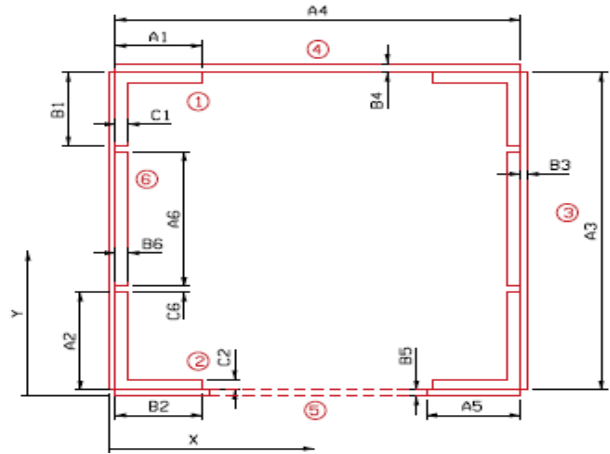
Web Plate 2:

$A_6 = b = 14.0000$ in
 $B_6 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.7500$ in

$C_6 = \text{gap} = 0.0000$ in



Member L114-L115

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	10.5000	30.3125	318.2813	0.6699	13.8863	2024.7101	2025.3800	
	Vertical Leg	12.4688	26.3125	328.0840	52.7487	9.8863	1218.6840	1271.4327	
2	Horizontal Leg	10.5000	1.1875	12.4688	0.6699	15.2387	2438.2864	2438.9564	
	Vertical Leg	12.4688	5.1875	64.6816	52.7487	11.2387	1574.9055	1627.6542	
3	Plate	52.5000	15.7500	826.8750	3937.5000	0.6762	24.0049	3961.5049	
4	Plate	13.7500	31.0625	427.1094	0.4476	14.6363	2945.5455	2945.9931	
5	Perforated Plate	7.8750	0.3750	2.9531	0.3691	16.0512	2028.9212	2029.2903	
6	Side Plates	12.2500	15.7500	192.9375	200.0833	0.6762	5.6011	205.6845	
Total		132.31		2173.39	4245.24		12260.66	16505.90	
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	
1	0.1250	30.0000	-3.7500	15.7500	-59.0625	-281.2500	0.6763	-1.7154	-282.9654
2	0.1250	3.0000	-0.3750	8.2500	-3.0938	-0.2813	8.1763	-25.0697	-25.3510
3	3.0000	0.1250	-0.3750	31.3125	-11.7422	-0.0005	14.8862	-83.0991	-83.0996
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-4.50		-73.90		-281.53		-109.88
									-391.42



Made By KMW
Checked By ADK

Date 2/1/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.4262 in	S _{top} =	1104.16 in ³	y-bar =	16.4263 in	S _{top} =	1077.99 in ³
I _x =	16505.90 in ⁴	S _{bott.} =	1004.85 in ³	I _x =	16114.48 in ⁴	S _{bott.} =	981.01 in ³
C _{top} =	14.9488 in	A =	132.3125 in ²	C _{top} =	14.9487 in	A =	127.8125 in ²
C _{bottom} =	16.4262 in	r _x =	11.1691 in	C _{bottom} =	16.4263 in	r _x =	11.2285 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	5.2500	3.8750	20.3438	15.7500	8.0000	336.0000	351.7500	
	Vertical Leg	6.2344	1.3125	8.1826	0.3978	10.5625	695.5468	695.9446	
1 (Right)	Horizontal Leg	5.2500	19.8750	104.3438	15.7500	8.0000	336.0000	351.7500	
	Vertical Leg	6.2344	22.4375	139.8838	0.3978	10.5625	695.5468	695.9446	
2 (Left)	Horizontal Leg	5.2500	3.8750	20.3438	15.7500	8.0000	336.0000	351.7500	
	Vertical Leg	6.2344	1.3125	8.1826	0.3978	10.5625	695.5468	695.9446	
2 (Right)	Horizontal Leg	5.2500	19.8750	104.3438	15.7500	8.0000	336.0000	351.7500	
	Vertical Leg	6.2344	22.4375	139.8838	0.3978	10.5625	695.5468	695.9446	
3 (Left)	Plate	26.2500	0.4375	11.4844	1.6748	11.4375	3433.9307	3435.6055	
3 (Right)	Plate	26.2500	23.3125	611.9531	1.6748	11.4375	3433.9307	3435.6055	
4	Plate	13.7500	11.8750	163.2813	554.5833	0.0000	0.0000	554.5833	
5 (Left)	Perforated Plate	3.9375	3.5000	13.7813	9.0439	8.3750	276.1787	285.2227	
5 (Right)	Perforated Plate	3.9375	20.2500	79.7344	9.0439	8.3750	276.1787	285.2227	
6 (Left)	Plate	6.1250	1.0938	6.6992	0.0977	10.7813	711.9415	712.0392	
6 (Right)	Plate	6.1250	22.6563	138.7695	0.0977	10.7813	711.9415	712.0392	
Total		132.31		1571.21	640.81		12970.29	13611.10	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	30.0000	0.1250	-3.7500	0.0625	-0.2344	-0.0049	12.1655	-554.9973	-555.0022
2	3.0000	0.1250	-0.3750	0.1875	-0.0703	-0.0005	12.0405	-54.3651	-54.3656
3	0.1250	3.0000	-0.3750	21.3750	-8.0156	-0.2813	9.1470	-31.3754	-31.6566
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-4.50		-8.32	-0.29		-640.74	-641.02

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	11.8750 in	S _{right} =	1146.20 in ³	x-bar =	12.2280 in	S _{right} =	1125.68 in ³
I _y =	13611.10 in ⁴	S _{left} =	1146.20 in ³	I _y =	12970.07 in ⁴	S _{left} =	1060.69 in ³
C _{right} =	11.8750 in	A =	132.3125 in ²	C _{right} =	11.5220 in	A =	127.8125 in ²
C _{left} =	11.8750 in	r _y =	10.1425 in	C _{left} =	12.2280 in	r _y =	10.0736 in



Made By KMW
Checked By ADK

Date 2/1/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

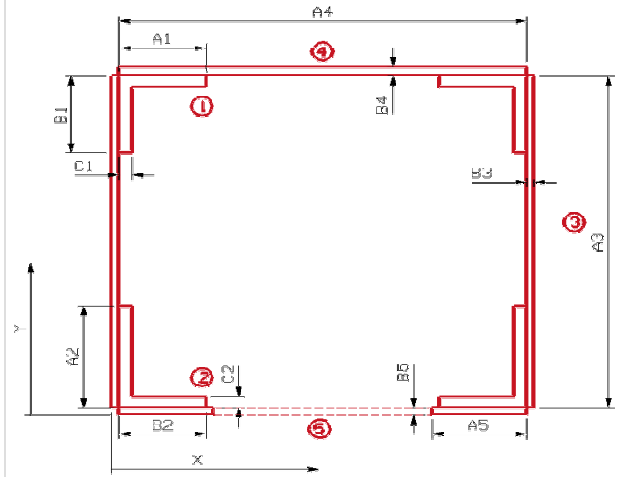
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6875$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6875$ in

Top Cover Plate:
 $A_4 = b = 22.0000$ in
 $B_4 = t = 0.6250$ in

Web Plate:
 $A_3 = b = 30.0000$ in
 $B_3 = t = 0.8750$ in

Perforated Cover Plate
 $A_5 = b = 5.2500$ in
 $B_5 = t = 0.7500$ in



Member L115-L116

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	8.2500	30.4063	250.8516	0.3250	13.8483	1582.1453	1582.4702
	Vertical Leg	10.0547	26.4063	265.5066	44.8042	9.8483	975.1926	1019.9968
2	Horizontal Leg	8.2500	1.0938	9.0234	0.3250	15.4642	1972.9193	1973.2443
	Vertical Leg	10.0547	5.0938	51.2161	44.8042	11.4642	1321.4682	1366.2724
3	Plate	52.5000	15.7500	826.8750	3937.5000	0.8080	34.2718	3971.7718
4	Plate	13.7500	31.0625	427.1094	0.4476	14.5045	2892.7488	2893.1964
5	Perforated Plate	7.8750	0.3750	2.9531	0.3691	16.1830	2062.3691	2062.7382
Total		110.73		1833.54	4028.58		10841.12	14869.69
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.1250	12.0000	-1.5000	6.7500	-10.1250	-18.0000	9.9426	-148.2842
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.50	-10.13	-18.00		-148.28	-166.28



Made By KMW
Checked By ADK

Date 2/1/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.5580 in	S _{top} =	1003.55 in ³	y-bar =	16.6926 in	S _{top} =	1001.43 in ³
I _x =	14869.69 in ⁴	S _{bott.} =	898.04 in ³	I _x =	14703.41 in ⁴	S _{bott.} =	880.83 in ³
C _{top} =	14.8170 in	A =	110.7344 in ²	C _{top} =	14.6824 in	A =	109.2344 in ²
C _{bottom} =	16.5580 in	r _x =	11.5880 in	C _{bottom} =	16.6926 in	r _x =	11.6019 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	3.8750	15.9844	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.2188	6.1271	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	19.8750	81.9844	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.5313	113.2723	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	3.8750	15.9844	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.2188	6.1271	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	19.8750	81.9844	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.5313	113.2723	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	26.2500	0.4375	11.4844	1.6748	11.4375	3433.9307	3435.6055	
3 (Right)	Plate	26.2500	23.3125	611.9531	1.6748	11.4375	3433.9307	3435.6055	
4	Plate	13.7500	11.8750	163.2813	554.5833	0.0000	0.0000	554.5833	
5 (Left)	Perforated Plate	3.9375	3.5000	13.7813	9.0439	8.3750	276.1787	285.2227	
5 (Right)	Perforated Plate	3.9375	20.2500	79.7344	9.0439	8.3750	276.1787	285.2227	
Total		110.73		1314.97	626.31		10759.75	11386.07	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	12.0000	0.1250	-1.5000	23.6875	-35.5313	-0.0020	11.9747	-215.0905	-215.0924
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.50		-35.53	0.00		-215.09	-215.09

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	11.8750 in	S _{right} =	958.83 in ³	x-bar =	11.7128 in	S _{right} =	928.04 in ³
I _y =	11386.07 in ⁴	S _{left} =	958.83 in ³	I _y =	11170.97 in ⁴	S _{left} =	953.74 in ³
C _{right} =	11.8750 in	A =	110.7344 in ²	C _{right} =	12.0372 in	A =	109.2344 in ²
C _{left} =	11.8750 in	r _y =	10.1402 in	C _{left} =	11.7128 in	r _y =	10.1127 in



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6875$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6875$ in

Top Cover Plate:

$A_4 = b = 22.0000$ in
 $B_4 = t = 0.6250$ in

Web Plate:

$A_3 = b = 30.0000$ in
 $B_3 = t = 0.9375$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.7500$ in



Member L116-L117

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	8.2500	30.4063	250.8516	0.3250	13.8748	1588.1983	1588.5232
	Vertical Leg	10.0547	26.4063	265.5066	44.8042	9.8748	980.4409	1025.2451
2	Horizontal Leg	8.2500	1.0938	9.0234	0.3250	15.4377	1966.1723	1966.4972
	Vertical Leg	10.0547	5.0938	51.2161	44.8042	11.4377	1315.3740	1360.1782
3	Plate	56.2500	15.7500	885.9375	4218.7500	0.7815	34.3536	4253.1036
4	Plate	13.7500	31.0625	427.1094	0.4476	14.5310	2903.3147	2903.7623
5	Perforated Plate	7.8750	0.3750	2.9531	0.3691	16.1565	2055.6291	2055.9983
Total		114.48		1892.60	4309.83		10843.48	15153.31
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.5315 in	S _{top} =	1020.87 in ³	y-bar =	16.5315 in	S _{top} =	1020.87 in ³
I _x =	15153.31 in ⁴	S _{bott.} =	916.63 in ³	I _x =	15153.31 in ⁴	S _{bott.} =	916.63 in ³
C _{top} =	14.8435 in	A =	114.4844 in ²	C _{top} =	14.8435 in	A =	114.4844 in ²
C _{bottom} =	16.5315 in	r _x =	11.5048 in	C _{bottom} =	16.5315 in	r _x =	11.5048 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	3.9375	16.2422	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.2813	6.4413	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	19.9375	82.2422	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.5938	113.5865	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	3.9375	16.2422	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.2813	6.4413	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	19.9375	82.2422	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.5938	113.5865	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	28.1250	0.4688	13.1836	2.0599	11.4688	3699.3439	3701.4038	
3 (Right)	Plate	28.1250	23.4063	658.3008	2.0599	11.4688	3699.3439	3701.4038	
4	Plate	13.7500	11.9375	164.1406	554.5833	0.0000	0.0000	554.5833	
5 (Left)	Perforated Plate	3.9375	3.5625	14.0273	9.0439	8.3750	276.1787	285.2227	
5 (Right)	Perforated Plate	3.9375	20.3125	79.9805	9.0439	8.3750	276.1787	285.2227	
Total		114.48		1366.66	627.08		11290.58	11917.66	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	11.9375 in	S _{right} =	998.34 in ³	x-bar =	11.9375 in	S _{right} =	998.34 in ³
I _y =	11917.66 in ⁴	S _{left} =	998.34 in ³	I _y =	11917.66 in ⁴	S _{left} =	998.34 in ³
C _{right} =	11.9375 in	A =	114.4844 in ²	C _{right} =	11.9375 in	A =	114.4844 in ²
C _{left} =	11.9375 in	r _y =	10.2029 in	C _{left} =	11.9375 in	r _y =	10.2029 in



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.7500$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.7500$ in

Web Plate 1:

$A_3 = b = 30.0000$ in
 $B_3 = t = 0.8750$ in

Top Cover Plate:

$A_4 = b = 22.0000$ in
 $B_4 = t = 0.6250$ in

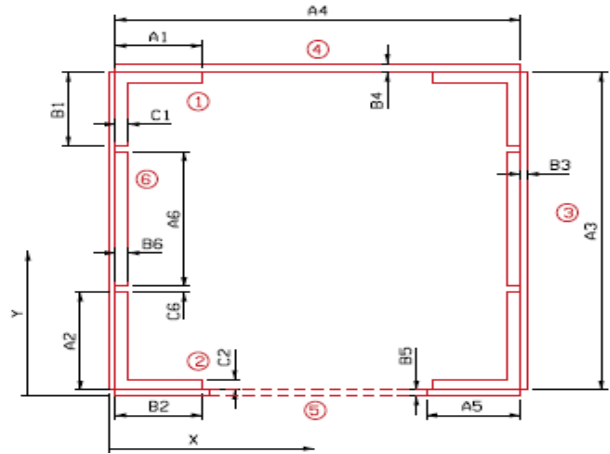
Web Plate 2:

$A_6 = b = 14.0000$ in
 $B_6 = t = 0.7500$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.7500$ in

$C_6 = \text{gap} = 0.0000$ in



Member L117-L118

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	9.0000	30.3750	273.3750	0.4219	13.9617	1754.3501	1754.7720
	Vertical Leg	10.8750	26.3750	286.8281	47.6348	9.9617	1079.1758	1126.8106
2	Horizontal Leg	9.0000	1.1250	10.1250	0.4219	15.2883	2103.6016	2104.0235
	Vertical Leg	10.8750	5.1250	55.7344	47.6348	11.2883	1385.7659	1433.4007
3	Plate	52.5000	15.7500	826.8750	3937.5000	0.6633	23.1014	3960.6014
4	Plate	13.7500	31.0625	427.1094	0.4476	14.6492	2950.7187	2951.1663
5	Perforated Plate	7.8750	0.3750	2.9531	0.3691	16.0383	2025.6747	2026.0438
6	Side Plates	21.0000	15.7500	330.7500	343.0000	0.6633	9.2406	352.2406
Total		134.88		2213.75	4377.43		11331.63	15709.06
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.4133 in	S _{top} =	1049.95 in ³	y-bar =	16.4133 in	S _{top} =	1049.95 in ³
I _x =	15709.06 in ⁴	S _{bott.} =	957.09 in ³	I _x =	15709.06 in ⁴	S _{bott.} =	957.09 in ³
C _{top} =	14.9617 in	A =	134.8750 in ²	C _{top} =	14.9617 in	A =	134.8750 in ²
C _{bottom} =	16.4133 in	r _x =	10.7922 in	C _{bottom} =	16.4133 in	r _x =	10.7922 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.5000	3.8750	17.4375	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	1.2500	6.7969	0.2549	10.6250	613.8428	614.0977	
1 (Right)	Horizontal Leg	4.5000	19.8750	89.4375	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	22.5000	122.3438	0.2549	10.6250	613.8428	614.0977	
2 (Left)	Horizontal Leg	4.5000	3.8750	17.4375	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	1.2500	6.7969	0.2549	10.6250	613.8428	614.0977	
2 (Right)	Horizontal Leg	4.5000	19.8750	89.4375	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	22.5000	122.3438	0.2549	10.6250	613.8428	614.0977	
3 (Left)	Plate	26.2500	0.4375	11.4844	1.6748	11.4375	3433.9307	3435.6055	
3 (Right)	Plate	26.2500	23.3125	611.9531	1.6748	11.4375	3433.9307	3435.6055	
4	Plate	13.7500	11.8750	163.2813	554.5833	0.0000	0.0000	554.5833	
5 (Left)	Perforated Plate	3.9375	3.5000	13.7813	9.0439	8.3750	276.1787	285.2227	
5 (Right)	Perforated Plate	3.9375	20.2500	79.7344	9.0439	8.3750	276.1787	285.2227	
6 (Left)	Plate	10.5000	1.2500	13.1250	0.4922	10.6250	1185.3516	1185.8438	
6 (Right)	Plate	10.5000	22.5000	236.2500	0.4922	10.6250	1185.3516	1185.8438	
Total		134.88		1601.64	632.02		13398.29	14030.32	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	11.8750 in	S _{right} =	1181.50 in ³	x-bar =	11.8750 in	S _{right} =	1181.50 in ³
I _y =	14030.32 in ⁴	S _{left} =	1181.50 in ³	I _y =	14030.32 in ⁴	S _{left} =	1181.50 in ³
C _{right} =	11.8750 in	A =	134.8750 in ²	C _{right} =	11.8750 in	A =	134.8750 in ²
C _{left} =	11.8750 in	r _y =	10.1992 in	C _{left} =	11.8750 in	r _y =	10.1992 in



Made By KMW
Checked By ADK

Date 2/1/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

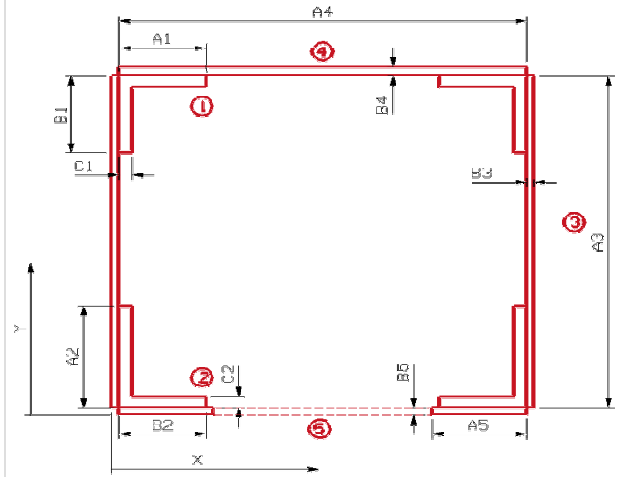
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.7500$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.7500$ in

Top Cover Plate:
 $A_4 = b = 22.0000$ in
 $B_4 = t = 0.6250$ in

Web Plates:**
 $A_3 = b = 30.0000$ in
 $B_3 = t = 1.6250$ in

Perforated Cover Plate
 $A_5 = b = 5.2500$ in
 $B_5 = t = 0.7500$ in



Member L118-L119

**There are 2 web plates, thickness shown is total of both

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	9.0000	30.3750	273.3750	0.4219	14.0619	1779.6233	1780.0452	
	Vertical Leg	10.8750	26.3750	286.8281	47.6348	10.0619	1100.9963	1148.6311	
2	Horizontal Leg	9.0000	1.1250	10.1250	0.4219	15.1881	2076.1162	2076.5380	
	Vertical Leg	10.8750	5.1250	55.7344	47.6348	11.1881	1361.2723	1408.9070	
3	Plate	97.5000	15.7500	1535.6250	7312.5000	0.5631	30.9198	7343.4198	
4	Plate	13.7500	31.0625	427.1094	0.4476	14.7494	2991.2251	2991.6727	
5	Perforated Plate	7.8750	0.3750	2.9531	0.3691	15.9381	2000.4412	2000.8104	
Total		158.88		2591.75	7409.43		11340.59	18750.02	
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	
1	0.1875	8.0000	-1.5000	12.7500	-19.1250	-8.0000	3.5562	-18.9694	-26.9694
2	0.0625	16.0000	-1.0000	22.7500	-22.7500	-21.3333	6.4438	-41.5231	-62.8565
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.50	-41.88	-29.33		-60.49	-89.83	



Made By KMW
Checked By ADK

Date 2/1/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.3131 in	S _{top} =	1244.87 in ³	y-bar =	16.3062 in	S _{top} =	1238.33 in ³
I _x =	18750.02 in ⁴	S _{bottom} =	1149.38 in ³	I _x =	18660.20 in ⁴	S _{bottom} =	1144.37 in ³
C _{top} =	15.0619 in	A =	158.8750 in ²	C _{top} =	15.0688 in	A =	156.3750 in ²
C _{bottom} =	16.3131 in	r _x =	10.8636 in	C _{bottom} =	16.3062 in	r _x =	10.9238 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.5000	4.6250	20.8125	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	2.0000	10.8750	0.2549	10.6250	613.8428	614.0977	
1 (Right)	Horizontal Leg	4.5000	20.6250	92.8125	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	23.2500	126.4219	0.2549	10.6250	613.8428	614.0977	
2 (Left)	Horizontal Leg	4.5000	4.6250	20.8125	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	2.0000	10.8750	0.2549	10.6250	613.8428	614.0977	
2 (Right)	Horizontal Leg	4.5000	20.6250	92.8125	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	23.2500	126.4219	0.2549	10.6250	613.8428	614.0977	
3 (Left)	Plate	48.7500	0.8125	39.6094	10.7275	11.8125	6802.3389	6813.0664	
3 (Right)	Plate	48.7500	24.4375	1191.3281	10.7275	11.8125	6802.3389	6813.0664	
4	Plate	13.7500	12.6250	173.5938	554.5833	0.0000	0.0000	554.5833	
5 (Left)	Perforated Plate	3.9375	4.2500	16.7344	9.0439	8.3750	276.1787	285.2227	
5 (Right)	Perforated Plate	3.9375	21.0000	82.6875	9.0439	8.3750	276.1787	285.2227	
Total		158.88		2005.80	649.15		17764.41	18413.55	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	8.0000	0.1875	-1.5000	0.0938	-0.1406	-0.0044	12.5709	-237.0420	-237.0464
2	16.0000	0.0625	-1.0000	25.2188	-25.2188	-0.0003	12.5541	-157.6050	-157.6053
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.50		-25.36	0.00		-394.65	-394.65

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.6250 in	S _{right} =	1458.50 in ³	x-bar =	12.6647 in	S _{right} =	1431.74 in ³
I _y =	18413.55 in ⁴	S _{left} =	1458.50 in ³	I _y =	18018.90 in ⁴	S _{left} =	1422.77 in ³
C _{right} =	12.6250 in	A =	158.8750 in ²	C _{right} =	12.5853 in	A =	156.3750 in ²
C _{left} =	12.6250 in	r _y =	10.7657 in	C _{left} =	12.6647 in	r _y =	10.7345 in



Made By KMW
Checked By ADK

Date 2/1/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

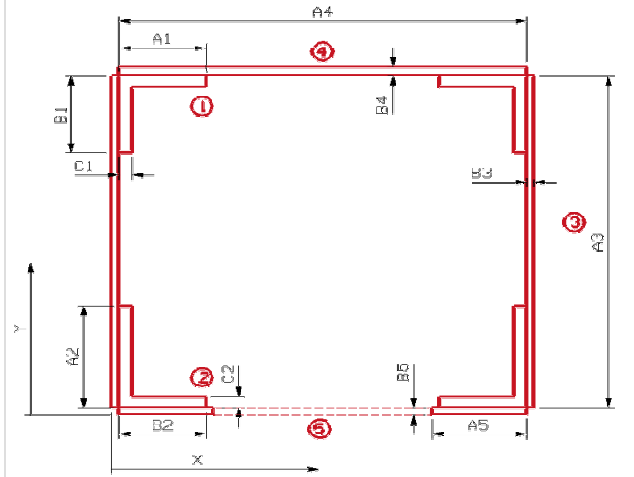
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.7500$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.7500$ in

Top Cover Plate:
 $A_4 = b = 22.0000$ in
 $B_4 = t = 0.6250$ in

Web Plates:**
 $A_3 = b = 30.0000$ in
 $B_3 = t = 1.6250$ in

Perforated Cover Plate
 $A_5 = b = 5.2500$ in
 $B_5 = t = 0.7500$ in



Member L119-L120

**There are 2 web plates, thickness shown is total of both

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	9.0000	30.3750	273.3750	0.4219	14.0619	1779.6233	1780.0452	
	Vertical Leg	10.8750	26.3750	286.8281	47.6348	10.0619	1100.9963	1148.6311	
2	Horizontal Leg	9.0000	1.1250	10.1250	0.4219	15.1881	2076.1162	2076.5380	
	Vertical Leg	10.8750	5.1250	55.7344	47.6348	11.1881	1361.2723	1408.9070	
3	Plate	97.5000	15.7500	1535.6250	7312.5000	0.5631	30.9198	7343.4198	
4	Plate	13.7500	31.0625	427.1094	0.4476	14.7494	2991.2251	2991.6727	
5	Perforated Plate	7.8750	0.3750	2.9531	0.3691	15.9381	2000.4412	2000.8104	
Total		158.88		2591.75	7409.43		11340.59	18750.02	
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	
1	0.2500	16.0000	-4.0000	8.7500	-35.0000	-85.3333	7.8606	-247.1544	-332.4878
2	4.0000	0.1250	-0.5000	31.3125	-15.6563	-0.0007	14.7019	-108.0733	-108.0740
3	0.2500	24.0000	-6.0000	12.7500	-76.5000	-288.0000	3.8606	-89.4241	-377.4241
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-10.50	-127.16	-373.33		-444.65	-817.99	



Made By KMW
Checked By ADK

Date 2/1/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.3131 in	S _{top} =	1244.87 in ³	y-bar =	16.6106 in	S _{top} =	1214.54 in ³
I _x =	18750.02 in ⁴	S _{bott.} =	1149.38 in ³	I _x =	17932.04 in ⁴	S _{bott.} =	1079.56 in ³
C _{top} =	15.0619 in	A =	158.8750 in ²	C _{top} =	14.7644 in	A =	148.3750 in ²
C _{bottom} =	16.3131 in	r _x =	10.8636 in	C _{bottom} =	16.6106 in	r _x =	10.9935 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.5000	4.6250	20.8125	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	2.0000	10.8750	0.2549	10.6250	613.8428	614.0977	
1 (Right)	Horizontal Leg	4.5000	20.6250	92.8125	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	23.2500	126.4219	0.2549	10.6250	613.8428	614.0977	
2 (Left)	Horizontal Leg	4.5000	4.6250	20.8125	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	2.0000	10.8750	0.2549	10.6250	613.8428	614.0977	
2 (Right)	Horizontal Leg	4.5000	20.6250	92.8125	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	23.2500	126.4219	0.2549	10.6250	613.8428	614.0977	
3 (Left)	Plate	48.7500	0.8125	39.6094	10.7275	11.8125	6802.3389	6813.0664	
3 (Right)	Plate	48.7500	24.4375	1191.3281	10.7275	11.8125	6802.3389	6813.0664	
4	Plate	13.7500	12.6250	173.5938	554.5833	0.0000	0.0000	554.5833	
5 (Left)	Perforated Plate	3.9375	4.2500	16.7344	9.0439	8.3750	276.1787	285.2227	
5 (Right)	Perforated Plate	3.9375	21.0000	82.6875	9.0439	8.3750	276.1787	285.2227	
Total		158.88		2005.80	649.15		17764.41	18413.55	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	16.0000	0.2500	-4.0000	0.1250	-0.5000	-0.0208	12.3618	-611.2600	-611.2808
2	0.1250	4.0000	-0.5000	3.6250	-1.8125	-0.6667	8.8618	-39.2661	-39.9327
3	24.0000	0.2500	-6.0000	25.1250	-150.7500	-0.0313	12.6382	-958.3391	-958.3703
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-10.50		-153.06	-0.72		-1608.87	-1609.58

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.6250 in	S _{right} =	1458.50 in ³	x-bar =	12.4868 in	S _{right} =	1316.60 in ³
I _y =	18413.55 in ⁴	S _{left} =	1458.50 in ³	I _y =	16803.97 in ⁴	S _{left} =	1345.73 in ³
C _{right} =	12.6250 in	A =	158.8750 in ²	C _{right} =	12.7632 in	A =	148.3750 in ²
C _{left} =	12.6250 in	r _y =	10.7657 in	C _{left} =	12.4868 in	r _y =	10.6421 in



Made By KMW
Checked By ADK

Date 2/1/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6250$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6250$ in

Top Cover Plate:

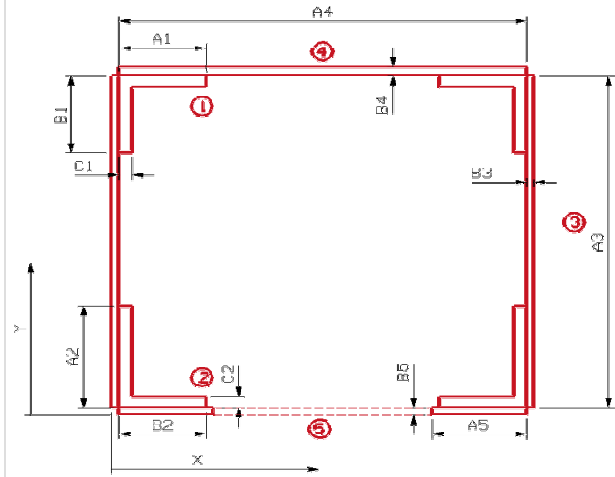
$A_4 = b = 22.0000$ in
 $B_4 = t = 0.6250$ in

Web Plates:**

$A_3 = b = 30.0000$ in
 $B_3 = t = 1.5625$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.7500$ in



Member L120-L121

**There are 2 web plates, thickness shown is total of both

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	7.5000	30.4375	228.2813	0.2441	14.0863	1488.1751	1488.4192	
	Vertical Leg	9.2188	26.4375	243.7207	41.7845	10.0863	937.8519	979.6363	
2	Horizontal Leg	7.5000	1.0625	7.9688	0.2441	15.2887	1753.0867	1753.3309	
	Vertical Leg	9.2188	5.0625	46.6699	41.7845	11.2887	1174.7928	1216.5773	
3	Plate	93.7500	15.7500	1476.5625	7031.2500	0.6012	33.8872	7065.1372	
4	Plate	13.7500	31.0625	427.1094	0.4476	14.7113	2975.8000	2976.2476	
5	Perforated Plate	7.8750	0.3750	2.9531	0.3691	15.9762	2010.0114	2010.3805	
Total		148.81		2433.27	7116.12		10373.61	17489.73	
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	
1	0.1250	10.0000	-1.2500	25.7500	-32.1875	-10.4167	9.4465	-111.5454	-121.9620
2	0.0625	6.0000	-0.3750	3.7500	-1.4063	-1.1250	12.5535	-59.0964	-60.2214
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.63	-33.59	-11.54		-170.64	-182.18	



Made By KMW
Checked By ADK

Date 2/1/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.3512 in	S _{top} =	1164.14 in ³	y-bar =	16.3035 in	S _{top} =	1148.36 in ³
I _x =	17489.73 in ⁴	S _{bott.} =	1069.63 in ³	I _x =	17307.55 in ⁴	S _{bott.} =	1061.58 in ³
C _{top} =	15.0238 in	A =	148.8125 in ²	C _{top} =	15.0715 in	A =	147.1875 in ²
C _{bottom} =	16.3512 in	r _x =	10.8411 in	C _{bottom} =	16.3035 in	r _x =	10.8438 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.7500	4.5625	17.1094	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.8750	8.6426	0.1500	10.6875	526.4951	526.6451	
1 (Right)	Horizontal Leg	3.7500	20.5625	77.1094	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	23.2500	107.1680	0.1500	10.6875	526.4951	526.6451	
2 (Left)	Horizontal Leg	3.7500	4.5625	17.1094	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.8750	8.6426	0.1500	10.6875	526.4951	526.6451	
2 (Right)	Horizontal Leg	3.7500	20.5625	77.1094	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	23.2500	107.1680	0.1500	10.6875	526.4951	526.6451	
3 (Left)	Plate	46.8750	0.7813	36.6211	9.5367	11.7813	6506.1493	6515.6860	
3 (Right)	Plate	46.8750	24.3438	1141.1133	9.5367	11.7813	6506.1493	6515.6860	
4	Plate	13.7500	12.5625	172.7344	554.5833	0.0000	0.0000	554.5833	
5 (Left)	Perforated Plate	3.9375	4.1875	16.4883	9.0439	8.3750	276.1787	285.2227	
5 (Right)	Perforated Plate	3.9375	20.9375	82.4414	9.0439	8.3750	276.1787	285.2227	
Total		148.81		1869.46	637.34		16630.64	17267.98	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	10.0000	0.1250	-1.2500	0.0625	-0.0781	-0.0016	12.6381	-199.6515	-199.6531
2	6.0000	0.0625	-0.3750	0.0313	-0.0117	-0.0001	12.6693	-60.1920	-60.1921
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.63		-0.09	0.00		-259.84	-259.85

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.5625 in	S _{right} =	1374.57 in ³	x-bar =	12.7006 in	S _{right} =	1368.93 in ³
I _y =	17267.98 in ⁴	S _{left} =	1374.57 in ³	I _y =	17008.14 in ⁴	S _{left} =	1339.16 in ³
C _{right} =	12.5625 in	A =	148.8125 in ²	C _{right} =	12.4244 in	A =	147.1875 in ²
C _{left} =	12.5625 in	r _y =	10.7721 in	C _{left} =	12.7006 in	r _y =	10.7496 in

South Truss

Member L121-L122



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6250$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6250$ in

Web Plate 1:

$A_3 = b = 30.0000$ in
 $B_3 = t = 0.8750$ in

Top Cover Plate:

$A_4 = b = 22.0000$ in
 $B_4 = t = 0.6250$ in

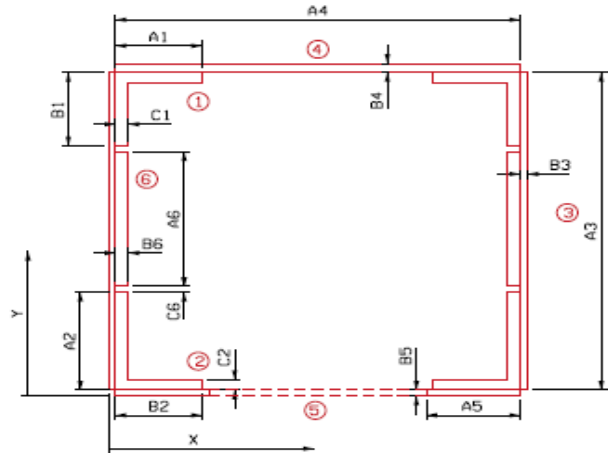
Web Plate 2:

$A_6 = b = 14.0000$ in
 $B_6 = t = 0.6250$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.7500$ in

$C_6 = \text{gap} = 0.0000$ in



Member L121-L122

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg		7.5000	30.4375	228.2813	0.2441	13.9721	1464.1485	1464.3926
	Vertical Leg		9.2188	26.4375	243.7207	41.7845	9.9721	916.7395	958.5240
2	Horizontal Leg		7.5000	1.0625	7.9688	0.2441	15.4029	1779.3682	1779.6123
	Vertical Leg		9.2188	5.0625	46.6699	41.7845	11.4029	1198.6768	1240.4612
3	Plate		52.5000	15.7500	826.8750	3937.5000	0.7154	26.8688	3964.3688
4	Plate		13.7500	31.0625	427.1094	0.4476	14.5971	2929.7889	2930.2364
5	Perforated Plate		7.8750	0.3750	2.9531	0.3691	16.0904	2038.8432	2039.2123
6	Side Plates		17.5000	15.7500	275.6250	285.8333	0.7154	8.9563	294.7896
Total			125.06		2059.20	4308.21		10363.39	14671.60
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.4654 in	$S_{top} = 984.04 \text{ in}^3$			y-bar = 16.4654 in	$S_{top} = 984.04 \text{ in}^3$		
$I_x = 14671.60 \text{ in}^4$	$S_{bott.} = 891.06 \text{ in}^3$			$I_x = 14671.60 \text{ in}^4$	$S_{bott.} = 891.06 \text{ in}^3$		
$C_{top} = 14.9096 \text{ in}$	$A = 125.0625 \text{ in}^2$			$C_{top} = 14.9096 \text{ in}$	$A = 125.0625 \text{ in}^2$		
$C_{bottom} = 16.4654 \text{ in}$	$r_x = 10.8312 \text{ in}$			$C_{bottom} = 16.4654 \text{ in}$	$r_x = 10.8312 \text{ in}$		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I_o	d	Ad^2	$I_{y,gross}$	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.7500	3.8750	14.5313	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.1875	5.4736	0.1500	10.6875	526.4951	526.6451	
1 (Right)	Horizontal Leg	3.7500	19.8750	74.5313	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	22.5625	103.9990	0.1500	10.6875	526.4951	526.6451	
2 (Left)	Horizontal Leg	3.7500	3.8750	14.5313	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.1875	5.4736	0.1500	10.6875	526.4951	526.6451	
2 (Right)	Horizontal Leg	3.7500	19.8750	74.5313	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	22.5625	103.9990	0.1500	10.6875	526.4951	526.6451	
3 (Left)	Plate	26.2500	0.4375	11.4844	1.6748	11.4375	3433.9307	3435.6055	
3 (Right)	Plate	26.2500	23.3125	611.9531	1.6748	11.4375	3433.9307	3435.6055	
4	Plate	13.7500	11.8750	163.2813	554.5833	0.0000	0.0000	554.5833	
5 (Left)	Perforated Plate	3.9375	3.5000	13.7813	9.0439	8.3750	276.1787	285.2227	
5 (Right)	Perforated Plate	3.9375	20.2500	79.7344	9.0439	8.3750	276.1787	285.2227	
6 (Left)	Plate	8.7500	1.1875	10.3906	0.2848	10.6875	999.4482	999.7331	
6 (Right)	Plate	8.7500	22.5625	197.4219	0.2848	10.6875	999.4482	999.7331	
Total		125.06		1485.12	622.19		12485.10	13107.29	
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 11.8750 in	$S_{right} = 1103.77 \text{ in}^3$			x-bar = 11.8750 in	$S_{right} = 1103.77 \text{ in}^3$		
$I_y = 13107.29 \text{ in}^4$	$S_{left} = 1103.77 \text{ in}^3$			$I_y = 13107.29 \text{ in}^4$	$S_{left} = 1103.77 \text{ in}^3$		
$C_{right} = 11.8750 \text{ in}$	$A = 125.0625 \text{ in}^2$			$C_{right} = 11.8750 \text{ in}$	$A = 125.0625 \text{ in}^2$		
$C_{left} = 11.8750 \text{ in}$	$r_y = 10.2375 \text{ in}$			$C_{left} = 11.8750 \text{ in}$	$r_y = 10.2375 \text{ in}$		



Made By KMW
Checked By ADK

Date 2/2/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

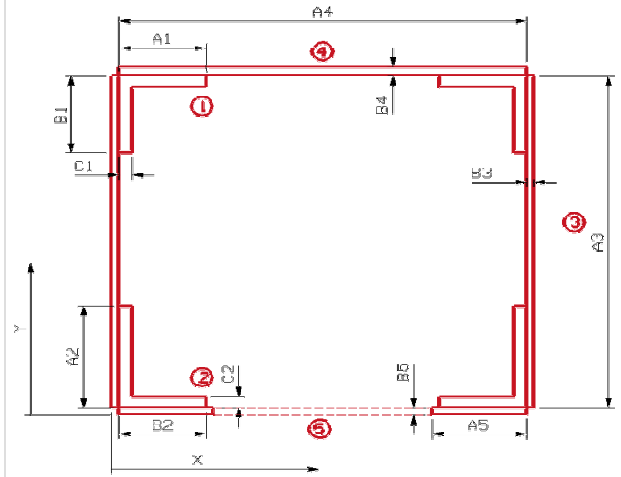
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.4375$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_f = 0.4375$ in

Top Cover Plate:
 $A_4 = b = 22.0000$ in
 $B_4 = t = 0.3750$ in

Web Plate:
 $A_3 = b = 30.0000$ in
 $B_3 = t = 0.8750$ in

Perforated Cover Plate
 $A_5 = b = 5.2500$ in
 $B_5 = t = 0.5000$ in



Member L122-L123

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.2500	30.2813	158.9766	0.0837	14.2772	1070.1455	1070.2293
	Vertical Leg	6.6172	26.2813	173.9080	31.5372	10.2772	698.9072	730.4444
2	Horizontal Leg	5.2500	0.7188	3.7734	0.0837	15.2853	1226.6188	1226.7026
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	11.2853	842.7580	874.2952
3	Plate	52.5000	15.5000	813.7500	3937.5000	0.5041	13.3407	3950.8407
4	Plate	8.2500	30.6875	253.1719	0.0967	14.6834	1778.7204	1778.8171
5	Perforated Plate	5.2500	0.2500	1.3125	0.1094	15.7541	1303.0049	1303.1143
Total		89.73		1436.12	4000.95		6933.50	10934.44
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	4.0000	0.0625	-0.2500	30.8438	-7.7109	-0.0001	14.8811	-55.3619
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.25	-7.71	0.00		-55.36	-55.36



Made By KMW
Checked By ADK

Date 2/2/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.0041 in	S _{top} =	735.29 in ³	y-bar =	15.9626 in	S _{top} =	729.53 in ³
I _x =	10934.44 in ⁴	S _{bott.} =	683.23 in ³	I _x =	10879.08 in ⁴	S _{bott.} =	681.53 in ³
C _{top} =	14.8709 in	A =	89.7344 in ²	C _{top} =	14.9124 in	A =	89.4844 in ²
C _{bottom} =	16.0041 in	r _x =	11.0387 in	C _{bottom} =	15.9626 in	r _x =	11.0261 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.8750	10.1719	7.8750	8.0000	168.0000	175.8750	
	Vertical Leg	3.3086	1.0938	3.6188	0.0528	10.7813	384.5756	384.6283	
1 (Right)	Horizontal Leg	2.6250	19.8750	52.1719	7.8750	8.0000	168.0000	175.8750	
	Vertical Leg	3.3086	22.6563	74.9603	0.0528	10.7813	384.5756	384.6283	
2 (Left)	Horizontal Leg	2.6250	3.8750	10.1719	7.8750	8.0000	168.0000	175.8750	
	Vertical Leg	3.3086	1.0938	3.6188	0.0528	10.7813	384.5756	384.6283	
2 (Right)	Horizontal Leg	2.6250	19.8750	52.1719	7.8750	8.0000	168.0000	175.8750	
	Vertical Leg	3.3086	22.6563	74.9603	0.0528	10.7813	384.5756	384.6283	
3 (Left)	Plate	26.2500	0.4375	11.4844	1.6748	11.4375	3433.9307	3435.6055	
3 (Right)	Plate	26.2500	23.3125	611.9531	1.6748	11.4375	3433.9307	3435.6055	
4	Plate	8.2500	11.8750	97.9688	332.7500	0.0000	0.0000	332.7500	
5 (Left)	Perforated Plate	2.6250	3.5000	9.1875	6.0293	8.3750	184.1191	190.1484	
5 (Right)	Perforated Plate	2.6250	20.2500	53.1563	6.0293	8.3750	184.1191	190.1484	
Total		89.73		1065.60	379.87		9446.40	9826.27	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0625	4.0000	-0.2500	2.8750	-0.7188	-0.3333	9.0251	-20.3633	-20.6966
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.25		-0.72	-0.33		-20.36	-20.70

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	11.8750 in	S _{right} =	827.48 in ³	x-bar =	11.9001 in	S _{right} =	827.48 in ³
I _y =	9826.27 in ⁴	S _{left} =	827.48 in ³	I _y =	9805.57 in ⁴	S _{left} =	823.99 in ³
C _{right} =	11.8750 in	A =	89.7344 in ²	C _{right} =	11.8499 in	A =	89.4844 in ²
C _{left} =	11.8750 in	r _y =	10.4644 in	C _{left} =	11.9001 in	r _y =	10.4680 in



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.4375$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.4375$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 30.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member L123-L124

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.5000	30.2813	105.9844	0.0558	14.0455	690.4667	690.5225
	Vertical Leg	6.6172	26.2813	173.9080	31.5372	10.0455	667.7547	699.2919
2	Horizontal Leg	3.5000	0.7188	2.5156	0.0558	15.5170	842.7200	842.7758
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	11.5170	877.7116	909.2488
3	Plate	22.5000	15.5000	348.7500	1687.5000	0.7357	12.1797	1699.6797
4	Plate	8.8125	30.6875	270.4336	0.1033	14.4518	1840.5189	1840.6222
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	15.9857	1533.2643	1533.3893
Total		57.55		934.32	1750.91		6464.62	8215.53
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By CTG
Checked By NRF

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.2357 in	S _{top} =	561.20 in ³	y-bar =	16.2357 in	S _{top} =	561.20 in ³
I _x =	8215.53 in ⁴	S _{bott.} =	506.01 in ³	I _x =	8215.53 in ⁴	S _{bott.} =	506.01 in ³
C _{top} =	14.6393 in	A =	57.5469 in ²	C _{top} =	14.6393 in	A =	57.5469 in ²
C _{bottom} =	16.2357 in	r _x =	11.9483 in	C _{bottom} =	16.2357 in	r _x =	11.9483 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.7500	2.3750	4.1563	2.3333	9.7500	166.3594	168.6927	
	Vertical Leg	3.3086	0.5938	1.9645	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	1.7500	21.8750	38.2813	2.3333	9.7500	166.3594	168.6927	
	Vertical Leg	3.3086	23.6563	78.2689	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	1.7500	2.3750	4.1563	2.3333	9.7500	166.3594	168.6927	
	Vertical Leg	3.3086	0.5938	1.9645	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	1.7500	21.8750	38.2813	2.3333	9.7500	166.3594	168.6927	
	Vertical Leg	3.3086	23.6563	78.2689	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	11.2500	0.1875	2.1094	0.1318	11.9375	1603.1689	1603.3008	
3 (Right)	Plate	11.2500	24.0625	270.7031	0.1318	11.9375	1603.1689	1603.3008	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.3750	10.1250	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.8750	62.6250	9.0000	8.7500	229.6875	238.6875	
Total		57.55		697.76	433.37		6090.92	6524.29	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	538.09 in ³	x-bar =	12.1250 in	S _{right} =	538.09 in ³
I _y =	6524.29 in ⁴	S _{left} =	538.09 in ³	I _y =	6524.29 in ⁴	S _{left} =	538.09 in ³
C _{right} =	12.1250 in	A =	57.5469 in ²	C _{right} =	12.1250 in	A =	57.5469 in ²
C _{left} =	12.1250 in	r _y =	10.6477 in	C _{left} =	12.1250 in	r _y =	10.6477 in

South Truss

Member L124-L125



Made By KMW
Checked By ADK

Date 2/2/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:
 $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:
 $A_3 = b = 30.0000$ in
 $B_3 = t = 0.5000$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L124-L125

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	30.2188	75.5469	0.0203	13.6062	462.8183	462.8387
	Vertical Leg	2.3047	28.2188	65.0354	2.6115	11.6062	310.4477	313.0592
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	16.0813	646.5245	646.5449
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	14.0813	456.9836	459.5951
3	Plate	30.0000	15.3750	461.2500	2250.0000	1.2376	45.9496	2295.9496
4	Plate	8.8125	30.5625	269.3320	0.1033	13.9499	1714.9100	1715.0133
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	16.4251	1214.0275	1214.0803
Total		52.92		879.17	2255.42		4851.66	7107.08
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.1250	3.6875	-0.4609	2.5313	-1.1667	-0.5223	15.5420	-111.3416
2	0.1250	3.6875	-0.4609	2.5313	-1.1667	-0.5223	15.5420	-111.3416
3	3.6875	0.3125	-1.1523	0.5313	-0.6122	-0.0094	17.5420	-354.6025
4	3.6875	0.3125	-1.1523	0.5313	-0.6122	-0.0094	17.5420	-354.6025
5	0.1250	11.0000	-1.3750	9.8750	-13.5781	-13.8646	8.1983	-92.4162
6	0.1250	11.0000	-1.3750	9.8750	-13.5781	-13.8646	8.1983	-92.4162
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-5.98	-30.71	-28.79		-1116.72	-1145.51



Made By KMW
Checked By ADK

Date 2/2/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.6126 in	S _{top} =	502.71 in ³	y-bar =	18.0733 in	S _{top} =	470.28 in ³
I _x =	7107.08 in ⁴	S _{bott.} =	427.81 in ³	I _x =	5961.57 in ⁴	S _{bott.} =	329.86 in ³
C _{top} =	14.1374 in	A =	52.9219 in ²	C _{top} =	12.6767 in	A =	46.9453 in ²
C _{bottom} =	16.6126 in	r _x =	11.5885 in	C _{bottom} =	18.0733 in	r _x =	11.2690 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.5000	3.1250	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.6563	0.7562	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	22.0000	27.5000	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.8438	27.4762	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.5000	3.1250	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.6563	0.7562	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	22.0000	27.5000	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.8438	27.4762	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	15.0000	0.2500	3.7500	0.3125	12.0000	2160.0000	2160.3125	
3 (Right)	Plate	15.0000	24.2500	363.7500	0.3125	12.0000	2160.0000	2160.3125	
4	Plate	8.8125	12.2500	107.9531	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.5000	7.8750	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	21.0000	47.2500	6.7500	8.7500	172.2656	179.0156	
Total		52.92		648.29	426.39		5759.41	6185.80	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	3.6875	0.1250	-0.4609	0.7500	-0.3457	-0.0006	11.5000	-60.9590	-60.9596
2	3.6875	0.1250	-0.4609	23.7500	-10.9473	-0.0006	11.5000	-60.9590	-60.9596
3	0.3125	3.6875	-1.1523	2.6563	-3.0609	-1.3058	9.5938	-106.0618	-107.3675
4	0.3125	3.6875	-1.1523	21.8438	-25.1715	-1.3058	9.5938	-106.0618	-107.3675
5	11.0000	0.1250	-1.3750	0.4375	-0.6016	-0.0018	11.8125	-191.8608	-191.8626
6	11.0000	0.1250	-1.3750	24.0625	-33.0859	-0.0018	11.8125	-191.8608	-191.8626
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-5.98		-73.21	-2.62		-717.76	-720.38

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2500 in	S _{right} =	504.96 in ³	x-bar =	12.2500 in	S _{right} =	446.16 in ³
I _y =	6185.80 in ⁴	S _{left} =	504.96 in ³	I _y =	5465.42 in ⁴	S _{left} =	446.16 in ³
C _{right} =	12.2500 in	A =	52.9219 in ²	C _{right} =	12.2500 in	A =	46.9453 in ²
C _{left} =	12.2500 in	r _y =	10.8114 in	C _{left} =	12.2500 in	r _y =	10.7899 in

South Truss

Member L125-L126 (2)



Made By KMW
Checked By ADK

Date 2/2/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_f = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3125$ in

Top Cover Plate:

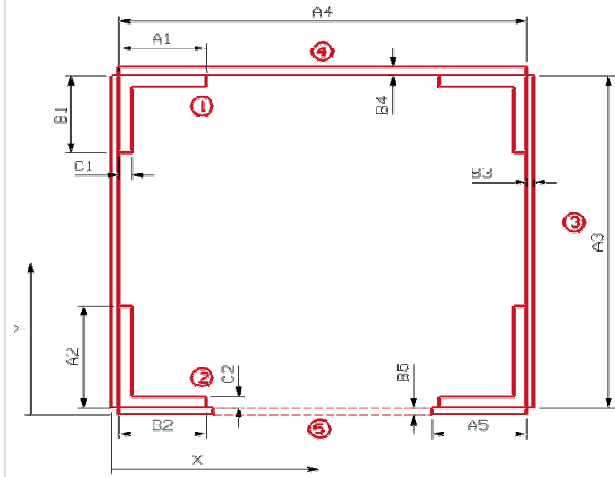
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate:

$A_3 = b = 30.0000$ in
 $B_3 = t = 0.5000$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member L125-L126

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	2.5000	30.2188	75.5469	0.0203	13.6062	462.8183	462.8387	
	Vertical Leg	2.3047	28.2188	65.0354	2.6115	11.6062	310.4477	313.0592	
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	16.0813	646.5245	646.5449	
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	14.0813	456.9836	459.5951	
3	Plate	30.0000	15.3750	461.2500	2250.0000	1.2376	45.9496	2295.9496	
4	Plate	8.8125	30.5625	269.3320	0.1033	13.9499	1714.9100	1715.0133	
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	16.4251	1214.0275	1214.0803	
Total		52.92		879.17	2255.42		4851.66	7107.08	
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)	
1	0.0625	30.0000	-1.8750	15.3750	-28.8281	-140.6250	1.4071	-3.7124	-144.3374
2	0.1250	6.0000	-0.7500	15.3750	-11.5313	-2.2500	1.4071	-1.4849	-3.7349
3	0.1250	30.0000	-3.7500	15.3750	-57.6563	-281.2500	1.4071	-7.4247	-288.6747
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-6.38	-98.02	-424.13		-12.62	-436.75	



Made By KMW
Checked By ADK

Date 2/2/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.6126 in	S _{top} =	502.71 in ³	y-bar =	16.7821 in	S _{top} =	477.55 in ³
I _x =	7107.08 in ⁴	S _{bott.} =	427.81 in ³	I _x =	6670.33 in ⁴	S _{bott.} =	397.47 in ³
C _{top} =	14.1374 in	A =	52.9219 in ²	C _{top} =	13.9679 in	A =	46.5469 in ²
C _{bottom} =	16.6126 in	r _x =	11.5885 in	C _{bottom} =	16.7821 in	r _x =	11.9709 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.5000	3.1250	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.6563	0.7562	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	22.0000	27.5000	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.8438	27.4762	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.5000	3.1250	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.6563	0.7562	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	22.0000	27.5000	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.8438	27.4762	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	15.0000	0.2500	3.7500	0.3125	12.0000	2160.0000	2160.3125	
3 (Right)	Plate	15.0000	24.2500	363.7500	0.3125	12.0000	2160.0000	2160.3125	
4	Plate	8.8125	12.2500	107.9531	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.5000	7.8750	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	21.0000	47.2500	6.7500	8.7500	172.2656	179.0156	
Total		52.92		648.29	426.39		5759.41	6185.80	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	30.0000	0.0625	-1.8750	0.0313	-0.0586	-0.0006	11.9244	-266.6105	-266.6111
2	6.0000	0.1250	-0.7500	0.1250	-0.0938	-0.0010	11.8307	-104.9739	-104.9749
3	30.0000	0.1250	-3.7500	24.4375	-91.6406	-0.0049	12.4818	-584.2334	-584.2383
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-6.38		-91.79	-0.01		-955.82	-955.82

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2500 in	S _{right} =	504.96 in ³	x-bar =	11.9557 in	S _{right} =	416.92 in ³
I _y =	6185.80 in ⁴	S _{left} =	504.96 in ³	I _y =	5229.98 in ⁴	S _{left} =	437.45 in ³
C _{right} =	12.2500 in	A =	52.9219 in ²	C _{right} =	12.5443 in	A =	46.5469 in ²
C _{left} =	12.2500 in	r _y =	10.8114 in	C _{left} =	11.9557 in	r _y =	10.6000 in



Made By CTG
Checked By NRF

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam WF14x 95

- $A_1 = t_w = 0.4650$ in
- $A_2 = t_f = 0.7480$ in
- $B_1 = d = 14.1200$ in
- $B_2 = b_f = 14.5450$ in



Member L127-L128

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x, gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		5.8702	7.2725	42.6907	0.1058	0.0000	0.0000	0.1058
2	Flange Plates		21.7593	7.2725	158.2447	383.6114	0.0000	0.0000	383.6114
Total			27.63		200.94	383.72		0.00	383.72
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	7.2725	in	$S_{top} = 52.76$ in ³	y-bar =	7.2725	in	$S_{top} = 52.76$ in ³
$I_x =$	383.72	in ⁴	$S_{bott.} = 52.76$ in ³	$I_x =$	383.72	in ⁴	$S_{bott.} = 52.76$ in ³
$c_{top} =$	7.2725	in	$A = 27.6295$ in ²	$c_{top} =$	7.2725	in	$A = 27.6295$ in ²
$c_{bottom} =$	7.2725	in	$r_x = 3.7267$ in	$c_{bottom} =$	7.2725	in	$r_x = 3.7267$ in



Made By CTG
Checked By NRF

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		5.8702	7.0600	41.4433	77.9584	0.0000	0.0000	77.9584
2	Left Flange		10.8797	0.3740	4.0690	0.5073	6.6860	486.3490	486.8563
	Right Flange		10.8797	13.7460	149.5518	0.5073	6.6860	486.3490	486.8563
Total			27.63		195.06	78.97		972.70	1051.67
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	7.0600	in	S _{right} =	148.96	in ³	x-bar =	7.0600	in	S _{right} =	148.96	in ³
I _y =	1051.67	in ⁴	S _{left} =	148.96	in ³	I _y =	1051.67	in ⁴	S _{left} =	148.96	in ³
C _{right} =	7.0600	in	A =	27.6295	in ²	C _{right} =	7.0600	in	A =	27.6295	in ²
C _{left} =	7.0600	in	r _y =	6.1696	in	C _{left} =	7.0600	in	r _y =	6.1696	in



Made By CTG
Checked By NRF

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam WF14x 95

- $A_1 = t_w = 0.4650$ in
- $A_2 = t_f = 0.7480$ in
- $B_1 = d = 14.1200$ in
- $B_2 = b_f = 14.5450$ in



Member L128-L129

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x, gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		5.8702	7.2725	42.6907	0.1058	0.0000	0.0000	0.1058
2	Flange Plates		21.7593	7.2725	158.2447	383.6114	0.0000	0.0000	383.6114
Total			27.63		200.94	383.72		0.00	383.72
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.2725	in	$S_{top} =$	52.76	in ³	y-bar =	7.2725	in	$S_{top} =$	52.76	in ³
$I_x =$	383.72	in ⁴	$S_{bott.} =$	52.76	in ³	$I_x =$	383.72	in ⁴	$S_{bott.} =$	52.76	in ³
$c_{top} =$	7.2725	in	A =	27.6295	in ²	$c_{top} =$	7.2725	in	A =	27.6295	in ²
$c_{bottom} =$	7.2725	in	$r_x =$	3.7267	in	$c_{bottom} =$	7.2725	in	$r_x =$	3.7267	in



Made By CTG
Checked By NRF

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		5.8702	7.0600	41.4433	77.9584	0.0000	0.0000	77.9584
2	Left Flange		10.8797	0.3740	4.0690	0.5073	6.6860	486.3490	486.8563
	Right Flange		10.8797	13.7460	149.5518	0.5073	6.6860	486.3490	486.8563
Total			27.63		195.06	78.97		972.70	1051.67
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	7.0600	in	S _{right} =	148.96	in ³	x-bar =	7.0600	in	S _{right} =	148.96	in ³
I _y =	1051.67	in ⁴	S _{left} =	148.96	in ³	I _y =	1051.67	in ⁴	S _{left} =	148.96	in ³
C _{right} =	7.0600	in	A =	27.6295	in ²	C _{right} =	7.0600	in	A =	27.6295	in ²
C _{left} =	7.0600	in	r _y =	6.1696	in	C _{left} =	7.0600	in	r _y =	6.1696	in



Made By CTG
Checked By NRF

Date 1/20/2012
Date 1/25/2012

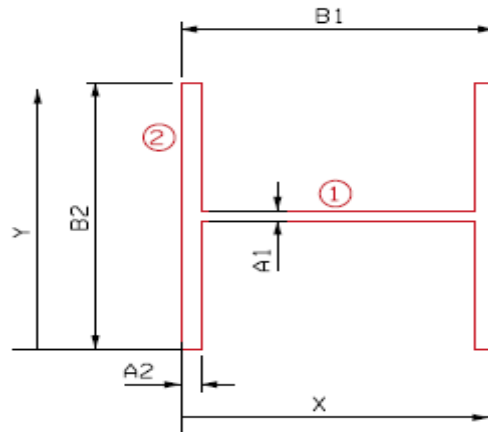
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam WF14x 211

- $A_1 = t_w = 0.9800$ in
- $A_2 = t_f = 1.5630$ in
- $B_1 = d = 15.7500$ in
- $B_2 = b_f = 15.8000$ in



Member L129-L130

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		12.3715	7.9000	97.7350	0.9901	0.0000	0.0000	0.9901
2	Flange Plates		49.3908	7.9000	390.1873	1027.4933	0.0000	0.0000	1027.4933
Total			61.76		487.92	1028.48		0.00	1028.48
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	7.9000	in	$S_{top} = 130.19$ in ³	y-bar =	7.9000	in	$S_{top} = 130.19$ in ³
$I_x =$	1028.48	in ⁴	$S_{bott.} = 130.19$ in ³	$I_x =$	1028.48	in ⁴	$S_{bott.} = 130.19$ in ³
$c_{top} =$	7.9000	in	A = 61.7623 in ²	$c_{top} =$	7.9000	in	A = 61.7623 in ²
$c_{bottom} =$	7.9000	in	$r_x = 4.0807$ in	$c_{bottom} =$	7.9000	in	$r_x = 4.0807$ in



Made By CTG
Checked By NRF

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.3715	7.8750	97.4257	164.2993	0.0000	0.0000	164.2993
2	Left Flange		24.6954	0.7815	19.2995	5.0275	7.0935	1242.6168	1247.6443
	Right Flange		24.6954	14.9685	369.6531	5.0275	7.0935	1242.6168	1247.6443
Total			61.76		486.38	174.35		2485.23	2659.59
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	7.8750	in	S _{right} =	337.73	in ³	x-bar =	7.8750	in	S _{right} =	337.73	in ³
I _y =	2659.59	in ⁴	S _{left} =	337.73	in ³	I _y =	2659.59	in ⁴	S _{left} =	337.73	in ³
C _{right} =	7.8750	in	A =	61.7623	in ²	C _{right} =	7.8750	in	A =	61.7623	in ²
C _{left} =	7.8750	in	r _y =	6.5621	in	C _{left} =	7.8750	in	r _y =	6.5621	in



Made By CTG
Checked By NRF

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam WF14x 211

- $A_1 = t_w = 0.9800$ in
- $A_2 = t_f = 1.5630$ in
- $B_1 = d = 15.7500$ in
- $B_2 = b_f = 15.8000$ in



Member L130-L131

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		12.3715	7.9000	97.7350	0.9901	0.0000	0.0000	0.9901
2	Flange Plates		49.3908	7.9000	390.1873	1027.4933	0.0000	0.0000	1027.4933
Total			61.76		487.92	1028.48		0.00	1028.48
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	7.9000	in	$S_{top} = 130.19$ in ³	y-bar =	7.9000	in	$S_{top} = 130.19$ in ³
$I_x =$	1028.48	in ⁴	$S_{bott.} = 130.19$ in ³	$I_x =$	1028.48	in ⁴	$S_{bott.} = 130.19$ in ³
$c_{top} =$	7.9000	in	A = 61.7623 in ²	$c_{top} =$	7.9000	in	A = 61.7623 in ²
$c_{bottom} =$	7.9000	in	$r_x = 4.0807$ in	$c_{bottom} =$	7.9000	in	$r_x = 4.0807$ in



Made By CTG
Checked By NRF

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.3715	7.8750	97.4257	164.2993	0.0000	0.0000	164.2993
2	Left Flange		24.6954	0.7815	19.2995	5.0275	7.0935	1242.6168	1247.6443
	Right Flange		24.6954	14.9685	369.6531	5.0275	7.0935	1242.6168	1247.6443
Total			61.76		486.38	174.35		2485.23	2659.59
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	7.8750	in	S _{right} =	337.73	in ³	x-bar =	7.8750	in	S _{right} =	337.73	in ³
I _y =	2659.59	in ⁴	S _{left} =	337.73	in ³	I _y =	2659.59	in ⁴	S _{left} =	337.73	in ³
C _{right} =	7.8750	in	A =	61.7623	in ²	C _{right} =	7.8750	in	A =	61.7623	in ²
C _{left} =	7.8750	in	r _y =	6.5621	in	C _{left} =	7.8750	in	r _y =	6.5621	in



Made By CTG
Checked By NRF

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam WF14x 211

- $A_1 = t_w = 0.9800$ in
- $A_2 = t_f = 1.5630$ in
- $B_1 = d = 15.7500$ in
- $B_2 = b_f = 15.8000$ in



Member L131-L132

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		12.3715	7.9000	97.7350	0.9901	0.0000	0.0000	0.9901
2	Flange Plates		49.3908	7.9000	390.1873	1027.4933	0.0000	0.0000	1027.4933
Total			61.76		487.92	1028.48		0.00	1028.48
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	7.9000	in	S _{top} = 130.19 in ³	y-bar =	7.9000	in	S _{top} = 130.19 in ³
I _x =	1028.48	in ⁴	S _{bott.} = 130.19 in ³	I _x =	1028.48	in ⁴	S _{bott.} = 130.19 in ³
c _{top} =	7.9000	in	A = 61.7623 in ²	c _{top} =	7.9000	in	A = 61.7623 in ²
c _{bottom} =	7.9000	in	r _x = 4.0807 in	c _{bottom} =	7.9000	in	r _x = 4.0807 in



Made By CTG
Checked By NRF

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.3715	7.8750	97.4257	164.2993	0.0000	0.0000	164.2993
2	Left Flange		24.6954	0.7815	19.2995	5.0275	7.0935	1242.6168	1247.6443
	Right Flange		24.6954	14.9685	369.6531	5.0275	7.0935	1242.6168	1247.6443
Total			61.76		486.38	174.35		2485.23	2659.59
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	7.8750	in	S _{right} =	337.73	in ³	x-bar =	7.8750	in	S _{right} =	337.73	in ³
I _y =	2659.59	in ⁴	S _{left} =	337.73	in ³	I _y =	2659.59	in ⁴	S _{left} =	337.73	in ³
C _{right} =	7.8750	in	A =	61.7623	in ²	C _{right} =	7.8750	in	A =	61.7623	in ²
C _{left} =	7.8750	in	r _y =	6.5621	in	C _{left} =	7.8750	in	r _y =	6.5621	in



Made By CTG
Checked By NRF

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam WF14x 211

- $A_1 = t_w = 0.9800$ in
- $A_2 = t_f = 1.5630$ in
- $B_1 = d = 15.7500$ in
- $B_2 = b_f = 15.8000$ in



Member L132-L133

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		12.3715	7.9000	97.7350	0.9901	0.0000	0.0000	0.9901
2	Flange Plates		49.3908	7.9000	390.1873	1027.4933	0.0000	0.0000	1027.4933
Total			61.76		487.92	1028.48		0.00	1028.48
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	7.9000	in	S _{top} = 130.19 in ³	y-bar =	7.9000	in	S _{top} = 130.19 in ³
I _x =	1028.48	in ⁴	S _{bott.} = 130.19 in ³	I _x =	1028.48	in ⁴	S _{bott.} = 130.19 in ³
c _{top} =	7.9000	in	A = 61.7623 in ²	c _{top} =	7.9000	in	A = 61.7623 in ²
c _{bottom} =	7.9000	in	r _x = 4.0807 in	c _{bottom} =	7.9000	in	r _x = 4.0807 in



Made By CTG
Checked By NRF

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.3715	7.8750	97.4257	164.2993	0.0000	0.0000	164.2993
2	Left Flange		24.6954	0.7815	19.2995	5.0275	7.0935	1242.6168	1247.6443
	Right Flange		24.6954	14.9685	369.6531	5.0275	7.0935	1242.6168	1247.6443
Total			61.76		486.38	174.35		2485.23	2659.59
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	7.8750	in	S _{right} =	337.73	in ³	x-bar =	7.8750	in	S _{right} =	337.73	in ³
I _y =	2659.59	in ⁴	S _{left} =	337.73	in ³	I _y =	2659.59	in ⁴	S _{left} =	337.73	in ³
C _{right} =	7.8750	in	A =	61.7623	in ²	C _{right} =	7.8750	in	A =	61.7623	in ²
C _{left} =	7.8750	in	r _y =	6.5621	in	C _{left} =	7.8750	in	r _y =	6.5621	in



Made By CTG
Checked By NRF

Date 1/20/2012
Date 1/25/2012

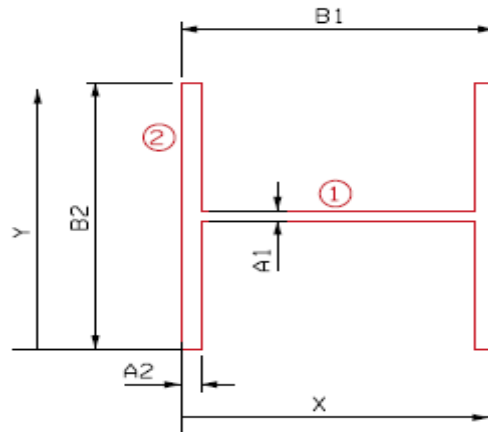
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam WF14x 87

- $A_1 = t_w = 0.4200$ in
- $A_2 = t_f = 0.6880$ in
- $B_1 = d = 14.0000$ in
- $B_2 = b_f = 14.5000$ in



Member L133-L134

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x, gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		5.3021	7.2500	38.4401	0.0779	0.0000	0.0000	0.0779
2	Flange Plates		19.9520	7.2500	144.6520	349.5757	0.0000	0.0000	349.5757
Total			25.25		183.09	349.65		0.00	349.65
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	7.2500	in	$S_{top} = 48.23$	in ³	y-bar =	7.2500	in	$S_{top} = 48.23$	in ³		
$I_x =$	349.65	in ⁴	$S_{bott.} = 48.23$	in ³	$I_x =$	349.65	in ⁴	$S_{bott.} = 48.23$	in ³		
$c_{top} =$	7.2500	in	A =	25.2541	in ²	$c_{top} =$	7.2500	in	A =	25.2541	in ²
$c_{bottom} =$	7.2500	in	$r_x =$	3.7209	in	$c_{bottom} =$	7.2500	in	$r_x =$	3.7209	in



Made By CTG
Checked By NRF

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate	5.3021	7.0000	37.1146	70.4140	0.0000	0.0000	70.4140
2	Left Flange	9.9760	0.3440	3.4317	0.3935	6.6560	441.9601	442.3536
	Right Flange	9.9760	13.6560	136.2323	0.3935	6.6560	441.9601	442.3536
Total		25.25		176.78	71.20		883.92	955.12
Section Losses		A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	7.0000	in	S _{right} = 136.45 in ³	x-bar =	7.0000	in	S _{right} = 136.45 in ³
I _y =	955.12	in ⁴	S _{left} = 136.45 in ³	I _y =	955.12	in ⁴	S _{left} = 136.45 in ³
C _{right} =	7.0000	in	A = 25.2541 in ²	C _{right} =	7.0000	in	A = 25.2541 in ²
C _{left} =	7.0000	in	r _y = 6.1498 in	C _{left} =	7.0000	in	r _y = 6.1498 in



Made By KMW
Checked By ADK

Date 2/2/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam **WF14x 87**

- $A_1 = t_w = 0.4200$ in
- $A_2 = t_f = 0.6880$ in
- $B_1 = d = 14.0000$ in
- $B_2 = b_f = 14.5000$ in



Member L134-L135

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x, gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		5.3021	7.2500	38.4401	0.0779	0.0000	0.0000	0.0779
2	Flange Plates		19.9520	7.2500	144.6520	349.5757	0.0000	0.0000	349.5757
Total			25.25		183.09	349.65		0.00	349.65
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1250	14.5000	-1.8125	7.2500	-13.1406	-31.7565	0.1405	-0.0358	-31.7923
2	0.1250	6.0000	-0.7500	11.5000	-8.6250	-2.2500	4.3905	-14.4572	-16.7072
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.56		-21.77	-34.01		-14.49	-48.50

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	7.2500	in	$S_{top} = 48.23$	in ³	y-bar =	7.1095	in	$S_{top} = 40.75$	in ³		
$I_x =$	349.65	in ⁴	$S_{bott.} = 48.23$	in ³	$I_x =$	301.15	in ⁴	$S_{bott.} = 42.36$	in ³		
$c_{top} =$	7.2500	in	A =	25.2541	in ²	$c_{top} =$	7.3905	in	A =	22.6916	in ²
$c_{bottom} =$	7.2500	in	$r_x =$	3.7209	in	$c_{bottom} =$	7.1095	in	$r_x =$	3.6430	in



Made By KMW
Checked By ADK

Date 2/2/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		5.3021	7.0000	37.1146	70.4140	0.0000	0.0000	70.4140
2	Left Flange		9.9760	0.3440	3.4317	0.3935	6.6560	441.9601	442.3536
	Right Flange		9.9760	13.6560	136.2323	0.3935	6.6560	441.9601	442.3536
Total			25.25		176.78	71.20		883.92	955.12
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	14.5000	0.1250	-1.8125	0.0625	-0.1133	-0.0024	7.2623	-95.5941	-95.5964
2	6.0000	0.1250	-0.7500	13.9375	-10.4531	-0.0010	6.6127	-32.7955	-32.7964
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.56		-10.57	0.00		-128.39	-128.39

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	7.0000	in	S _{right} =	136.45	in ³	x-bar =	7.3248	in	S _{right} =	123.85	in ³
I _y =	955.12	in ⁴	S _{left} =	136.45	in ³	I _y =	826.73	in ⁴	S _{left} =	112.87	in ³
C _{right} =	7.0000	in	A =	25.2541	in ²	C _{right} =	6.6752	in	A =	22.6916	in ²
C _{left} =	7.0000	in	r _y =	6.1498	in	C _{left} =	7.3248	in	r _y =	6.0360	in



Made By SFH
Checked By DMP

Date 1/17/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member U0-U1

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x, gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5985	336.3153	336.3356
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5985	212.3354	214.9469
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.0890	496.2470	496.2674
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.0890	336.8139	339.4254
3	Plate	22.7500	13.3750	304.2813	1281.5833	1.2452	35.2750	1316.8583
4	Plate	8.8125	26.5625	234.0820	0.1033	11.9423	1256.8236	1256.9269
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.4327	937.3641	937.4168
Total		45.67		667.73	1287.00		3611.17	4898.18
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/17/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	14.6202	in	S _{top} =	403.81	in ³	y-bar =	14.6202	in	S _{top} =	403.81	in ³
I _x =	4898.18	in ⁴	S _{bott.} =	335.03	in ³	I _x =	4898.18	in ⁴	S _{bott.} =	335.03	in ³
C _{top} =	12.1298	in	A =	45.6719	in ²	C _{top} =	12.1298	in	A =	45.6719	in ²
C _{bottom} =	14.6202	in	r _x =	10.3560	in	C _{bottom} =	14.6202	in	r _x =	10.3560	in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.4375	7.7344	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.9375	47.1094	6.7500	8.7500	172.2656	179.0156	
Total		45.67		556.63	426.13		4698.37	5124.50	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
x-bar =	12.1875	in	S _{right} =	420.47	in ³	x-bar =	12.1875	in	S _{right} =	420.47	in ³
I _y =	5124.50	in ⁴	S _{left} =	420.47	in ³	I _y =	5124.50	in ⁴	S _{left} =	420.47	in ³
C _{right} =	12.1875	in	A =	45.6719	in ²	C _{right} =	12.1875	in	A =	45.6719	in ²
C _{left} =	12.1875	in	r _y =	10.5926	in	C _{left} =	12.1875	in	r _y =	10.5926	in



Made By SFH
Checked By DMP

Date 1/17/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.4375$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.4375$ in

Top Cover Plate:

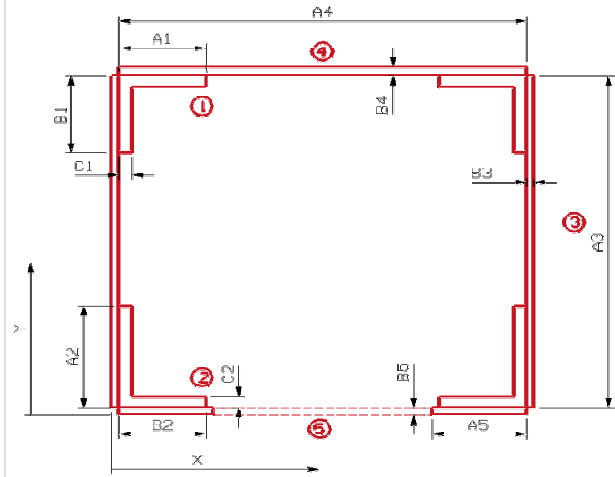
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member U1-U2

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.2500	26.2813	137.9766	0.0837	12.1823	779.1420	779.2258
	Vertical Leg	6.6172	22.2813	147.4392	31.5372	8.1823	443.0190	474.5562
2	Horizontal Leg	5.2500	0.7188	3.7734	0.0837	13.3802	939.9087	939.9924
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	9.3802	582.2363	613.7735
3	Plate	22.7500	13.5000	307.1250	1281.5833	0.5990	8.1618	1289.7452
4	Plate	8.8125	26.6875	235.1836	0.1033	12.5885	1396.5270	1396.6303
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	13.8490	1150.7634	1150.8884
Total		61.30		864.22	1345.05		5299.76	6644.81
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/17/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.0990 in	S _{top} =	520.10 in ³	y-bar =	14.0990 in	S _{top} =	520.10 in ³
I _x =	6644.81 in ⁴	S _{bott.} =	471.30 in ³	I _x =	6644.81 in ⁴	S _{bott.} =	471.30 in ³
C _{top} =	12.7760 in	A =	61.2969 in ²	C _{top} =	12.7760 in	A =	61.2969 in ²
C _{bottom} =	14.0990 in	r _x =	10.4117 in	C _{bottom} =	14.0990 in	r _x =	10.4117 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.4375	9.0234	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	20.9375	54.9609	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.4375	9.0234	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	20.9375	54.9609	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.4375	10.3125	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.9375	62.8125	9.0000	8.7500	229.6875	238.6875	
Total		61.30		747.06	455.63		6282.01	6737.64	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	552.83 in ³	x-bar =	12.1875 in	S _{right} =	552.83 in ³
I _y =	6737.64 in ⁴	S _{left} =	552.83 in ³	I _y =	6737.64 in ⁴	S _{left} =	552.83 in ³
C _{right} =	12.1875 in	A =	61.2969 in ²	C _{right} =	12.1875 in	A =	61.2969 in ²
C _{left} =	12.1875 in	r _y =	10.4842 in	C _{left} =	12.1875 in	r _y =	10.4842 in



Made By SFH
Checked By DMP

Date 1/17/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6250$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6250$ in

Top Cover Plate:

$A_4 = b = 22.0000$ in
 $B_4 = t = 0.5000$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.8750$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.6250$ in



Member U2-U3

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	7.5000	26.3125	197.3438	0.2441	12.0825	1094.8931	1095.1373
	Vertical Leg	9.2188	22.3125	205.6934	41.7845	8.0825	602.2250	644.0094
2	Horizontal Leg	7.5000	0.9375	7.0313	0.2441	13.2925	1325.1879	1325.4320
	Vertical Leg	9.2188	4.9375	45.5176	41.7845	9.2925	796.0517	837.8361
3	Plate	45.5000	13.6250	619.9375	2563.1667	0.6050	16.6565	2579.8232
4	Plate	11.0000	26.8750	295.6250	0.2292	12.6450	1758.8441	1759.0733
5	Perforated Plate	6.5625	0.3125	2.0508	0.2136	13.9175	1271.1433	1271.3569
Total		96.50		1373.20	2647.67		6865.00	9512.67
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/17/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.2300 in	S _{top} =	737.70 in ³	y-bar =	14.2300 in	S _{top} =	737.70 in ³
I _x =	9512.67 in ⁴	S _{bott.} =	668.49 in ³	I _x =	9512.67 in ⁴	S _{bott.} =	668.49 in ³
C _{top} =	12.8950 in	A =	96.5000 in ²	C _{top} =	12.8950 in	A =	96.5000 in ²
C _{bottom} =	14.2300 in	r _x =	9.9286 in	C _{bottom} =	14.2300 in	r _x =	9.9286 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.7500	3.8750	14.5313	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.1875	5.4736	0.1500	10.6875	526.4951	526.6451	
1 (Right)	Horizontal Leg	3.7500	19.8750	74.5313	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	22.5625	103.9990	0.1500	10.6875	526.4951	526.6451	
2 (Left)	Horizontal Leg	3.7500	3.8750	14.5313	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.1875	5.4736	0.1500	10.6875	526.4951	526.6451	
2 (Right)	Horizontal Leg	3.7500	19.8750	74.5313	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	22.5625	103.9990	0.1500	10.6875	526.4951	526.6451	
3 (Left)	Plate	22.7500	0.4375	9.9531	1.4515	11.4375	2976.0732	2977.5247	
3 (Right)	Plate	22.7500	23.3125	530.3594	1.4515	11.4375	2976.0732	2977.5247	
4	Plate	11.0000	11.8750	130.6250	443.6667	0.0000	0.0000	443.6667	
5 (Left)	Perforated Plate	3.2813	3.5000	11.4844	7.5366	8.3750	230.1489	237.6855	
5 (Right)	Perforated Plate	3.2813	20.2500	66.4453	7.5366	8.3750	230.1489	237.6855	
Total		96.50		1145.94	507.24		9478.42	9985.67	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	11.8750 in	S _{right} =	840.90 in ³	x-bar =	11.8750 in	S _{right} =	840.90 in ³
I _y =	9985.67 in ⁴	S _{left} =	840.90 in ³	I _y =	9985.67 in ⁴	S _{left} =	840.90 in ³
C _{right} =	11.8750 in	A =	96.5000 in ²	C _{right} =	11.8750 in	A =	96.5000 in ²
C _{left} =	11.8750 in	r _y =	10.1724 in	C _{left} =	11.8750 in	r _y =	10.1724 in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6250$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6250$ in

Top Cover Plate:

$A_4 = b = 22.0000$ in
 $B_4 = t = 0.5000$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.8750$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.6250$ in



Member U3-U4

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	7.5000	26.3125	197.3438	0.2441	12.0825	1094.8931	1095.1373
	Vertical Leg	9.2188	22.3125	205.6934	41.7845	8.0825	602.2250	644.0094
2	Horizontal Leg	7.5000	0.9375	7.0313	0.2441	13.2925	1325.1879	1325.4320
	Vertical Leg	9.2188	4.9375	45.5176	41.7845	9.2925	796.0517	837.8361
3	Plate	45.5000	13.6250	619.9375	2563.1667	0.6050	16.6565	2579.8232
4	Plate	11.0000	26.8750	295.6250	0.2292	12.6450	1758.8441	1759.0733
5	Perforated Plate	6.5625	0.3125	2.0508	0.2136	13.9175	1271.1433	1271.3569
Total		96.50		1373.20	2647.67		6865.00	9512.67
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.2300 in	S _{top} =	737.70 in ³	y-bar =	14.2300 in	S _{top} =	737.70 in ³
I _x =	9512.67 in ⁴	S _{bott.} =	668.49 in ³	I _x =	9512.67 in ⁴	S _{bott.} =	668.49 in ³
C _{top} =	12.8950 in	A =	96.5000 in ²	C _{top} =	12.8950 in	A =	96.5000 in ²
C _{bottom} =	14.2300 in	r _x =	9.9286 in	C _{bottom} =	14.2300 in	r _x =	9.9286 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.7500	3.8750	14.5313	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.1875	5.4736	0.1500	10.6875	526.4951	526.6451	
1 (Right)	Horizontal Leg	3.7500	19.8750	74.5313	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	22.5625	103.9990	0.1500	10.6875	526.4951	526.6451	
2 (Left)	Horizontal Leg	3.7500	3.8750	14.5313	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.1875	5.4736	0.1500	10.6875	526.4951	526.6451	
2 (Right)	Horizontal Leg	3.7500	19.8750	74.5313	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	22.5625	103.9990	0.1500	10.6875	526.4951	526.6451	
3 (Left)	Plate	22.7500	0.4375	9.9531	1.4515	11.4375	2976.0732	2977.5247	
3 (Right)	Plate	22.7500	23.3125	530.3594	1.4515	11.4375	2976.0732	2977.5247	
4	Plate	11.0000	11.8750	130.6250	443.6667	0.0000	0.0000	443.6667	
5 (Left)	Perforated Plate	3.2813	3.5000	11.4844	7.5366	8.3750	230.1489	237.6855	
5 (Right)	Perforated Plate	3.2813	20.2500	66.4453	7.5366	8.3750	230.1489	237.6855	
Total		96.50		1145.94	507.24		9478.42	9985.67	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	11.8750 in	S _{right} =	840.90 in ³	x-bar =	11.8750 in	S _{right} =	840.90 in ³
I _y =	9985.67 in ⁴	S _{left} =	840.90 in ³	I _y =	9985.67 in ⁴	S _{left} =	840.90 in ³
C _{right} =	11.8750 in	A =	96.5000 in ²	C _{right} =	11.8750 in	A =	96.5000 in ²
C _{left} =	11.8750 in	r _y =	10.1724 in	C _{left} =	11.8750 in	r _y =	10.1724 in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.5000$ in

Top Cover Plate:

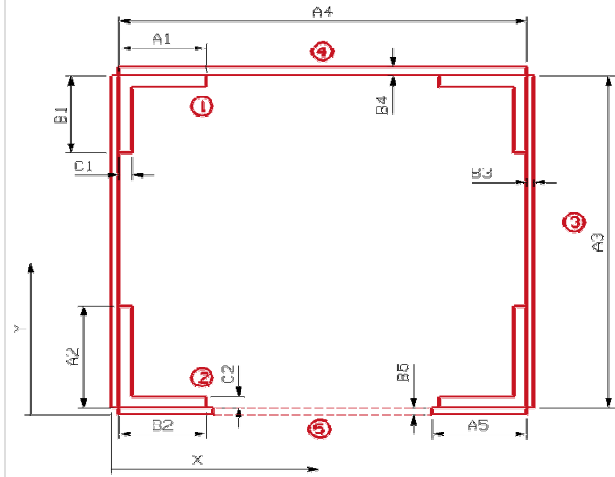
$A_4 = b = 22.0000$ in
 $B_4 = t = 0.4375$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.8125$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.5625$ in



Member U4-U5

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	6.0000	26.3125	157.8750	0.1250	12.1745	889.3168	889.4418
	Vertical Leg	7.5000	22.3125	167.3438	35.1563	8.1745	501.1735	536.3297
2	Horizontal Leg	6.0000	0.8125	4.8750	0.1250	13.3255	1065.4071	1065.5321
	Vertical Leg	7.5000	4.8125	36.0938	35.1563	9.3255	652.2313	687.3876
3	Plate	42.2500	13.5625	573.0156	2380.0833	0.5755	13.9912	2394.0745
4	Plate	9.6250	26.7813	257.7695	0.1535	12.6433	1538.5834	1538.7369
5	Perforated Plate	5.9063	0.2813	1.6611	0.1557	13.8567	1134.0494	1134.2052
Total		84.78		1198.63	2450.96		5794.75	8245.71
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.1380 in	S _{top} =	641.09 in ³	y-bar =	14.1380 in	S _{top} =	641.09 in ³
I _x =	8245.71 in ⁴	S _{bott.} =	583.23 in ³	I _x =	8245.71 in ⁴	S _{bott.} =	583.23 in ³
C _{top} =	12.8620 in	A =	84.7813 in ²	C _{top} =	12.8620 in	A =	84.7813 in ²
C _{bottom} =	14.1380 in	r _x =	9.8620 in	C _{bottom} =	14.1380 in	r _x =	9.8620 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.0000	3.8125	11.4375	9.0000	8.0000	192.0000	201.0000	
	Vertical Leg	3.7500	1.0625	3.9844	0.0781	10.7500	433.3594	433.4375	
1 (Right)	Horizontal Leg	3.0000	19.8125	59.4375	9.0000	8.0000	192.0000	201.0000	
	Vertical Leg	3.7500	22.5625	84.6094	0.0781	10.7500	433.3594	433.4375	
2 (Left)	Horizontal Leg	3.0000	3.8125	11.4375	9.0000	8.0000	192.0000	201.0000	
	Vertical Leg	3.7500	1.0625	3.9844	0.0781	10.7500	433.3594	433.4375	
2 (Right)	Horizontal Leg	3.0000	19.8125	59.4375	9.0000	8.0000	192.0000	201.0000	
	Vertical Leg	3.7500	22.5625	84.6094	0.0781	10.7500	433.3594	433.4375	
3 (Left)	Plate	21.1250	0.4063	8.5820	1.1622	11.4063	2748.4161	2749.5783	
3 (Right)	Plate	21.1250	23.2188	490.4961	1.1622	11.4063	2748.4161	2749.5783	
4	Plate	9.6250	11.8125	113.6953	388.2083	0.0000	0.0000	388.2083	
5 (Left)	Perforated Plate	2.9531	3.4375	10.1514	6.7830	8.3750	207.1340	213.9170	
5 (Right)	Perforated Plate	2.9531	20.1875	59.6162	6.7830	8.3750	207.1340	213.9170	
Total		84.78		1001.48	440.41		8412.54	8852.95	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	11.8125 in	S _{right} =	749.46 in ³	x-bar =	11.8125 in	S _{right} =	749.46 in ³
I _y =	8852.95 in ⁴	S _{left} =	749.46 in ³	I _y =	8852.95 in ⁴	S _{left} =	749.46 in ³
C _{right} =	11.8125 in	A =	84.7813 in ²	C _{right} =	11.8125 in	A =	84.7813 in ²
C _{left} =	11.8125 in	r _y =	10.2187 in	C _{left} =	11.8125 in	r _y =	10.2187 in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.5000$ in

Top Cover Plate:

$A_4 = b = 22.0000$ in
 $B_4 = t = 0.4375$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.8125$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.5625$ in



Member U5-U6

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	6.0000	26.3125	157.8750	0.1250	12.1745	889.3168	889.4418
	Vertical Leg	7.5000	22.3125	167.3438	35.1563	8.1745	501.1735	536.3297
2	Horizontal Leg	6.0000	0.8125	4.8750	0.1250	13.3255	1065.4071	1065.5321
	Vertical Leg	7.5000	4.8125	36.0938	35.1563	9.3255	652.2313	687.3876
3	Plate	42.2500	13.5625	573.0156	2380.0833	0.5755	13.9912	2394.0745
4	Plate	9.6250	26.7813	257.7695	0.1535	12.6433	1538.5834	1538.7369
5	Perforated Plate	5.9063	0.2813	1.6611	0.1557	13.8567	1134.0494	1134.2052
Total		84.78		1198.63	2450.96		5794.75	8245.71
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.1380 in	S _{top} =	641.09 in ³	y-bar =	14.1380 in	S _{top} =	641.09 in ³
I _x =	8245.71 in ⁴	S _{bott.} =	583.23 in ³	I _x =	8245.71 in ⁴	S _{bott.} =	583.23 in ³
C _{top} =	12.8620 in	A =	84.7813 in ²	C _{top} =	12.8620 in	A =	84.7813 in ²
C _{bottom} =	14.1380 in	r _x =	9.8620 in	C _{bottom} =	14.1380 in	r _x =	9.8620 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.0000	3.8125	11.4375	9.0000	8.0000	192.0000	201.0000	
	Vertical Leg	3.7500	1.0625	3.9844	0.0781	10.7500	433.3594	433.4375	
1 (Right)	Horizontal Leg	3.0000	19.8125	59.4375	9.0000	8.0000	192.0000	201.0000	
	Vertical Leg	3.7500	22.5625	84.6094	0.0781	10.7500	433.3594	433.4375	
2 (Left)	Horizontal Leg	3.0000	3.8125	11.4375	9.0000	8.0000	192.0000	201.0000	
	Vertical Leg	3.7500	1.0625	3.9844	0.0781	10.7500	433.3594	433.4375	
2 (Right)	Horizontal Leg	3.0000	19.8125	59.4375	9.0000	8.0000	192.0000	201.0000	
	Vertical Leg	3.7500	22.5625	84.6094	0.0781	10.7500	433.3594	433.4375	
3 (Left)	Plate	21.1250	0.4063	8.5820	1.1622	11.4063	2748.4161	2749.5783	
3 (Right)	Plate	21.1250	23.2188	490.4961	1.1622	11.4063	2748.4161	2749.5783	
4	Plate	9.6250	11.8125	113.6953	388.2083	0.0000	0.0000	388.2083	
5 (Left)	Perforated Plate	2.9531	3.4375	10.1514	6.7830	8.3750	207.1340	213.9170	
5 (Right)	Perforated Plate	2.9531	20.1875	59.6162	6.7830	8.3750	207.1340	213.9170	
Total		84.78		1001.48	440.41		8412.54	8852.95	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	11.8125 in	S _{right} =	749.46 in ³	x-bar =	11.8125 in	S _{right} =	749.46 in ³
I _y =	8852.95 in ⁴	S _{left} =	749.46 in ³	I _y =	8852.95 in ⁴	S _{left} =	749.46 in ³
C _{right} =	11.8125 in	A =	84.7813 in ²	C _{right} =	11.8125 in	A =	84.7813 in ²
C _{left} =	11.8125 in	r _y =	10.2187 in	C _{left} =	11.8125 in	r _y =	10.2187 in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.4375$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.4375$ in

Top Cover Plate:

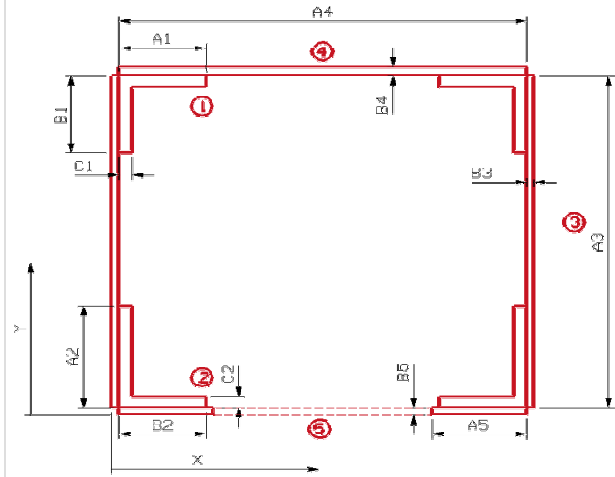
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member U6-U7

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.2500	26.2813	137.9766	0.0837	12.1487	774.8582	774.9420
	Vertical Leg	6.6172	22.2813	147.4392	31.5372	8.1487	439.3950	470.9321
2	Horizontal Leg	5.2500	0.7188	3.7734	0.0837	13.4138	944.6261	944.7098
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	9.4138	586.4069	617.9441
3	Plate	19.5000	13.5000	263.2500	1098.5000	0.6325	7.8012	1106.3012
4	Plate	8.8125	26.6875	235.1836	0.1033	12.5550	1389.0962	1389.1995
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	13.8825	1156.3434	1156.4684
Total		58.05		820.35	1161.97		5298.53	6460.50
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties					
y-bar =	14.1325	in	$S_{top} = 507.00$	in^3	y-bar =	14.1325	in	$S_{top} = 507.00$	in^3
$I_x =$	6460.50	in^4	$S_{bott.} = 457.14$	in^3	$I_x =$	6460.50	in^4	$S_{bott.} = 457.14$	in^3
$C_{top} =$	12.7425	in	$A = 58.0469$	in^2	$C_{top} =$	12.7425	in	$A = 58.0469$	in^2
$C_{bottom} =$	14.1325	in	$r_x = 10.5498$	in	$C_{bottom} =$	14.1325	in	$r_x = 10.5498$	in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I_o	d	Ad^2	$I_{y,gross}$	
Element	Description	(in^2)	(in)	(in^3)	(in^4)	(in)	(in^4)	(in^4)	
1 (Left)	Horizontal Leg	2.6250	3.3750	8.8594	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.5938	1.9645	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	20.8750	54.7969	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.6563	78.2689	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.3750	8.8594	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.5938	1.9645	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	20.8750	54.7969	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.6563	78.2689	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	9.7500	0.1875	1.8281	0.1143	11.9375	1389.4131	1389.5273	
3 (Right)	Plate	9.7500	24.0625	234.6094	0.1143	11.9375	1389.4131	1389.5273	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.3750	10.1250	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.8750	62.6250	9.0000	8.7500	229.6875	238.6875	
Total		58.05		703.82	455.50		5801.88	6257.38	
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y,loss}$
Loss #	b (in)	h (in)	(in^2)	(in)	(in^3)	(in^4)	(in)	(in^4)	(in^4)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties					
x-bar =	12.1250	in	$S_{right} = 516.07$	in^3	x-bar =	12.1250	in	$S_{right} = 516.07$	in^3
$I_y =$	6257.38	in^4	$S_{left} = 516.07$	in^3	$I_y =$	6257.38	in^4	$S_{left} = 516.07$	in^3
$C_{right} =$	12.1250	in	$A = 58.0469$	in^2	$C_{right} =$	12.1250	in	$A = 58.0469$	in^2
$C_{left} =$	12.1250	in	$r_y = 10.3826$	in	$C_{left} =$	12.1250	in	$r_y = 10.3826$	in



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member U7-U8

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5985	336.3153	336.3356
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5985	212.3354	214.9469
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.0890	496.2470	496.2674
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.0890	336.8139	339.4254
3	Plate	22.7500	13.3750	304.2813	1281.5833	1.2452	35.2750	1316.8583
4	Plate	8.8125	26.5625	234.0820	0.1033	11.9423	1256.8236	1256.9269
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.4327	937.3641	937.4168
Total		45.67		667.73	1287.00		3611.17	4898.18
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	14.6202	in	S _{top} =	403.81	in ³	y-bar =	14.6202	in	S _{top} =	403.81	in ³
I _x =	4898.18	in ⁴	S _{bott.} =	335.03	in ³	I _x =	4898.18	in ⁴	S _{bott.} =	335.03	in ³
C _{top} =	12.1298	in	A =	45.6719	in ²	C _{top} =	12.1298	in	A =	45.6719	in ²
C _{bottom} =	14.6202	in	r _x =	10.3560	in	C _{bottom} =	14.6202	in	r _x =	10.3560	in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.4375	7.7344	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.9375	47.1094	6.7500	8.7500	172.2656	179.0156	
Total		45.67		556.63	426.13		4698.37	5124.50	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.1875	in	S _{right} =	420.47	in ³	x-bar =	12.1875	in	S _{right} =	420.47	in ³
I _y =	5124.50	in ⁴	S _{left} =	420.47	in ³	I _y =	5124.50	in ⁴	S _{left} =	420.47	in ³
C _{right} =	12.1875	in	A =	45.6719	in ²	C _{right} =	12.1875	in	A =	45.6719	in ²
C _{left} =	12.1875	in	r _y =	10.5926	in	C _{left} =	12.1875	in	r _y =	10.5926	in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

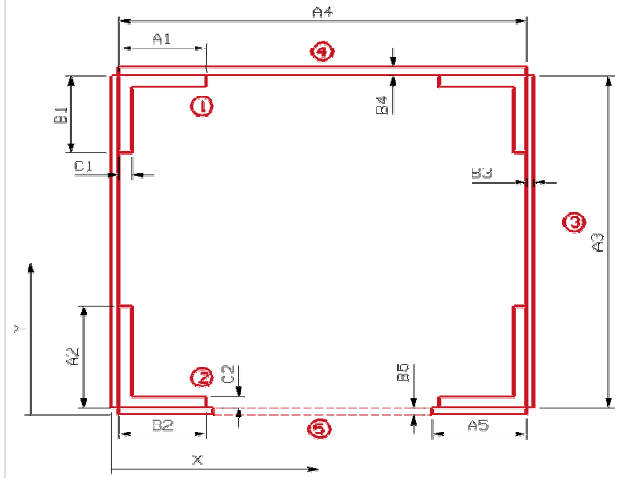
Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:
 $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member U8-U9

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.3438	65.8594	0.0203	12.0654	363.9365	363.9568
	Vertical Leg	2.3047	24.3438	56.1047	2.6115	10.0654	233.4945	236.1060
2	Horizontal Leg	2.5000	0.6563	1.6406	0.0203	13.6221	463.9020	463.9224
	Vertical Leg	2.3047	2.6563	6.1218	2.6115	11.6221	311.3000	313.9115
3	Plate	22.7500	13.5000	307.1250	1281.5833	0.7783	13.7816	1295.3649
4	Plate	8.8125	26.6875	235.1836	0.1033	12.4092	1357.0169	1357.1202
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	14.0283	1180.7627	1180.8877
Total		47.17		673.54	1287.08		3924.19	5211.27
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties					
y-bar =	14.2783	in	$S_{top} = 413.70$	in ³	y-bar =	14.2783	in	$S_{top} = 413.70$	in ³
$I_x =$	5211.27	in ⁴	$S_{bott.} = 364.98$	in ³	$I_x =$	5211.27	in ⁴	$S_{bott.} = 364.98$	in ³
$C_{top} =$	12.5967	in	$A = 47.1719$	in ²	$C_{top} =$	12.5967	in	$A = 47.1719$	in ²
$C_{bottom} =$	14.2783	in	$r_x = 10.5107$	in	$C_{bottom} =$	14.2783	in	$r_x = 10.5107$	in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I_o	d	Ad^2	$I_{y,gross}$	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.4375	10.3125	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.9375	62.8125	9.0000	8.7500	229.6875	238.6875	
Total		47.17		574.91	430.63		4813.22	5243.84	
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties					
x-bar =	12.1875	in	$S_{right} = 430.26$	in ³	x-bar =	12.1875	in	$S_{right} = 430.26$	in ³
$I_y =$	5243.84	in ⁴	$S_{left} = 430.26$	in ³	$I_y =$	5243.84	in ⁴	$S_{left} = 430.26$	in ³
$C_{right} =$	12.1875	in	$A = 47.1719$	in ²	$C_{right} =$	12.1875	in	$A = 47.1719$	in ²
$C_{left} =$	12.1875	in	$r_y = 10.5435$	in	$C_{left} =$	12.1875	in	$r_y = 10.5435$	in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.4375$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.4375$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.6875$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member U9-U10

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.2500	26.2813	137.9766	0.0837	12.2871	792.6055	792.6893
	Vertical Leg	6.6172	22.2813	147.4392	31.5372	8.2871	454.4406	485.9778
2	Horizontal Leg	5.2500	0.7188	3.7734	0.0837	13.2754	925.2422	925.3260
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	9.2754	569.2985	600.8357
3	Plate	35.7500	13.5000	482.6250	2013.9167	0.4942	8.7301	2022.6467
4	Plate	8.8125	26.6875	235.1836	0.1033	12.6933	1419.8769	1419.9801
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	13.7442	1133.4123	1133.5373
Total		74.30		1039.72	2077.39		5303.61	7380.99
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	13.9942 in	S _{top} =	573.02 in ³	y-bar =	13.9942 in	S _{top} =	573.02 in ³
I _x =	7380.99 in ⁴	S _{bottom} =	527.43 in ³	I _x =	7380.99 in ⁴	S _{bottom} =	527.43 in ³
C _{top} =	12.8808 in	A =	74.2969 in ²	C _{top} =	12.8808 in	A =	74.2969 in ²
C _{bottom} =	13.9942 in	r _x =	9.9672 in	C _{bottom} =	13.9942 in	r _x =	9.9672 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.6875	9.6797	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.9063	2.9984	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	21.1875	55.6172	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.9688	79.3029	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.6875	9.6797	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.9063	2.9984	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	21.1875	55.6172	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.9688	79.3029	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	17.8750	0.3438	6.1445	0.7041	12.0938	2614.3759	2615.0799	
3 (Right)	Plate	17.8750	24.5313	438.4961	0.7041	12.0938	2614.3759	2615.0799	
4	Plate	8.8125	12.4375	109.6055	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.6875	11.0625	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	21.1875	63.5625	9.0000	8.7500	229.6875	238.6875	
Total		74.30		924.07	456.68		8251.80	8708.48	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.4375 in	S _{right} =	700.18 in ³	x-bar =	12.4375 in	S _{right} =	700.18 in ³
I _y =	8708.48 in ⁴	S _{left} =	700.18 in ³	I _y =	8708.48 in ⁴	S _{left} =	700.18 in ³
C _{right} =	12.4375 in	A =	74.2969 in ²	C _{right} =	12.4375 in	A =	74.2969 in ²
C _{left} =	12.4375 in	r _y =	10.8264 in	C _{left} =	12.4375 in	r _y =	10.8264 in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.5625$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.5625$ in

Top Cover Plate:

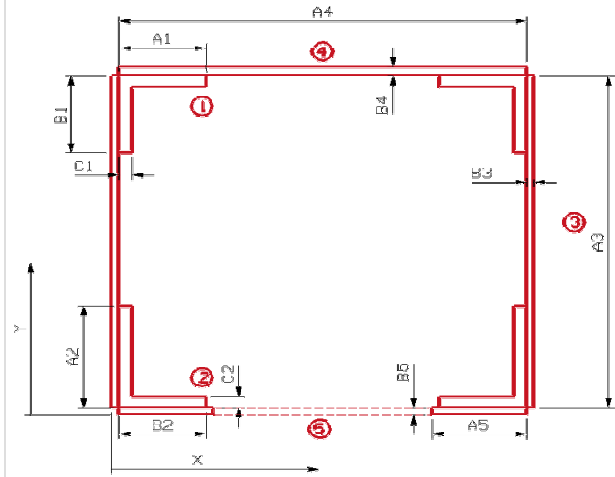
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.5000$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.7500$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.6250$ in



Member U10-U11

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	6.7500	26.3438	177.8203	0.1780	12.0876	986.2488	986.4268
	Vertical Leg	8.3672	22.3438	186.9543	38.5702	8.0876	547.2965	585.8667
2	Horizontal Leg	6.7500	0.9063	6.1172	0.1780	13.3499	1202.9774	1203.1554
	Vertical Leg	8.3672	4.9063	41.0515	38.5702	9.3499	731.4592	770.0294
3	Plate	39.0000	13.6250	531.3750	2197.0000	0.6311	15.5339	2212.5339
4	Plate	11.7500	26.8750	315.7813	0.2448	12.6189	1871.0263	1871.2711
5	Perforated Plate	7.5000	0.3125	2.3438	0.2441	13.9436	1458.1828	1458.4270
Total		88.48		1261.44	2274.99		6812.72	9087.71
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.2561 in	S _{top} =	706.18 in ³	y-bar =	14.2561 in	S _{top} =	706.18 in ³
I _x =	9087.71 in ⁴	S _{bott.} =	637.46 in ³	I _x =	9087.71 in ⁴	S _{bott.} =	637.46 in ³
C _{top} =	12.8689 in	A =	88.4844 in ²	C _{top} =	12.8689 in	A =	88.4844 in ²
C _{bottom} =	14.2561 in	r _x =	10.1343 in	C _{bottom} =	14.2561 in	r _x =	10.1343 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.3750	3.7500	12.6563	10.1250	8.7500	258.3984	268.5234	
	Vertical Leg	4.1836	1.0313	4.3143	0.1103	11.4688	550.2774	550.3877	
1 (Right)	Horizontal Leg	3.3750	21.2500	71.7188	10.1250	8.7500	258.3984	268.5234	
	Vertical Leg	4.1836	23.9688	100.2755	0.1103	11.4688	550.2774	550.3877	
2 (Left)	Horizontal Leg	3.3750	3.7500	12.6563	10.1250	8.7500	258.3984	268.5234	
	Vertical Leg	4.1836	1.0313	4.3143	0.1103	11.4688	550.2774	550.3877	
2 (Right)	Horizontal Leg	3.3750	21.2500	71.7188	10.1250	8.7500	258.3984	268.5234	
	Vertical Leg	4.1836	23.9688	100.2755	0.1103	11.4688	550.2774	550.3877	
3 (Left)	Plate	19.5000	0.3750	7.3125	0.9141	12.1250	2866.8047	2867.7188	
3 (Right)	Plate	19.5000	24.6250	480.1875	0.9141	12.1250	2866.8047	2867.7188	
4	Plate	11.7500	12.5000	146.8750	540.7448	0.0000	0.0000	540.7448	
5 (Left)	Perforated Plate	3.7500	3.7500	14.0625	11.2500	8.7500	287.1094	298.3594	
5 (Right)	Perforated Plate	3.7500	21.2500	79.6875	11.2500	8.7500	287.1094	298.3594	
Total		88.48		1106.05	606.01		9542.53	10148.55	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.5000 in	S _{right} =	811.88 in ³	x-bar =	12.5000 in	S _{right} =	811.88 in ³
I _y =	10148.55 in ⁴	S _{left} =	811.88 in ³	I _y =	10148.55 in ⁴	S _{left} =	811.88 in ³
C _{right} =	12.5000 in	A =	88.4844 in ²	C _{right} =	12.5000 in	A =	88.4844 in ²
C _{left} =	12.5000 in	r _y =	10.7095 in	C _{left} =	12.5000 in	r _y =	10.7095 in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.5625$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.5625$ in

Top Cover Plate:

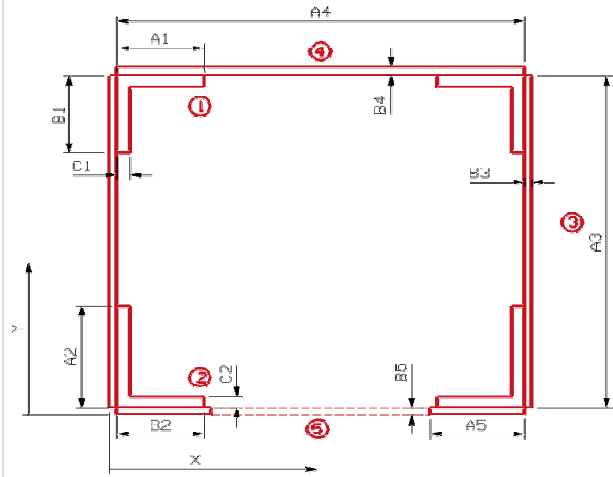
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.5000$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.7500$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.6250$ in



Member U11-U12

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x, gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	6.7500	26.3438	177.8203	0.1780	12.0876	986.2488	986.4268
	Vertical Leg	8.3672	22.3438	186.9543	38.5702	8.0876	547.2965	585.8667
2	Horizontal Leg	6.7500	0.9063	6.1172	0.1780	13.3499	1202.9774	1203.1554
	Vertical Leg	8.3672	4.9063	41.0515	38.5702	9.3499	731.4592	770.0294
3	Plate	39.0000	13.6250	531.3750	2197.0000	0.6311	15.5339	2212.5339
4	Plate	11.7500	26.8750	315.7813	0.2448	12.6189	1871.0263	1871.2711
5	Perforated Plate	7.5000	0.3125	2.3438	0.2441	13.9436	1458.1828	1458.4270
Total		88.48		1261.44	2274.99		6812.72	9087.71
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.2561 in	S _{top} =	706.18 in ³	y-bar =	14.2561 in	S _{top} =	706.18 in ³
I _x =	9087.71 in ⁴	S _{bott.} =	637.46 in ³	I _x =	9087.71 in ⁴	S _{bott.} =	637.46 in ³
C _{top} =	12.8689 in	A =	88.4844 in ²	C _{top} =	12.8689 in	A =	88.4844 in ²
C _{bottom} =	14.2561 in	r _x =	10.1343 in	C _{bottom} =	14.2561 in	r _x =	10.1343 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.3750	3.7500	12.6563	10.1250	8.7500	258.3984	268.5234	
	Vertical Leg	4.1836	1.0313	4.3143	0.1103	11.4688	550.2774	550.3877	
1 (Right)	Horizontal Leg	3.3750	21.2500	71.7188	10.1250	8.7500	258.3984	268.5234	
	Vertical Leg	4.1836	23.9688	100.2755	0.1103	11.4688	550.2774	550.3877	
2 (Left)	Horizontal Leg	3.3750	3.7500	12.6563	10.1250	8.7500	258.3984	268.5234	
	Vertical Leg	4.1836	1.0313	4.3143	0.1103	11.4688	550.2774	550.3877	
2 (Right)	Horizontal Leg	3.3750	21.2500	71.7188	10.1250	8.7500	258.3984	268.5234	
	Vertical Leg	4.1836	23.9688	100.2755	0.1103	11.4688	550.2774	550.3877	
3 (Left)	Plate	19.5000	0.3750	7.3125	0.9141	12.1250	2866.8047	2867.7188	
3 (Right)	Plate	19.5000	24.6250	480.1875	0.9141	12.1250	2866.8047	2867.7188	
4	Plate	11.7500	12.5000	146.8750	540.7448	0.0000	0.0000	540.7448	
5 (Left)	Perforated Plate	3.7500	3.7500	14.0625	11.2500	8.7500	287.1094	298.3594	
5 (Right)	Perforated Plate	3.7500	21.2500	79.6875	11.2500	8.7500	287.1094	298.3594	
Total		88.48		1106.05	606.01		9542.53	10148.55	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.5000 in	S _{right} =	811.88 in ³	x-bar =	12.5000 in	S _{right} =	811.88 in ³
I _y =	10148.55 in ⁴	S _{left} =	811.88 in ³	I _y =	10148.55 in ⁴	S _{left} =	811.88 in ³
C _{right} =	12.5000 in	A =	88.4844 in ²	C _{right} =	12.5000 in	A =	88.4844 in ²
C _{left} =	12.5000 in	r _y =	10.7095 in	C _{left} =	12.5000 in	r _y =	10.7095 in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.5625$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.5625$ in

Top Cover Plate:

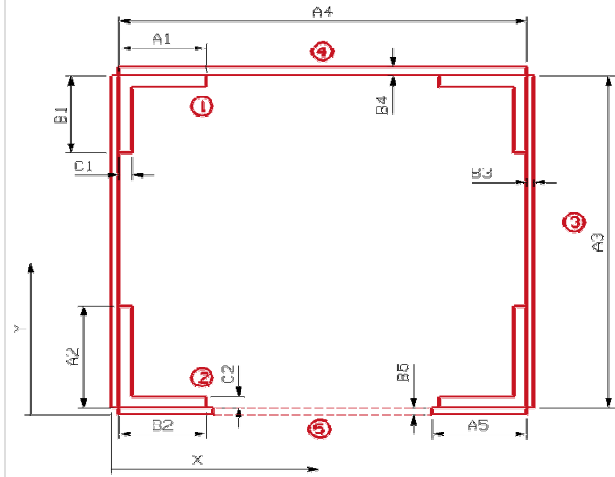
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.5000$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.8125$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.6250$ in



Member U12-U13

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	6.7500	26.3438	177.8203	0.1780	12.1100	989.9009	990.0789
	Vertical Leg	8.3672	22.3438	186.9543	38.5702	8.1100	550.3268	588.8971
2	Horizontal Leg	6.7500	0.9063	6.1172	0.1780	13.3275	1198.9511	1199.1291
	Vertical Leg	8.3672	4.9063	41.0515	38.5702	9.3275	727.9650	766.5352
3	Plate	42.2500	13.6250	575.6563	2380.0833	0.6088	15.6571	2395.7404
4	Plate	11.7500	26.8750	315.7813	0.2448	12.6412	1877.6627	1877.9075
5	Perforated Plate	7.5000	0.3125	2.3438	0.2441	13.9213	1453.5100	1453.7542
Total		91.73		1305.72	2458.07		6813.97	9272.04
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.2338 in	S _{top} =	719.25 in ³	y-bar =	14.2338 in	S _{top} =	719.25 in ³
I _x =	9272.04 in ⁴	S _{bott.} =	651.41 in ³	I _x =	9272.04 in ⁴	S _{bott.} =	651.41 in ³
C _{top} =	12.8912 in	A =	91.7344 in ²	C _{top} =	12.8912 in	A =	91.7344 in ²
C _{bottom} =	14.2338 in	r _x =	10.0536 in	C _{bottom} =	14.2338 in	r _x =	10.0536 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.3750	3.8125	12.8672	10.1250	8.7500	258.3984	268.5234	
	Vertical Leg	4.1836	1.0938	4.5758	0.1103	11.4688	550.2774	550.3877	
1 (Right)	Horizontal Leg	3.3750	21.3125	71.9297	10.1250	8.7500	258.3984	268.5234	
	Vertical Leg	4.1836	24.0313	100.5370	0.1103	11.4688	550.2774	550.3877	
2 (Left)	Horizontal Leg	3.3750	3.8125	12.8672	10.1250	8.7500	258.3984	268.5234	
	Vertical Leg	4.1836	1.0938	4.5758	0.1103	11.4688	550.2774	550.3877	
2 (Right)	Horizontal Leg	3.3750	21.3125	71.9297	10.1250	8.7500	258.3984	268.5234	
	Vertical Leg	4.1836	24.0313	100.5370	0.1103	11.4688	550.2774	550.3877	
3 (Left)	Plate	21.1250	0.4063	8.5820	1.1622	12.1563	3121.7345	3122.8966	
3 (Right)	Plate	21.1250	24.7188	522.1836	1.1622	12.1563	3121.7345	3122.8966	
4	Plate	11.7500	12.5625	147.6094	540.7448	0.0000	0.0000	540.7448	
5 (Left)	Perforated Plate	3.7500	3.8125	14.2969	11.2500	8.7500	287.1094	298.3594	
5 (Right)	Perforated Plate	3.7500	21.3125	79.9219	11.2500	8.7500	287.1094	298.3594	
Total		91.73		1152.41	606.51		10052.39	10658.90	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.5625 in	S _{right} =	848.47 in ³	x-bar =	12.5625 in	S _{right} =	848.47 in ³
I _y =	10658.90 in ⁴	S _{left} =	848.47 in ³	I _y =	10658.90 in ⁴	S _{left} =	848.47 in ³
C _{right} =	12.5625 in	A =	91.7344 in ²	C _{right} =	12.5625 in	A =	91.7344 in ²
C _{left} =	12.5625 in	r _y =	10.7793 in	C _{left} =	12.5625 in	r _y =	10.7793 in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.5625$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.5625$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.5625$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.8125$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.6875$ in



Member U13-U14

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	6.7500	26.4063	178.2422	0.1780	12.0219	975.5435	975.7215
	Vertical Leg	8.3672	22.4063	187.4773	38.5702	8.0219	538.4297	576.9999
2	Horizontal Leg	6.7500	0.9688	6.5391	0.1780	13.4156	1214.8621	1215.0400
	Vertical Leg	8.3672	4.9688	41.5745	38.5702	9.4156	741.7879	780.3582
3	Plate	42.2500	13.6875	578.2969	2380.0833	0.6969	20.5193	2400.6027
4	Plate	13.2188	26.9688	356.4932	0.3485	12.5844	2093.4000	2093.7485
5	Perforated Plate	8.2500	0.3438	2.8359	0.3250	14.0406	1626.4029	1626.7279
Total		93.95		1351.46	2458.25		7210.95	9669.20
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties					
y-bar =	14.3844	in	$S_{top} = 751.55$	in^3	y-bar =	14.3844	in	$S_{top} = 751.55$	in^3
$I_x =$	9669.20	in^4	$S_{bott.} = 672.20$	in^3	$I_x =$	9669.20	in^4	$S_{bott.} = 672.20$	in^3
$C_{top} =$	12.8656	in	$A = 93.9531$	in^2	$C_{top} =$	12.8656	in	$A = 93.9531$	in^2
$C_{bottom} =$	14.3844	in	$r_x = 10.1447$	in	$C_{bottom} =$	14.3844	in	$r_x = 10.1447$	in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I_o	d	Ad^2	$I_{y,gross}$	
Element	Description	(in^2)	(in)	(in^3)	(in^4)	(in)	(in^4)	(in^4)	
1 (Left)	Horizontal Leg	3.3750	3.8125	12.8672	10.1250	8.7500	258.3984	268.5234	
	Vertical Leg	4.1836	1.0938	4.5758	0.1103	11.4688	550.2774	550.3877	
1 (Right)	Horizontal Leg	3.3750	21.3125	71.9297	10.1250	8.7500	258.3984	268.5234	
	Vertical Leg	4.1836	24.0313	100.5370	0.1103	11.4688	550.2774	550.3877	
2 (Left)	Horizontal Leg	3.3750	3.8125	12.8672	10.1250	8.7500	258.3984	268.5234	
	Vertical Leg	4.1836	1.0938	4.5758	0.1103	11.4688	550.2774	550.3877	
2 (Right)	Horizontal Leg	3.3750	21.3125	71.9297	10.1250	8.7500	258.3984	268.5234	
	Vertical Leg	4.1836	24.0313	100.5370	0.1103	11.4688	550.2774	550.3877	
3 (Left)	Plate	21.1250	0.4063	8.5820	1.1622	12.1563	3121.7345	3122.8966	
3 (Right)	Plate	21.1250	24.7188	522.1836	1.1622	12.1563	3121.7345	3122.8966	
4	Plate	13.2188	12.5625	166.0605	608.3379	0.0000	0.0000	608.3379	
5 (Left)	Perforated Plate	4.1250	3.8125	15.7266	12.3750	8.7500	315.8203	328.1953	
5 (Right)	Perforated Plate	4.1250	21.3125	87.9141	12.3750	8.7500	315.8203	328.1953	
Total		93.95		1180.29	676.35		10109.81	10786.17	
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y,loss}$
Loss #	b (in)	h (in)	(in^2)	(in)	(in^3)	(in^4)	(in)	(in^4)	(in^4)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties					
x-bar =	12.5625	in	$S_{right} = 858.60$	in^3	x-bar =	12.5625	in	$S_{right} = 858.60$	in^3
$I_y =$	10786.17	n^4	$S_{left} = 858.60$	in^3	$I_y =$	10786.17	n^4	$S_{left} = 858.60$	in^3
$C_{right} =$	12.5625	in	$A = 93.9531$	in^2	$C_{right} =$	12.5625	in	$A = 93.9531$	in^2
$C_{left} =$	12.5625	in	$r_y = 10.7146$	in	$C_{left} =$	12.5625	in	$r_y = 10.7146$	in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.5625$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.5625$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.5000$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.8125$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.6250$ in



Member U14-U15

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	6.7500	26.3438	177.8203	0.1780	12.1100	989.9009	990.0789
	Vertical Leg	8.3672	22.3438	186.9543	38.5702	8.1100	550.3268	588.8971
2	Horizontal Leg	6.7500	0.9063	6.1172	0.1780	13.3275	1198.9511	1199.1291
	Vertical Leg	8.3672	4.9063	41.0515	38.5702	9.3275	727.9650	766.5352
3	Plate	42.2500	13.6250	575.6563	2380.0833	0.6088	15.6571	2395.7404
4	Plate	11.7500	26.8750	315.7813	0.2448	12.6412	1877.6627	1877.9075
5	Perforated Plate	7.5000	0.3125	2.3438	0.2441	13.9213	1453.5100	1453.7542
Total		91.73		1305.72	2458.07		6813.97	9272.04
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties					
y-bar =	14.2338	in	$S_{top} = 719.25$	in^3	y-bar =	14.2338	in	$S_{top} = 719.25$	in^3
$I_x =$	9272.04	in^4	$S_{bott.} = 651.41$	in^3	$I_x =$	9272.04	in^4	$S_{bott.} = 651.41$	in^3
$C_{top} =$	12.8912	in	$A = 91.7344$	in^2	$C_{top} =$	12.8912	in	$A = 91.7344$	in^2
$C_{bottom} =$	14.2338	in	$r_x = 10.0536$	in	$C_{bottom} =$	14.2338	in	$r_x = 10.0536$	in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I_o	d	Ad^2	$I_{y,gross}$	
Element	Description	(in^2)	(in)	(in^3)	(in^4)	(in)	(in^4)	(in^4)	
1 (Left)	Horizontal Leg	3.3750	3.8125	12.8672	10.1250	8.7500	258.3984	268.5234	
	Vertical Leg	4.1836	1.0938	4.5758	0.1103	11.4688	550.2774	550.3877	
1 (Right)	Horizontal Leg	3.3750	21.3125	71.9297	10.1250	8.7500	258.3984	268.5234	
	Vertical Leg	4.1836	24.0313	100.5370	0.1103	11.4688	550.2774	550.3877	
2 (Left)	Horizontal Leg	3.3750	3.8125	12.8672	10.1250	8.7500	258.3984	268.5234	
	Vertical Leg	4.1836	1.0938	4.5758	0.1103	11.4688	550.2774	550.3877	
2 (Right)	Horizontal Leg	3.3750	21.3125	71.9297	10.1250	8.7500	258.3984	268.5234	
	Vertical Leg	4.1836	24.0313	100.5370	0.1103	11.4688	550.2774	550.3877	
3 (Left)	Plate	21.1250	0.4063	8.5820	1.1622	12.1563	3121.7345	3122.8966	
3 (Right)	Plate	21.1250	24.7188	522.1836	1.1622	12.1563	3121.7345	3122.8966	
4	Plate	11.7500	12.5625	147.6094	540.7448	0.0000	0.0000	540.7448	
5 (Left)	Perforated Plate	3.7500	3.8125	14.2969	11.2500	8.7500	287.1094	298.3594	
5 (Right)	Perforated Plate	3.7500	21.3125	79.9219	11.2500	8.7500	287.1094	298.3594	
Total		91.73		1152.41	606.51		10052.39	10658.90	
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y,loss}$
Loss #	b (in)	h (in)	(in^2)	(in)	(in^3)	(in^4)	(in)	(in^4)	(in^4)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties					
x-bar =	12.5625	in	$S_{right} = 848.47$	in^3	x-bar =	12.5625	in	$S_{right} = 848.47$	in^3
$I_y =$	10658.90	n^4	$S_{left} = 848.47$	in^3	$I_y =$	10658.90	n^4	$S_{left} = 848.47$	in^3
$C_{right} =$	12.5625	in	$A = 91.7344$	in^2	$C_{right} =$	12.5625	in	$A = 91.7344$	in^2
$C_{left} =$	12.5625	in	$r_y = 10.7793$	in	$C_{left} =$	12.5625	in	$r_y = 10.7793$	in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.5625$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.5625$ in

Top Cover Plate:

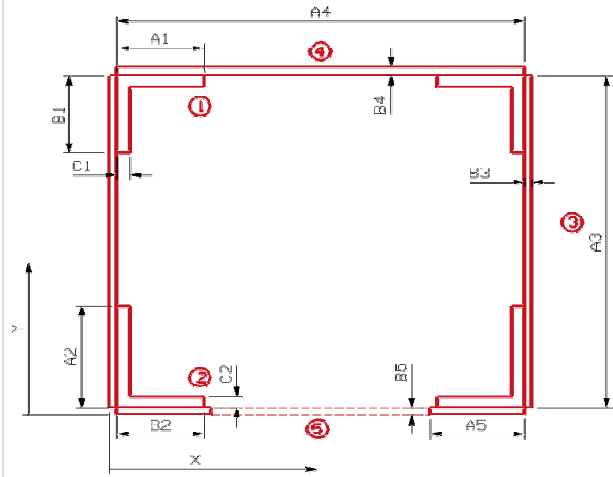
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.5000$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.8125$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.6250$ in



Member U15-U16

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	6.7500	26.3438	177.8203	0.1780	12.1100	989.9009	990.0789
	Vertical Leg	8.3672	22.3438	186.9543	38.5702	8.1100	550.3268	588.8971
2	Horizontal Leg	6.7500	0.9063	6.1172	0.1780	13.3275	1198.9511	1199.1291
	Vertical Leg	8.3672	4.9063	41.0515	38.5702	9.3275	727.9650	766.5352
3	Plate	42.2500	13.6250	575.6563	2380.0833	0.6088	15.6571	2395.7404
4	Plate	11.7500	26.8750	315.7813	0.2448	12.6412	1877.6627	1877.9075
5	Perforated Plate	7.5000	0.3125	2.3438	0.2441	13.9213	1453.5100	1453.7542
Total		91.73		1305.72	2458.07		6813.97	9272.04
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.2338 in	S _{top} =	719.25 in ³	y-bar =	14.2338 in	S _{top} =	719.25 in ³
I _x =	9272.04 in ⁴	S _{bott.} =	651.41 in ³	I _x =	9272.04 in ⁴	S _{bott.} =	651.41 in ³
C _{top} =	12.8912 in	A =	91.7344 in ²	C _{top} =	12.8912 in	A =	91.7344 in ²
C _{bottom} =	14.2338 in	r _x =	10.0536 in	C _{bottom} =	14.2338 in	r _x =	10.0536 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.3750	3.8125	12.8672	10.1250	8.7500	258.3984	268.5234	
	Vertical Leg	4.1836	1.0938	4.5758	0.1103	11.4688	550.2774	550.3877	
1 (Right)	Horizontal Leg	3.3750	21.3125	71.9297	10.1250	8.7500	258.3984	268.5234	
	Vertical Leg	4.1836	24.0313	100.5370	0.1103	11.4688	550.2774	550.3877	
2 (Left)	Horizontal Leg	3.3750	3.8125	12.8672	10.1250	8.7500	258.3984	268.5234	
	Vertical Leg	4.1836	1.0938	4.5758	0.1103	11.4688	550.2774	550.3877	
2 (Right)	Horizontal Leg	3.3750	21.3125	71.9297	10.1250	8.7500	258.3984	268.5234	
	Vertical Leg	4.1836	24.0313	100.5370	0.1103	11.4688	550.2774	550.3877	
3 (Left)	Plate	21.1250	0.4063	8.5820	1.1622	12.1563	3121.7345	3122.8966	
3 (Right)	Plate	21.1250	24.7188	522.1836	1.1622	12.1563	3121.7345	3122.8966	
4	Plate	11.7500	12.5625	147.6094	540.7448	0.0000	0.0000	540.7448	
5 (Left)	Perforated Plate	3.7500	3.8125	14.2969	11.2500	8.7500	287.1094	298.3594	
5 (Right)	Perforated Plate	3.7500	21.3125	79.9219	11.2500	8.7500	287.1094	298.3594	
Total		91.73		1152.41	606.51		10052.39	10658.90	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.5625 in	S _{right} =	848.47 in ³	x-bar =	12.5625 in	S _{right} =	848.47 in ³
I _y =	10658.90 in ⁴	S _{left} =	848.47 in ³	I _y =	10658.90 in ⁴	S _{left} =	848.47 in ³
C _{right} =	12.5625 in	A =	91.7344 in ²	C _{right} =	12.5625 in	A =	91.7344 in ²
C _{left} =	12.5625 in	r _y =	10.7793 in	C _{left} =	12.5625 in	r _y =	10.7793 in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.5000$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.5000$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.7500$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.6250$ in



Member U16-U17

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	6.0000	26.3750	158.2500	0.1250	12.0949	877.7256	877.8506
	Vertical Leg	7.5000	22.3750	167.8125	35.1563	8.0949	491.4606	526.6168
2	Horizontal Leg	6.0000	0.8750	5.2500	0.1250	13.4051	1078.1736	1078.2986
	Vertical Leg	7.5000	4.8750	36.5625	35.1563	9.4051	663.4135	698.5697
3	Plate	39.0000	13.6250	531.3750	2197.0000	0.6551	16.7350	2213.7350
4	Plate	11.7500	26.8750	315.7813	0.2448	12.5949	1863.9324	1864.1772
5	Perforated Plate	7.5000	0.3125	2.3438	0.2441	13.9676	1463.1952	1463.4394
Total		85.25		1217.38	2268.05		6454.64	8722.69
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.2801 in	S _{top} =	679.08 in ³	y-bar =	14.2801 in	S _{top} =	679.08 in ³
I _x =	8722.69 in ⁴	S _{bott.} =	610.83 in ³	I _x =	8722.69 in ⁴	S _{bott.} =	610.83 in ³
C _{top} =	12.8449 in	A =	85.2500 in ²	C _{top} =	12.8449 in	A =	85.2500 in ²
C _{bottom} =	14.2801 in	r _x =	10.1153 in	C _{bottom} =	14.2801 in	r _x =	10.1153 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.0000	3.7500	11.2500	9.0000	8.7500	229.6875	238.6875	
	Vertical Leg	3.7500	1.0000	3.7500	0.0781	11.5000	495.9375	496.0156	
1 (Right)	Horizontal Leg	3.0000	21.2500	63.7500	9.0000	8.7500	229.6875	238.6875	
	Vertical Leg	3.7500	24.0000	90.0000	0.0781	11.5000	495.9375	496.0156	
2 (Left)	Horizontal Leg	3.0000	3.7500	11.2500	9.0000	8.7500	229.6875	238.6875	
	Vertical Leg	3.7500	1.0000	3.7500	0.0781	11.5000	495.9375	496.0156	
2 (Right)	Horizontal Leg	3.0000	21.2500	63.7500	9.0000	8.7500	229.6875	238.6875	
	Vertical Leg	3.7500	24.0000	90.0000	0.0781	11.5000	495.9375	496.0156	
3 (Left)	Plate	19.5000	0.3750	7.3125	0.9141	12.1250	2866.8047	2867.7188	
3 (Right)	Plate	19.5000	24.6250	480.1875	0.9141	12.1250	2866.8047	2867.7188	
4	Plate	11.7500	12.5000	146.8750	540.7448	0.0000	0.0000	540.7448	
5 (Left)	Perforated Plate	3.7500	3.7500	14.0625	11.2500	8.7500	287.1094	298.3594	
5 (Right)	Perforated Plate	3.7500	21.2500	79.6875	11.2500	8.7500	287.1094	298.3594	
Total		85.25		1065.63	601.39		9210.33	9811.71	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.5000 in	S _{right} =	784.94 in ³	x-bar =	12.5000 in	S _{right} =	784.94 in ³
I _y =	9811.71 in ⁴	S _{left} =	784.94 in ³	I _y =	9811.71 in ⁴	S _{left} =	784.94 in ³
C _{right} =	12.5000 in	A =	85.2500 in ²	C _{right} =	12.5000 in	A =	85.2500 in ²
C _{left} =	12.5000 in	r _y =	10.7282 in	C _{left} =	12.5000 in	r _y =	10.7282 in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.5000$ in

Top Cover Plate:

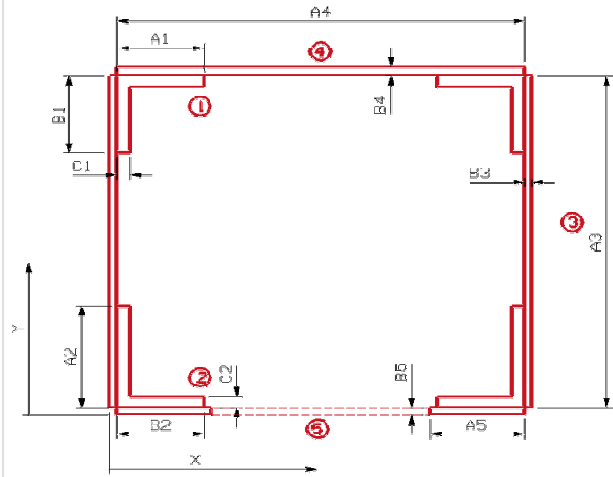
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.5000$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.5000$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.6250$ in



Member U17-U18

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	6.0000	26.3750	158.2500	0.1250	11.9771	860.7021	860.8271
	Vertical Leg	7.5000	22.3750	167.8125	35.1563	7.9771	477.2531	512.4093
2	Horizontal Leg	6.0000	0.8750	5.2500	0.1250	13.5229	1097.2168	1097.3418
	Vertical Leg	7.5000	4.8750	36.5625	35.1563	9.5229	680.1456	715.3018
3	Plate	26.0000	13.6250	354.2500	1464.6667	0.7729	15.5327	1480.1994
4	Plate	11.7500	26.8750	315.7813	0.2448	12.4771	1829.2098	1829.4546
5	Perforated Plate	7.5000	0.3125	2.3438	0.2441	14.0854	1487.9937	1488.2379
Total		72.25		1040.25	1535.72		6448.05	7983.77
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.3979 in	S _{top} =	627.31 in ³	y-bar =	14.3979 in	S _{top} =	627.31 in ³
I _x =	7983.77 in ⁴	S _{bott.} =	554.51 in ³	I _x =	7983.77 in ⁴	S _{bott.} =	554.51 in ³
C _{top} =	12.7271 in	A =	72.2500 in ²	C _{top} =	12.7271 in	A =	72.2500 in ²
C _{bottom} =	14.3979 in	r _x =	10.5120 in	C _{bottom} =	14.3979 in	r _x =	10.5120 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.0000	3.5000	10.5000	9.0000	8.7500	229.6875	238.6875	
	Vertical Leg	3.7500	0.7500	2.8125	0.0781	11.5000	495.9375	496.0156	
1 (Right)	Horizontal Leg	3.0000	21.0000	63.0000	9.0000	8.7500	229.6875	238.6875	
	Vertical Leg	3.7500	23.7500	89.0625	0.0781	11.5000	495.9375	496.0156	
2 (Left)	Horizontal Leg	3.0000	3.5000	10.5000	9.0000	8.7500	229.6875	238.6875	
	Vertical Leg	3.7500	0.7500	2.8125	0.0781	11.5000	495.9375	496.0156	
2 (Right)	Horizontal Leg	3.0000	21.0000	63.0000	9.0000	8.7500	229.6875	238.6875	
	Vertical Leg	3.7500	23.7500	89.0625	0.0781	11.5000	495.9375	496.0156	
3 (Left)	Plate	13.0000	0.2500	3.2500	0.2708	12.0000	1872.0000	1872.2708	
3 (Right)	Plate	13.0000	24.2500	315.2500	0.2708	12.0000	1872.0000	1872.2708	
4	Plate	11.7500	12.2500	143.9375	540.7448	0.0000	0.0000	540.7448	
5 (Left)	Perforated Plate	3.7500	3.5000	13.1250	11.2500	8.7500	287.1094	298.3594	
5 (Right)	Perforated Plate	3.7500	21.0000	78.7500	11.2500	8.7500	287.1094	298.3594	
Total		72.25		885.06	600.10		7220.72	7820.82	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2500 in	S _{right} =	638.43 in ³	x-bar =	12.2500 in	S _{right} =	638.43 in ³
I _y =	7820.82 in ⁴	S _{left} =	638.43 in ³	I _y =	7820.82 in ⁴	S _{left} =	638.43 in ³
C _{right} =	12.2500 in	A =	72.2500 in ²	C _{right} =	12.2500 in	A =	72.2500 in ²
C _{left} =	12.2500 in	r _y =	10.4042 in	C _{left} =	12.2500 in	r _y =	10.4042 in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.4375$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.4375$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member U18-U19

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.2500	26.2813	137.9766	0.0837	12.1823	779.1420	779.2258
	Vertical Leg	6.6172	22.2813	147.4392	31.5372	8.1823	443.0190	474.5562
2	Horizontal Leg	5.2500	0.7188	3.7734	0.0837	13.3802	939.9087	939.9924
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	9.3802	582.2363	613.7735
3	Plate	22.7500	13.5000	307.1250	1281.5833	0.5990	8.1618	1289.7452
4	Plate	8.8125	26.6875	235.1836	0.1033	12.5885	1396.5270	1396.6303
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	13.8490	1150.7634	1150.8884
Total		61.30		864.22	1345.05		5299.76	6644.81
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.0990 in	S _{top} =	520.10 in ³	y-bar =	14.0990 in	S _{top} =	520.10 in ³
I _x =	6644.81 in ⁴	S _{bott.} =	471.30 in ³	I _x =	6644.81 in ⁴	S _{bott.} =	471.30 in ³
C _{top} =	12.7760 in	A =	61.2969 in ²	C _{top} =	12.7760 in	A =	61.2969 in ²
C _{bottom} =	14.0990 in	r _x =	10.4117 in	C _{bottom} =	14.0990 in	r _x =	10.4117 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.4375	9.0234	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	20.9375	54.9609	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.4375	9.0234	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	20.9375	54.9609	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.4375	10.3125	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.9375	62.8125	9.0000	8.7500	229.6875	238.6875	
Total		61.30		747.06	455.63		6282.01	6737.64	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	552.83 in ³	x-bar =	12.1875 in	S _{right} =	552.83 in ³
I _y =	6737.64 in ⁴	S _{left} =	552.83 in ³	I _y =	6737.64 in ⁴	S _{left} =	552.83 in ³
C _{right} =	12.1875 in	A =	61.2969 in ²	C _{right} =	12.1875 in	A =	61.2969 in ²
C _{left} =	12.1875 in	r _y =	10.4842 in	C _{left} =	12.1875 in	r _y =	10.4842 in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.4375$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.4375$ in

Top Cover Plate:

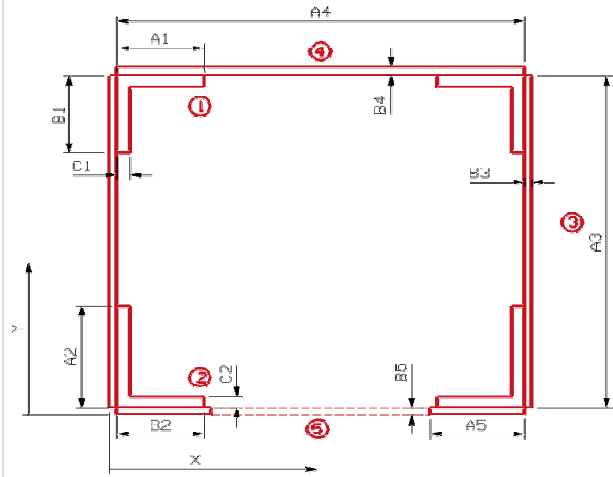
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member U19-U20

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.2500	26.2813	137.9766	0.0837	12.1823	779.1420	779.2258
	Vertical Leg	6.6172	22.2813	147.4392	31.5372	8.1823	443.0190	474.5562
2	Horizontal Leg	5.2500	0.7188	3.7734	0.0837	13.3802	939.9087	939.9924
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	9.3802	582.2363	613.7735
3	Plate	22.7500	13.5000	307.1250	1281.5833	0.5990	8.1618	1289.7452
4	Plate	8.8125	26.6875	235.1836	0.1033	12.5885	1396.5270	1396.6303
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	13.8490	1150.7634	1150.8884
Total		61.30		864.22	1345.05		5299.76	6644.81
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.0990 in	S _{top} =	520.10 in ³	y-bar =	14.0990 in	S _{top} =	520.10 in ³
I _x =	6644.81 in ⁴	S _{bott.} =	471.30 in ³	I _x =	6644.81 in ⁴	S _{bott.} =	471.30 in ³
C _{top} =	12.7760 in	A =	61.2969 in ²	C _{top} =	12.7760 in	A =	61.2969 in ²
C _{bottom} =	14.0990 in	r _x =	10.4117 in	C _{bottom} =	14.0990 in	r _x =	10.4117 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.4375	9.0234	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	20.9375	54.9609	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.4375	9.0234	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	20.9375	54.9609	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.4375	10.3125	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.9375	62.8125	9.0000	8.7500	229.6875	238.6875	
Total		61.30		747.06	455.63		6282.01	6737.64	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	552.83 in ³	x-bar =	12.1875 in	S _{right} =	552.83 in ³
I _y =	6737.64 in ⁴	S _{left} =	552.83 in ³	I _y =	6737.64 in ⁴	S _{left} =	552.83 in ³
C _{right} =	12.1875 in	A =	61.2969 in ²	C _{right} =	12.1875 in	A =	61.2969 in ²
C _{left} =	12.1875 in	r _y =	10.4842 in	C _{left} =	12.1875 in	r _y =	10.4842 in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3750$ in

Top Cover Plate:

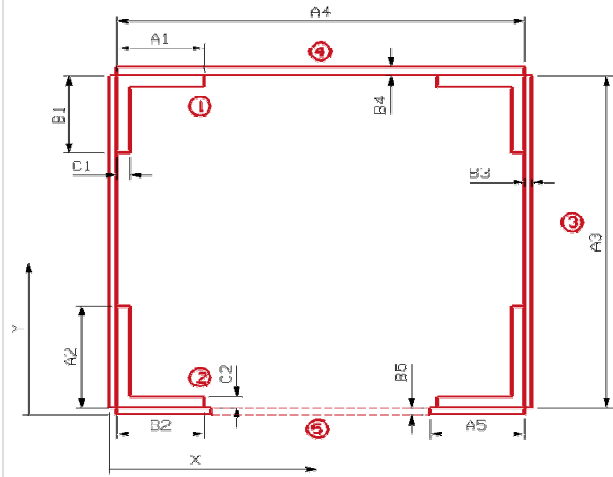
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member U20-U21

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.0000	26.3125	78.9375	0.0352	12.0632	436.5636	436.5988
	Vertical Leg	2.7188	24.3125	66.0996	2.9772	10.0632	275.3233	278.3005
2	Horizontal Leg	3.0000	0.6875	2.0625	0.0352	13.5618	551.7658	551.8010
	Vertical Leg	2.7188	2.6875	7.3066	2.9772	11.5618	363.4284	366.4056
3	Plate	22.7500	13.5000	307.1250	1281.5833	0.7493	12.7724	1294.3557
4	Plate	8.8125	26.6875	235.1836	0.1033	12.4382	1363.3753	1363.4786
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	13.9993	1175.8795	1176.0045
Total		49.00		698.21	1287.84		4179.11	5466.94
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	14.2493	in	S _{top} =	433.00	in ³	y-bar =	14.2493	in	S _{top} =	433.00	in ³
I _x =	5466.94	in ⁴	S _{bott.} =	383.66	in ³	I _x =	5466.94	in ⁴	S _{bott.} =	383.66	in ³
C _{top} =	12.6257	in	A =	49.0000	in ²	C _{top} =	12.6257	in	A =	49.0000	in ²
C _{bottom} =	14.2493	in	r _x =	10.5627	in	C _{bottom} =	14.2493	in	r _x =	10.5627	in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.5000	2.4375	3.6563	2.0000	9.7500	142.5938	144.5938	
	Vertical Leg	1.3594	0.6250	0.8496	0.0159	11.5625	181.7368	181.7527	
1 (Right)	Horizontal Leg	1.5000	21.9375	32.9063	2.0000	9.7500	142.5938	144.5938	
	Vertical Leg	1.3594	23.7500	32.2852	0.0159	11.5625	181.7368	181.7527	
2 (Left)	Horizontal Leg	1.5000	2.4375	3.6563	2.0000	9.7500	142.5938	144.5938	
	Vertical Leg	1.3594	0.6250	0.8496	0.0159	11.5625	181.7368	181.7527	
2 (Right)	Horizontal Leg	1.5000	21.9375	32.9063	2.0000	9.7500	142.5938	144.5938	
	Vertical Leg	1.3594	23.7500	32.2852	0.0159	11.5625	181.7368	181.7527	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.4375	10.3125	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.9375	62.8125	9.0000	8.7500	229.6875	238.6875	
Total		49.00		597.19	431.99		5015.66	5447.64	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
x-bar =	12.1875	in	S _{right} =	446.99	in ³	x-bar =	12.1875	in	S _{right} =	446.99	in ³
I _y =	5447.64	in ⁴	S _{left} =	446.99	in ³	I _y =	5447.64	in ⁴	S _{left} =	446.99	in ³
C _{right} =	12.1875	in	A =	49.0000	in ²	C _{right} =	12.1875	in	A =	49.0000	in ²
C _{left} =	12.1875	in	r _y =	10.5440	in	C _{left} =	12.1875	in	r _y =	10.5440	in



Made By KMW
Checked By ADK

Date 1/30/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

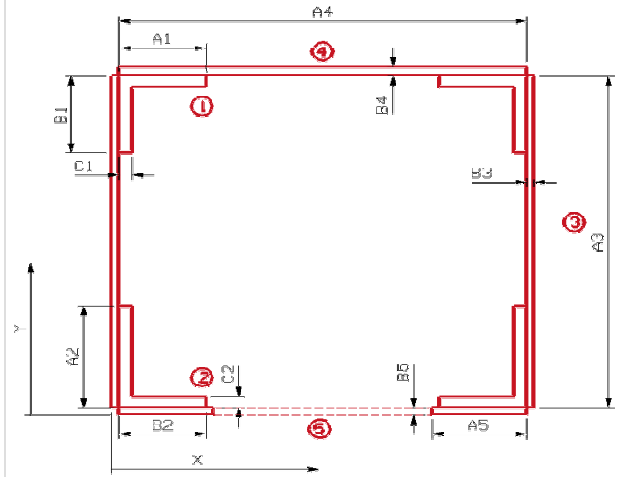
Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_f = 0.3125$ in

Bottom Angles:
 $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3125$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member U21-U22

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5031	330.8057	330.8260	
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5031	208.1357	210.7472	
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.1844	502.9900	503.0104	
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.1844	342.1506	344.7621	
3	Plate	19.5000	13.3750	260.8125	1098.5000	1.3406	35.0460	1133.5460	
4	Plate	8.8125	26.5625	234.0820	0.1033	11.8469	1236.8243	1236.9276	
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.5281	949.7966	949.8493	
Total		42.42		624.26	1103.92		3605.75	4709.67	
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	
1	0.0625	26.0000	-1.6250	13.3750	-21.7344	-91.5417	1.2228	-2.4296	-93.9712
2	0.0625	26.0000	-1.6250	13.3750	-21.7344	-91.5417	1.2228	-2.4296	-93.9712
3	2.0000	0.3750	-0.7500	26.5625	-19.9219	-0.0088	11.9647	-107.3664	-107.3752
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-4.00	-63.39	-183.09			-112.23	-295.32



Made By KMW
Checked By ADK

Date 1/30/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.7156 in	S _{top} =	391.35 in ³	y-bar =	14.5978 in	S _{top} =	363.25 in ³
I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³	I _x =	4414.35 in ⁴	S _{bott.} =	302.40 in ³
C _{top} =	12.0344 in	A =	42.4219 in ²	C _{top} =	12.1522 in	A =	38.4219 in ²
C _{bottom} =	14.7156 in	r _x =	10.5366 in	C _{bottom} =	14.5978 in	r _x =	10.7188 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	9.7500	0.1875	1.8281	0.1143	11.9375	1389.4131	1389.5273	
3 (Right)	Plate	9.7500	24.0625	234.6094	0.1143	11.9375	1389.4131	1389.5273	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.3750	7.5938	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.8750	46.9688	6.7500	8.7500	172.2656	179.0156	
Total		42.42		514.37	425.99		4218.24	4644.23	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	26.0000	0.0625	-1.6250	0.0313	-0.0508	-0.0005	12.1702	-240.6850	-240.6856
2	26.0000	0.0625	-1.6250	24.2188	-39.3555	-0.0005	12.0173	-234.6750	-234.6756
3	0.3750	2.0000	-0.7500	8.2083	-6.1563	-0.2500	3.9931	-11.9588	-12.2088
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-4.00		-45.56	-0.25		-487.32	-487.57

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	383.03 in ³	x-bar =	12.2015 in	S _{right} =	344.99 in ³
I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³	I _y =	4156.66 in ⁴	S _{left} =	340.67 in ³
C _{right} =	12.1250 in	A =	42.4219 in ²	C _{right} =	12.0485 in	A =	38.4219 in ²
C _{left} =	12.1250 in	r _y =	10.4631 in	C _{left} =	12.2015 in	r _y =	10.4012 in



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

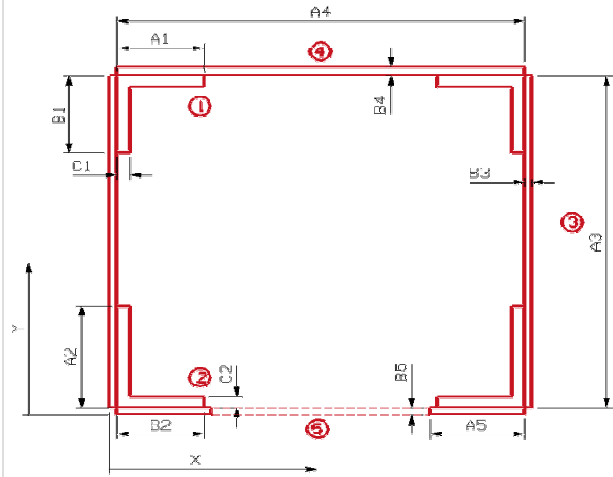
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member U22-U23

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5031	330.8057	330.8260
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5031	208.1357	210.7472
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.1844	502.9900	503.0104
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.1844	342.1506	344.7621
3	Plate	19.5000	13.3750	260.8125	1098.5000	1.3406	35.0460	1133.5460
4	Plate	8.8125	26.5625	234.0820	0.1033	11.8469	1236.8243	1236.9276
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.5281	949.7966	949.8493
Total		42.42		624.26	1103.92		3605.75	4709.67
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.7156 in	S _{top} =	391.35 in ³	y-bar =	14.7156 in	S _{top} =	391.35 in ³
I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³	I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³
C _{top} =	12.0344 in	A =	42.4219 in ²	C _{top} =	12.0344 in	A =	42.4219 in ²
C _{bottom} =	14.7156 in	r _x =	10.5366 in	C _{bottom} =	14.7156 in	r _x =	10.5366 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	9.7500	0.1875	1.8281	0.1143	11.9375	1389.4131	1389.5273	
3 (Right)	Plate	9.7500	24.0625	234.6094	0.1143	11.9375	1389.4131	1389.5273	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.3750	7.5938	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.8750	46.9688	6.7500	8.7500	172.2656	179.0156	
Total		42.42		514.37	425.99		4218.24	4644.23	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	383.03 in ³	x-bar =	12.1250 in	S _{right} =	383.03 in ³
I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³	I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³
C _{right} =	12.1250 in	A =	42.4219 in ²	C _{right} =	12.1250 in	A =	42.4219 in ²
C _{left} =	12.1250 in	r _y =	10.4631 in	C _{left} =	12.1250 in	r _y =	10.4631 in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

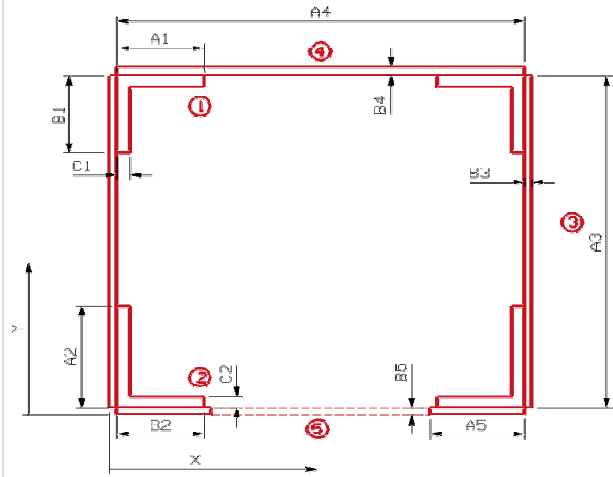
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member U23-U24

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5985	336.3153	336.3356
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5985	212.3354	214.9469
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.0890	496.2470	496.2674
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.0890	336.8139	339.4254
3	Plate	22.7500	13.3750	304.2813	1281.5833	1.2452	35.2750	1316.8583
4	Plate	8.8125	26.5625	234.0820	0.1033	11.9423	1256.8236	1256.9269
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.4327	937.3641	937.4168
Total		45.67		667.73	1287.00		3611.17	4898.18
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	14.6202	in	S _{top} =	403.81	in ³	y-bar =	14.6202	in	S _{top} =	403.81	in ³
I _x =	4898.18	in ⁴	S _{bott.} =	335.03	in ³	I _x =	4898.18	in ⁴	S _{bott.} =	335.03	in ³
C _{top} =	12.1298	in	A =	45.6719	in ²	C _{top} =	12.1298	in	A =	45.6719	in ²
C _{bottom} =	14.6202	in	r _x =	10.3560	in	C _{bottom} =	14.6202	in	r _x =	10.3560	in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.4375	7.7344	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.9375	47.1094	6.7500	8.7500	172.2656	179.0156	
Total		45.67		556.63	426.13		4698.37	5124.50	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
x-bar =	12.1875	in	S _{right} =	420.47	in ³	x-bar =	12.1875	in	S _{right} =	420.47	in ³
I _y =	5124.50	in ⁴	S _{left} =	420.47	in ³	I _y =	5124.50	in ⁴	S _{left} =	420.47	in ³
C _{right} =	12.1875	in	A =	45.6719	in ²	C _{right} =	12.1875	in	A =	45.6719	in ²
C _{left} =	12.1875	in	r _y =	10.5926	in	C _{left} =	12.1875	in	r _y =	10.5926	in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

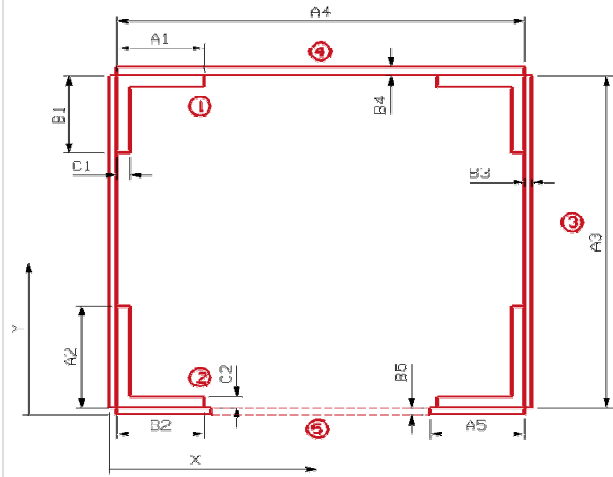
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.5625$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member U24-U25

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x, gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.7537	345.3724	345.3927
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.7537	219.2547	221.8662
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	13.9338	485.3785	485.3988
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	11.9338	328.2246	330.8361
3	Plate	29.2500	13.3750	391.2188	1647.7500	1.0901	34.7565	1682.5065
4	Plate	8.8125	26.5625	234.0820	0.1033	12.0974	1289.6897	1289.7930
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.2776	917.3208	917.3735
Total		52.17		754.67	1653.17		3620.00	5273.17
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.4651 in	S _{top} =	429.24 in ³	y-bar =	14.4651 in	S _{top} =	429.24 in ³
I _x =	5273.17 in ⁴	S _{bott.} =	364.54 in ³	I _x =	5273.17 in ⁴	S _{bott.} =	364.54 in ³
C _{top} =	12.2849 in	A =	52.1719 in ²	C _{top} =	12.2849 in	A =	52.1719 in ²
C _{bottom} =	14.4651 in	r _x =	10.0535 in	C _{bottom} =	14.4651 in	r _x =	10.0535 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.5625	3.2031	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.7188	0.8282	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	22.0625	27.5781	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.9063	27.5482	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.5625	3.2031	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.7188	0.8282	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	22.0625	27.5781	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.9063	27.5482	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	14.6250	0.2813	4.1133	0.3856	12.0313	2116.9830	2117.3687	
3 (Right)	Plate	14.6250	24.3438	356.0273	0.3856	12.0313	2116.9830	2117.3687	
4	Plate	8.8125	12.3125	108.5039	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.5625	8.0156	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	21.0625	47.3906	6.7500	8.7500	172.2656	179.0156	
Total		52.17		642.37	426.53		5673.38	6099.91	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3125 in	S _{right} =	495.42 in ³	x-bar =	12.3125 in	S _{right} =	495.42 in ³
I _y =	6099.91 in ⁴	S _{left} =	495.42 in ³	I _y =	6099.91 in ⁴	S _{left} =	495.42 in ³
C _{right} =	12.3125 in	A =	52.1719 in ²	C _{right} =	12.3125 in	A =	52.1719 in ²
C _{left} =	12.3125 in	r _y =	10.8129 in	C _{left} =	12.3125 in	r _y =	10.8129 in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

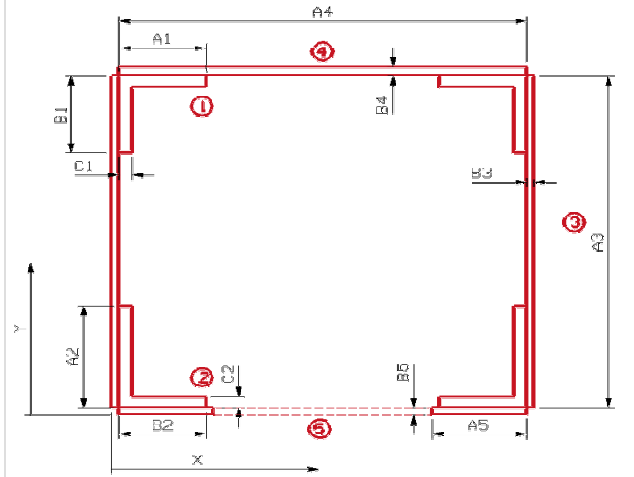
Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:
 $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.5625$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member U25-U26

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x, gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.7537	345.3724	345.3927
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.7537	219.2547	221.8662
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	13.9338	485.3785	485.3988
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	11.9338	328.2246	330.8361
3	Plate	29.2500	13.3750	391.2188	1647.7500	1.0901	34.7565	1682.5065
4	Plate	8.8125	26.5625	234.0820	0.1033	12.0974	1289.6897	1289.7930
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.2776	917.3208	917.3735
Total		52.17		754.67	1653.17		3620.00	5273.17
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.4651 in	S _{top} =	429.24 in ³	y-bar =	14.4651 in	S _{top} =	429.24 in ³
I _x =	5273.17 in ⁴	S _{bott.} =	364.54 in ³	I _x =	5273.17 in ⁴	S _{bott.} =	364.54 in ³
C _{top} =	12.2849 in	A =	52.1719 in ²	C _{top} =	12.2849 in	A =	52.1719 in ²
C _{bottom} =	14.4651 in	r _x =	10.0535 in	C _{bottom} =	14.4651 in	r _x =	10.0535 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.5625	3.2031	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.7188	0.8282	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	22.0625	27.5781	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.9063	27.5482	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.5625	3.2031	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.7188	0.8282	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	22.0625	27.5781	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.9063	27.5482	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	14.6250	0.2813	4.1133	0.3856	12.0313	2116.9830	2117.3687	
3 (Right)	Plate	14.6250	24.3438	356.0273	0.3856	12.0313	2116.9830	2117.3687	
4	Plate	8.8125	12.3125	108.5039	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.5625	8.0156	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	21.0625	47.3906	6.7500	8.7500	172.2656	179.0156	
Total		52.17		642.37	426.53		5673.38	6099.91	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3125 in	S _{right} =	495.42 in ³	x-bar =	12.3125 in	S _{right} =	495.42 in ³
I _y =	6099.91 in ⁴	S _{left} =	495.42 in ³	I _y =	6099.91 in ⁴	S _{left} =	495.42 in ³
C _{right} =	12.3125 in	A =	52.1719 in ²	C _{right} =	12.3125 in	A =	52.1719 in ²
C _{left} =	12.3125 in	r _y =	10.8129 in	C _{left} =	12.3125 in	r _y =	10.8129 in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

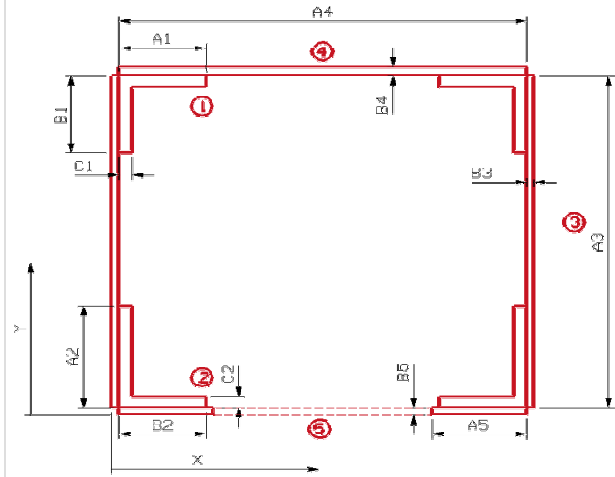
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.5625$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member U26-U27

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x, gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.7537	345.3724	345.3927
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.7537	219.2547	221.8662
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	13.9338	485.3785	485.3988
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	11.9338	328.2246	330.8361
3	Plate	29.2500	13.3750	391.2188	1647.7500	1.0901	34.7565	1682.5065
4	Plate	8.8125	26.5625	234.0820	0.1033	12.0974	1289.6897	1289.7930
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.2776	917.3208	917.3735
Total		52.17		754.67	1653.17		3620.00	5273.17
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.4651 in	S _{top} =	429.24 in ³	y-bar =	14.4651 in	S _{top} =	429.24 in ³
I _x =	5273.17 in ⁴	S _{bott.} =	364.54 in ³	I _x =	5273.17 in ⁴	S _{bott.} =	364.54 in ³
C _{top} =	12.2849 in	A =	52.1719 in ²	C _{top} =	12.2849 in	A =	52.1719 in ²
C _{bottom} =	14.4651 in	r _x =	10.0535 in	C _{bottom} =	14.4651 in	r _x =	10.0535 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.5625	3.2031	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.7188	0.8282	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	22.0625	27.5781	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.9063	27.5482	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.5625	3.2031	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.7188	0.8282	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	22.0625	27.5781	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.9063	27.5482	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	14.6250	0.2813	4.1133	0.3856	12.0313	2116.9830	2117.3687	
3 (Right)	Plate	14.6250	24.3438	356.0273	0.3856	12.0313	2116.9830	2117.3687	
4	Plate	8.8125	12.3125	108.5039	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.5625	8.0156	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	21.0625	47.3906	6.7500	8.7500	172.2656	179.0156	
Total		52.17		642.37	426.53		5673.38	6099.91	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3125 in	S _{right} =	495.42 in ³	x-bar =	12.3125 in	S _{right} =	495.42 in ³
I _y =	6099.91 in ⁴	S _{left} =	495.42 in ³	I _y =	6099.91 in ⁴	S _{left} =	495.42 in ³
C _{right} =	12.3125 in	A =	52.1719 in ²	C _{right} =	12.3125 in	A =	52.1719 in ²
C _{left} =	12.3125 in	r _y =	10.8129 in	C _{left} =	12.3125 in	r _y =	10.8129 in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member U27-U28

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5985	336.3153	336.3356
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5985	212.3354	214.9469
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.0890	496.2470	496.2674
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.0890	336.8139	339.4254
3	Plate	22.7500	13.3750	304.2813	1281.5833	1.2452	35.2750	1316.8583
4	Plate	8.8125	26.5625	234.0820	0.1033	11.9423	1256.8236	1256.9269
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.4327	937.3641	937.4168
Total		45.67		667.73	1287.00		3611.17	4898.18
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.6202 in	S _{top} =	403.81 in ³	y-bar =	14.6202 in	S _{top} =	403.81 in ³
I _x =	4898.18 in ⁴	S _{bott.} =	335.03 in ³	I _x =	4898.18 in ⁴	S _{bott.} =	335.03 in ³
C _{top} =	12.1298 in	A =	45.6719 in ²	C _{top} =	12.1298 in	A =	45.6719 in ²
C _{bottom} =	14.6202 in	r _x =	10.3560 in	C _{bottom} =	14.6202 in	r _x =	10.3560 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.4375	7.7344	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.9375	47.1094	6.7500	8.7500	172.2656	179.0156	
Total		45.67		556.63	426.13		4698.37	5124.50	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	420.47 in ³	x-bar =	12.1875 in	S _{right} =	420.47 in ³
I _y =	5124.50 in ⁴	S _{left} =	420.47 in ³	I _y =	5124.50 in ⁴	S _{left} =	420.47 in ³
C _{right} =	12.1875 in	A =	45.6719 in ²	C _{right} =	12.1875 in	A =	45.6719 in ²
C _{left} =	12.1875 in	r _y =	10.5926 in	C _{left} =	12.1875 in	r _y =	10.5926 in



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_f = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3125$ in

Top Cover Plate:

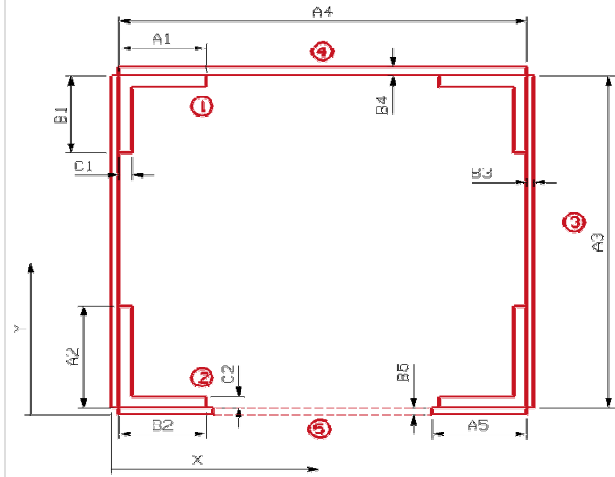
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member U28-U29

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5031	330.8057	330.8260
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5031	208.1357	210.7472
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.1844	502.9900	503.0104
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.1844	342.1506	344.7621
3	Plate	19.5000	13.3750	260.8125	1098.5000	1.3406	35.0460	1133.5460
4	Plate	8.8125	26.5625	234.0820	0.1033	11.8469	1236.8243	1236.9276
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.5281	949.7966	949.8493
Total		42.42		624.26	1103.92		3605.75	4709.67
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.7156 in	S _{top} =	391.35 in ³	y-bar =	14.7156 in	S _{top} =	391.35 in ³
I _x =	4709.67 in ⁴	S _{bot.} =	320.05 in ³	I _x =	4709.67 in ⁴	S _{bot.} =	320.05 in ³
C _{top} =	12.0344 in	A =	42.4219 in ²	C _{top} =	12.0344 in	A =	42.4219 in ²
C _{bottom} =	14.7156 in	r _x =	10.5366 in	C _{bottom} =	14.7156 in	r _x =	10.5366 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	9.7500	0.1875	1.8281	0.1143	11.9375	1389.4131	1389.5273	
3 (Right)	Plate	9.7500	24.0625	234.6094	0.1143	11.9375	1389.4131	1389.5273	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.3750	7.5938	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.8750	46.9688	6.7500	8.7500	172.2656	179.0156	
Total		42.42		514.37	425.99		4218.24	4644.23	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	383.03 in ³	x-bar =	12.1250 in	S _{right} =	383.03 in ³
I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³	I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³
C _{right} =	12.1250 in	A =	42.4219 in ²	C _{right} =	12.1250 in	A =	42.4219 in ²
C _{left} =	12.1250 in	r _y =	10.4631 in	C _{left} =	12.1250 in	r _y =	10.4631 in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member U29-U30

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5031	330.8057	330.8260
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5031	208.1357	210.7472
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.1844	502.9900	503.0104
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.1844	342.1506	344.7621
3	Plate	19.5000	13.3750	260.8125	1098.5000	1.3406	35.0460	1133.5460
4	Plate	8.8125	26.5625	234.0820	0.1033	11.8469	1236.8243	1236.9276
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.5281	949.7966	949.8493
Total		42.42		624.26	1103.92		3605.75	4709.67
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.7156 in	S _{top} =	391.35 in ³	y-bar =	14.7156 in	S _{top} =	391.35 in ³
I _x =	4709.67 in ⁴	S _{bot.} =	320.05 in ³	I _x =	4709.67 in ⁴	S _{bot.} =	320.05 in ³
C _{top} =	12.0344 in	A =	42.4219 in ²	C _{top} =	12.0344 in	A =	42.4219 in ²
C _{bottom} =	14.7156 in	r _x =	10.5366 in	C _{bottom} =	14.7156 in	r _x =	10.5366 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	9.7500	0.1875	1.8281	0.1143	11.9375	1389.4131	1389.5273	
3 (Right)	Plate	9.7500	24.0625	234.6094	0.1143	11.9375	1389.4131	1389.5273	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.3750	7.5938	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.8750	46.9688	6.7500	8.7500	172.2656	179.0156	
Total		42.42		514.37	425.99		4218.24	4644.23	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	383.03 in ³	x-bar =	12.1250 in	S _{right} =	383.03 in ³
I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³	I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³
C _{right} =	12.1250 in	A =	42.4219 in ²	C _{right} =	12.1250 in	A =	42.4219 in ²
C _{left} =	12.1250 in	r _y =	10.4631 in	C _{left} =	12.1250 in	r _y =	10.4631 in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

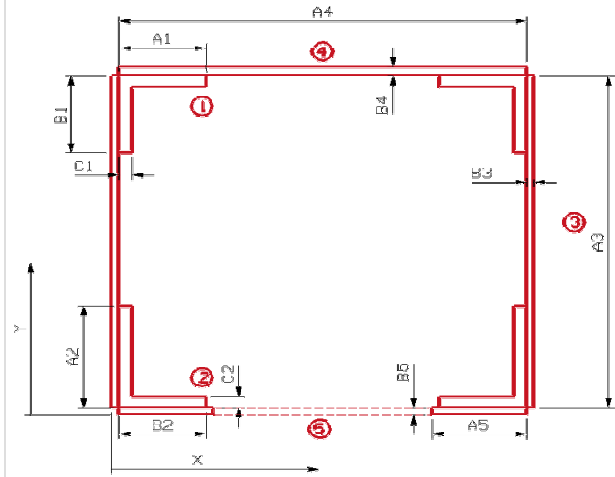
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member U30-U31

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5985	336.3153	336.3356
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5985	212.3354	214.9469
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.0890	496.2470	496.2674
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.0890	336.8139	339.4254
3	Plate	22.7500	13.3750	304.2813	1281.5833	1.2452	35.2750	1316.8583
4	Plate	8.8125	26.5625	234.0820	0.1033	11.9423	1256.8236	1256.9269
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.4327	937.3641	937.4168
Total		45.67		667.73	1287.00		3611.17	4898.18
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	14.6202	in	S _{top} =	403.81	in ³	y-bar =	14.6202	in	S _{top} =	403.81	in ³
I _x =	4898.18	in ⁴	S _{bott.} =	335.03	in ³	I _x =	4898.18	in ⁴	S _{bott.} =	335.03	in ³
C _{top} =	12.1298	in	A =	45.6719	in ²	C _{top} =	12.1298	in	A =	45.6719	in ²
C _{bottom} =	14.6202	in	r _x =	10.3560	in	C _{bottom} =	14.6202	in	r _x =	10.3560	in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.4375	7.7344	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.9375	47.1094	6.7500	8.7500	172.2656	179.0156	
Total		45.67		556.63	426.13		4698.37	5124.50	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.1875	in	S _{right} =	420.47	in ³	x-bar =	12.1875	in	S _{right} =	420.47	in ³
I _y =	5124.50	in ⁴	S _{left} =	420.47	in ³	I _y =	5124.50	in ⁴	S _{left} =	420.47	in ³
C _{right} =	12.1875	in	A =	45.6719	in ²	C _{right} =	12.1875	in	A =	45.6719	in ²
C _{left} =	12.1875	in	r _y =	10.5926	in	C _{left} =	12.1875	in	r _y =	10.5926	in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

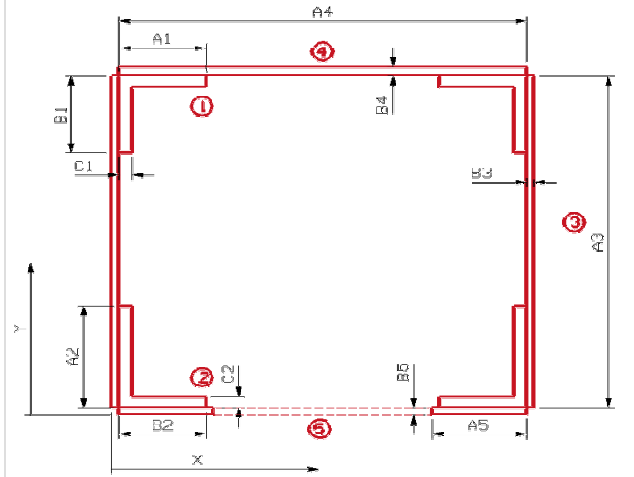
Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:
 $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member U31-U32

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5985	336.3153	336.3356
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5985	212.3354	214.9469
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.0890	496.2470	496.2674
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.0890	336.8139	339.4254
3	Plate	22.7500	13.3750	304.2813	1281.5833	1.2452	35.2750	1316.8583
4	Plate	8.8125	26.5625	234.0820	0.1033	11.9423	1256.8236	1256.9269
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.4327	937.3641	937.4168
Total		45.67		667.73	1287.00		3611.17	4898.18
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	14.6202	in	S _{top} =	403.81	in ³	y-bar =	14.6202	in	S _{top} =	403.81	in ³
I _x =	4898.18	in ⁴	S _{bott.} =	335.03	in ³	I _x =	4898.18	in ⁴	S _{bott.} =	335.03	in ³
C _{top} =	12.1298	in	A =	45.6719	in ²	C _{top} =	12.1298	in	A =	45.6719	in ²
C _{bottom} =	14.6202	in	r _x =	10.3560	in	C _{bottom} =	14.6202	in	r _x =	10.3560	in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.4375	7.7344	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.9375	47.1094	6.7500	8.7500	172.2656	179.0156	
Total		45.67		556.63	426.13		4698.37	5124.50	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
x-bar =	12.1875	in	S _{right} =	420.47	in ³	x-bar =	12.1875	in	S _{right} =	420.47	in ³
I _y =	5124.50	in ⁴	S _{left} =	420.47	in ³	I _y =	5124.50	in ⁴	S _{left} =	420.47	in ³
C _{right} =	12.1875	in	A =	45.6719	in ²	C _{right} =	12.1875	in	A =	45.6719	in ²
C _{left} =	12.1875	in	r _y =	10.5926	in	C _{left} =	12.1875	in	r _y =	10.5926	in



Made By KMW
Checked By ADK

Date 1/30/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.4375$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.4375$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.4375$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5625$ in



Member U32-U33

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	5.2500	26.3438	138.3047	0.0837	12.0530	762.6896	762.7733	
	Vertical Leg	6.6172	22.3438	147.8528	31.5372	8.0530	429.1273	460.6645	
2	Horizontal Leg	5.2500	0.7813	4.1016	0.0837	13.5095	958.1631	958.2469	
	Vertical Leg	6.6172	4.7813	31.6384	31.5372	9.5095	598.3993	629.9365	
3	Plate	22.7500	13.5625	308.5469	1281.5833	0.7283	12.0662	1293.6496	
4	Plate	10.2813	26.7813	275.3447	0.1640	12.4905	1603.9980	1604.1620	
5	Perforated Plate	6.7500	0.2813	1.8984	0.1780	14.0095	1324.8008	1324.9788	
Total		63.52		907.69	1345.17		5689.24	7034.41	
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	
1	0.1875	6.0000	-1.1250	23.5625	-26.5078	-3.3750	9.3737	-98.8486	-102.2236
2	0.2500	26.0000	-6.5000	13.5625	-88.1563	-366.1667	0.6263	-2.5500	-368.7167
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-7.63	-114.66	-369.54		-101.40	-470.94	



Made By KMW
Checked By ADK

Date 1/30/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.2908 in	S _{top} =	553.49 in ³	y-bar =	14.1888 in	S _{top} =	512.32 in ³
I _x =	7034.41 in ⁴	S _{bott.} =	492.23 in ³	I _x =	6563.47 in ⁴	S _{bott.} =	462.58 in ³
C _{top} =	12.7092 in	A =	63.5156 in ²	C _{top} =	12.8112 in	A =	55.8906 in ²
C _{bottom} =	14.2908 in	r _x =	10.5238 in	C _{bottom} =	14.1888 in	r _x =	10.8367 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.4375	9.0234	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	20.9375	54.9609	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.4375	9.0234	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	20.9375	54.9609	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	10.2813	12.1875	125.3027	473.1517	0.0000	0.0000	473.1517	
5 (Left)	Perforated Plate	3.3750	3.4375	11.6016	10.1250	8.7500	258.3984	268.5234	
5 (Right)	Perforated Plate	3.3750	20.9375	70.6641	10.1250	8.7500	258.3984	268.5234	
Total		63.52		774.10	525.48		6339.43	6864.91	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	6.0000	0.1875	-1.1250	0.0938	-0.1055	-0.0033	10.9343	-134.5045	-134.5078
2	26.0000	0.2500	-6.5000	24.2500	-157.6250	-0.0339	13.2219	-1136.3248	-1136.3587
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-7.63		-157.73	-0.04		-1270.83	-1270.87

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	563.27 in ³	x-bar =	11.0281 in	S _{right} =	419.13 in ³
I _y =	6864.91 in ⁴	S _{left} =	563.27 in ³	I _y =	5594.04 in ⁴	S _{left} =	507.25 in ³
C _{right} =	12.1875 in	A =	63.5156 in ²	C _{right} =	13.3469 in	A =	55.8906 in ²
C _{left} =	12.1875 in	r _y =	10.3963 in	C _{left} =	11.0281 in	r _y =	10.0045 in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.4375$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_f = 0.4375$ in

Top Cover Plate:

$A_4 = b = 22.0000$ in
 $B_4 = t = 0.5625$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.9375$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.6250$ in



Member U33-U34

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.2500	26.4063	138.6328	0.0837	11.9391	748.3443	748.4281
	Vertical Leg	6.6172	22.4063	148.2664	31.5372	7.9391	417.0753	448.6125
2	Horizontal Leg	5.2500	0.8438	4.4297	0.0837	13.6234	974.3864	974.4701
	Vertical Leg	6.6172	4.8438	32.0520	31.5372	9.6234	612.8183	644.3555
3	Plate	48.7500	13.6250	664.2188	2746.2500	0.8422	34.5754	2780.8254
4	Plate	12.3750	26.9063	332.9648	0.3263	12.4391	1914.7945	1915.1208
5	Perforated Plate	6.5625	0.3125	2.0508	0.2136	14.1547	1314.8264	1315.0401
Total		91.42		1322.62	2810.03		6016.82	8826.85
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.4672 in	S _{top} =	693.92 in ³	y-bar =	14.4672 in	S _{top} =	693.92 in ³
I _x =	8826.85 in ⁴	S _{bott.} =	610.13 in ³	I _x =	8826.85 in ⁴	S _{bott.} =	610.13 in ³
C _{top} =	12.7203 in	A =	91.4219 in ²	C _{top} =	12.7203 in	A =	91.4219 in ²
C _{bottom} =	14.4672 in	r _x =	9.8260 in	C _{bottom} =	14.4672 in	r _x =	9.8260 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.9375	10.3359	7.8750	8.0000	168.0000	175.8750	
	Vertical Leg	3.3086	1.1563	3.8256	0.0528	10.7813	384.5756	384.6283	
1 (Right)	Horizontal Leg	2.6250	19.9375	52.3359	7.8750	8.0000	168.0000	175.8750	
	Vertical Leg	3.3086	22.7188	75.1671	0.0528	10.7813	384.5756	384.6283	
2 (Left)	Horizontal Leg	2.6250	3.9375	10.3359	7.8750	8.0000	168.0000	175.8750	
	Vertical Leg	3.3086	1.1563	3.8256	0.0528	10.7813	384.5756	384.6283	
2 (Right)	Horizontal Leg	2.6250	19.9375	52.3359	7.8750	8.0000	168.0000	175.8750	
	Vertical Leg	3.3086	22.7188	75.1671	0.0528	10.7813	384.5756	384.6283	
3 (Left)	Plate	24.3750	0.4688	11.4258	1.7853	11.4688	3206.0980	3207.8833	
3 (Right)	Plate	24.3750	23.4063	570.5273	1.7853	11.4688	3206.0980	3207.8833	
4	Plate	12.3750	11.9375	147.7266	499.1250	0.0000	0.0000	499.1250	
5 (Left)	Perforated Plate	3.2813	3.5625	11.6895	7.5366	8.3750	230.1489	237.6855	
5 (Right)	Perforated Plate	3.2813	20.3125	66.6504	7.5366	8.3750	230.1489	237.6855	
Total		91.42		1091.35	549.48		9082.80	9632.28	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	11.9375 in	S _{right} =	806.89 in ³	x-bar =	11.9375 in	S _{right} =	806.89 in ³
I _y =	9632.28 in ⁴	S _{left} =	806.89 in ³	I _y =	9632.28 in ⁴	S _{left} =	806.89 in ³
C _{right} =	11.9375 in	A =	91.4219 in ²	C _{right} =	11.9375 in	A =	91.4219 in ²
C _{left} =	11.9375 in	r _y =	10.2645 in	C _{left} =	11.9375 in	r _y =	10.2645 in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6875$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6875$ in

Top Cover Plate:

$A_4 = b = 22.0000$ in
 $B_4 = t = 0.5625$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.8750$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.6875$ in



Member U34-U35

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	8.2500	26.3438	217.3359	0.3250	11.9873	1185.4946	1185.8195
	Vertical Leg	10.0547	22.3438	224.6594	44.8042	7.9873	641.4649	686.2691
2	Horizontal Leg	8.2500	1.0313	8.5078	0.3250	13.3252	1464.8692	1465.1941
	Vertical Leg	10.0547	5.0313	50.5876	44.8042	9.3252	874.3417	919.1459
3	Plate	45.5000	13.6875	622.7813	2563.1667	0.6689	20.3586	2583.5252
4	Plate	12.3750	26.9688	333.7383	0.3263	12.6123	1968.5050	1968.8313
5	Perforated Plate	7.2188	0.3438	2.4814	0.2843	14.0127	1417.4351	1417.7195
Total		101.70		1460.09	2654.04		7572.47	10226.50
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.3564 in	S _{top} =	793.15 in ³	y-bar =	14.3564 in	S _{top} =	793.15 in ³
I _x =	10226.50 in ⁴	S _{bottom} =	712.33 in ³	I _x =	10226.50 in ⁴	S _{bottom} =	712.33 in ³
C _{top} =	12.8936 in	A =	101.7031 in ²	C _{top} =	12.8936 in	A =	101.7031 in ²
C _{bottom} =	14.3564 in	r _x =	10.0276 in	C _{bottom} =	14.3564 in	r _x =	10.0276 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	3.8750	15.9844	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.2188	6.1271	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	19.8750	81.9844	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.5313	113.2723	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	3.8750	15.9844	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.2188	6.1271	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	19.8750	81.9844	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.5313	113.2723	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	22.7500	0.4375	9.9531	1.4515	11.4375	2976.0732	2977.5247	
3 (Right)	Plate	22.7500	23.3125	530.3594	1.4515	11.4375	2976.0732	2977.5247	
4	Plate	12.3750	11.8750	146.9531	499.1250	0.0000	0.0000	499.1250	
5 (Left)	Perforated Plate	3.6094	3.5000	12.6328	8.2903	8.3750	253.1638	261.4541	
5 (Right)	Perforated Plate	3.6094	20.2500	73.0898	8.2903	8.3750	253.1638	261.4541	
Total		101.70		1207.72	568.90		9798.01	10366.91	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	11.8750 in	S _{right} =	873.00 in ³	x-bar =	11.8750 in	S _{right} =	873.00 in ³
I _y =	10366.91 in ⁴	S _{left} =	873.00 in ³	I _y =	10366.91 in ⁴	S _{left} =	873.00 in ³
C _{right} =	11.8750 in	A =	101.7031 in ²	C _{right} =	11.8750 in	A =	101.7031 in ²
C _{left} =	11.8750 in	r _y =	10.0962 in	C _{left} =	11.8750 in	r _y =	10.0962 in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No.

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

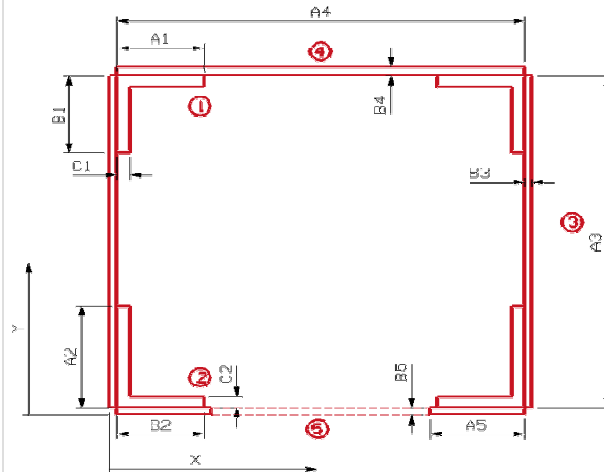
Top Angles: $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6875$ in

Bottom Angles: $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6875$ in

Top Cover Plate:
 $A_4 = b = 22.0000$ in
 $B_4 = t = 0.5625$ in

Web Plate 1: $A_3 = b = 26.0000$ in
 $B_3 = t = 0.8750$ in

Perforated Cover Plate
 $A_5 = b = 5.2500$ in
 $B_5 = t = 0.6875$ in



Member U35-U36

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg		8.2500	26.3438	217.3359	0.3250	11.9873	1185.4946	1185.8195
	Vertical Leg		10.0547	22.3438	224.6594	44.8042	7.9873	641.4649	686.2691
2	Horizontal Leg		8.2500	1.0313	8.5078	0.3250	13.3252	1464.8692	1465.1941
	Vertical Leg		10.0547	5.0313	50.5876	44.8042	9.3252	874.3417	919.1459
3	Plate		45.5000	13.6875	622.7813	2563.1667	0.6689	20.3586	2583.5252
4	Plate		12.3750	26.9688	333.7383	0.3263	12.6123	1968.5050	1968.8313
5	Perforated Plate		7.2188	0.3438	2.4814	0.2843	14.0127	1417.4351	1417.7195
Total			101.70		1460.09	2654.04		7572.47	10226.50
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.3564 in	S _{top} =	793.15 in ³	y-bar =	14.3564 in	S _{top} =	793.15 in ³
I _x =	10226.50 in ⁴	S _{bottom} =	712.33 in ³	I _x =	10226.50 in ⁴	S _{bottom} =	712.33 in ³
C _{top} =	12.8936 in	A =	101.7031 in ²	C _{top} =	12.8936 in	A =	101.7031 in ²
C _{bottom} =	14.3564 in	r _x =	10.0276 in	C _{bottom} =	14.3564 in	r _x =	10.0276 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	3.8750	15.9844	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.2188	6.1271	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	19.8750	81.9844	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.5313	113.2723	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	3.8750	15.9844	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.2188	6.1271	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	19.8750	81.9844	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.5313	113.2723	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	22.7500	0.4375	9.9531	1.4515	11.4375	2976.0732	2977.5247	
3 (Right)	Plate	22.7500	23.3125	530.3594	1.4515	11.4375	2976.0732	2977.5247	
4	Plate	12.3750	11.8750	146.9531	499.1250	0.0000	0.0000	499.1250	
5 (Left)	Perforated Plate	3.6094	3.5000	12.6328	8.2903	8.3750	253.1638	261.4541	
5 (Right)	Perforated Plate	3.6094	20.2500	73.0898	8.2903	8.3750	253.1638	261.4541	
Total		101.70		1207.72	568.90		9798.01	10366.91	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	11.8750 in	S _{right} =	873.00 in ³	x-bar =	11.8750 in	S _{right} =	873.00 in ³
I _y =	10366.91 in ⁴	S _{left} =	873.00 in ³	I _y =	10366.91 in ⁴	S _{left} =	873.00 in ³
C _{right} =	11.8750 in	A =	101.7031 in ²	C _{right} =	11.8750 in	A =	101.7031 in ²
C _{left} =	11.8750 in	r _y =	10.0962 in	C _{left} =	11.8750 in	r _y =	10.0962 in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

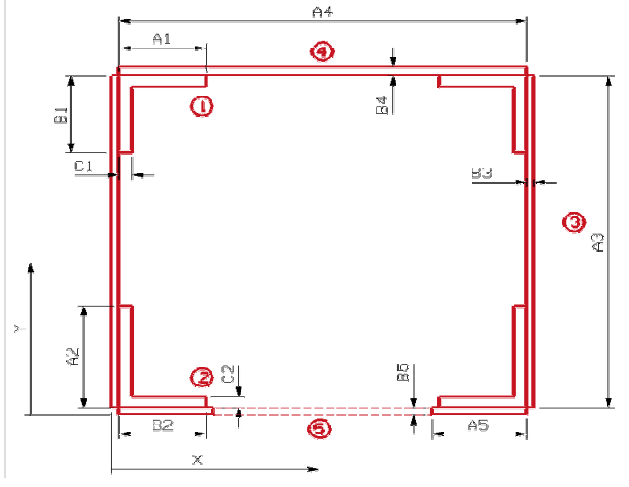
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.4375$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_f = 0.4375$ in

Top Cover Plate:
 $A_4 = b = 22.0000$ in
 $B_4 = t = 0.5000$ in

Web Plate 1:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.8750$ in

Perforated Cover Plate
 $A_5 = b = 5.2500$ in
 $B_5 = t = 0.6250$ in



Member U36-U37

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.2500	26.4063	138.6328	0.0837	12.1086	769.7414	769.8252
	Vertical Leg	6.6172	22.4063	148.2664	31.5372	8.1086	435.0726	466.6098
2	Horizontal Leg	5.2500	0.8438	4.4297	0.0837	13.4539	950.2935	950.3773
	Vertical Leg	6.6172	4.8438	32.0520	31.5372	9.4539	591.4233	622.9605
3	Plate	45.5000	13.6250	619.9375	2563.1667	0.6727	20.5888	2583.7555
4	Plate	11.0000	26.8750	295.6250	0.2292	12.5773	1740.0781	1740.3073
5	Perforated Plate	6.5625	0.3125	2.0508	0.2136	13.9852	1283.5287	1283.7423
Total		86.80		1240.99	2626.85		5790.73	8417.58
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.2977 in	S _{top} =	656.22 in ³	y-bar =	14.2977 in	S _{top} =	656.22 in ³
I _x =	8417.58 in ⁴	S _{bott.} =	588.74 in ³	I _x =	8417.58 in ⁴	S _{bott.} =	588.74 in ³
C _{top} =	12.8273 in	A =	86.7969 in ²	C _{top} =	12.8273 in	A =	86.7969 in ²
C _{bottom} =	14.2977 in	r _x =	9.8479 in	C _{bottom} =	14.2977 in	r _x =	9.8479 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.8750	10.1719	7.8750	8.0000	168.0000	175.8750	
	Vertical Leg	3.3086	1.0938	3.6188	0.0528	10.7813	384.5756	384.6283	
1 (Right)	Horizontal Leg	2.6250	19.8750	52.1719	7.8750	8.0000	168.0000	175.8750	
	Vertical Leg	3.3086	22.6563	74.9603	0.0528	10.7813	384.5756	384.6283	
2 (Left)	Horizontal Leg	2.6250	3.8750	10.1719	7.8750	8.0000	168.0000	175.8750	
	Vertical Leg	3.3086	1.0938	3.6188	0.0528	10.7813	384.5756	384.6283	
2 (Right)	Horizontal Leg	2.6250	19.8750	52.1719	7.8750	8.0000	168.0000	175.8750	
	Vertical Leg	3.3086	22.6563	74.9603	0.0528	10.7813	384.5756	384.6283	
3 (Left)	Plate	22.7500	0.4375	9.9531	1.4515	11.4375	2976.0732	2977.5247	
3 (Right)	Plate	22.7500	23.3125	530.3594	1.4515	11.4375	2976.0732	2977.5247	
4	Plate	11.0000	11.8750	130.6250	443.6667	0.0000	0.0000	443.6667	
5 (Left)	Perforated Plate	3.2813	3.5000	11.4844	7.5366	8.3750	230.1489	237.6855	
5 (Right)	Perforated Plate	3.2813	20.2500	66.4453	7.5366	8.3750	230.1489	237.6855	
Total		86.80		1030.71	493.35		8622.75	9116.10	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	11.8750 in	S _{right} =	767.67 in ³	x-bar =	11.8750 in	S _{right} =	767.67 in ³
I _y =	9116.10 in ⁴	S _{left} =	767.67 in ³	I _y =	9116.10 in ⁴	S _{left} =	767.67 in ³
C _{right} =	11.8750 in	A =	86.7969 in ²	C _{right} =	11.8750 in	A =	86.7969 in ²
C _{left} =	11.8750 in	r _y =	10.2483 in	C _{left} =	11.8750 in	r _y =	10.2483 in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.4375$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.4375$ in

Top Cover Plate:

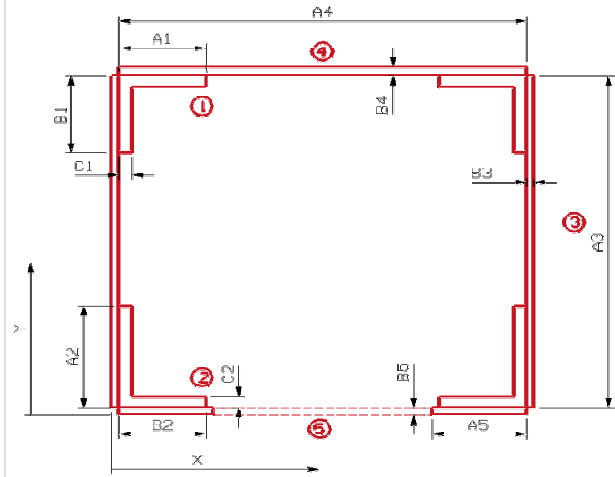
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.4375$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member U37-U38

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.2500	26.2813	137.9766	0.0837	11.8826	741.2781	741.3618
	Vertical Leg	6.6172	22.2813	147.4392	31.5372	7.8826	411.1599	442.6971
2	Horizontal Leg	5.2500	0.7188	3.7734	0.0837	13.6799	982.4854	982.5691
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	9.6799	620.0355	651.5727
3	Plate	22.7500	13.5000	307.1250	1281.5833	0.8987	18.3729	1299.9562
4	Plate	10.2813	26.7188	274.7021	0.1640	12.3201	1560.5343	1560.6983
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	14.1487	1201.1083	1201.2333
Total		62.77		903.74	1345.11		5534.97	6880.09
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.3987 in	S _{top} =	548.70 in ³	y-bar =	14.3987 in	S _{top} =	548.70 in ³
I _x =	6880.09 in ⁴	S _{bottom} =	477.83 in ³	I _x =	6880.09 in ⁴	S _{bottom} =	477.83 in ³
C _{top} =	12.5388 in	A =	62.7656 in ²	C _{top} =	12.5388 in	A =	62.7656 in ²
C _{bottom} =	14.3987 in	r _x =	10.4697 in	C _{bottom} =	14.3987 in	r _x =	10.4697 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.4375	9.0234	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	20.9375	54.9609	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.4375	9.0234	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	20.9375	54.9609	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	10.2813	12.1875	125.3027	473.1517	0.0000	0.0000	473.1517	
5 (Left)	Perforated Plate	3.0000	3.4375	10.3125	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.9375	62.8125	9.0000	8.7500	229.6875	238.6875	
Total		62.77		764.96	523.23		6282.01	6805.24	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	558.38 in ³	x-bar =	12.1875 in	S _{right} =	558.38 in ³
I _y =	6805.24 in ⁴	S _{left} =	558.38 in ³	I _y =	6805.24 in ⁴	S _{left} =	558.38 in ³
C _{right} =	12.1875 in	A =	62.7656 in ²	C _{right} =	12.1875 in	A =	62.7656 in ²
C _{left} =	12.1875 in	r _y =	10.4126 in	C _{left} =	12.1875 in	r _y =	10.4126 in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 23.5000$ in
 $B_5 = t = 0.3750$ in



Member U38-U39

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	14.8203	549.1031	549.1234
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	12.8203	378.7985	381.4101
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	10.8672	295.2402	295.2605
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	8.8672	181.2113	183.8228
3	Plate	22.7500	13.3750	304.2813	1281.5833	1.9765	88.8784	1370.4617
4	Plate	8.8125	26.5625	234.0820	0.1033	15.1640	2026.4198	2026.5231
5	Perforated Plate	17.6250	0.1875	3.3047	0.2065	11.2110	2215.2060	2215.4125
Total		58.80		670.19	1287.16		5734.86	7022.01
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	11.3985 in	S _{top} =	457.41 in ³	y-bar =	11.3985 in	S _{top} =	457.41 in ³
I _x =	7022.01 in ⁴	S _{bott.} =	616.05 in ³	I _x =	7022.01 in ⁴	S _{bott.} =	616.05 in ³
C _{top} =	15.3515 in	A =	58.7969 in ²	C _{top} =	15.3515 in	A =	58.7969 in ²
C _{bottom} =	11.3985 in	r _x =	10.9283 in	C _{bottom} =	11.3985 in	r _x =	10.9283 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Right)	Perforated Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
Total		58.80		716.59	1223.74		4353.84	5577.58	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	457.65 in ³	x-bar =	12.1875 in	S _{right} =	457.65 in ³
I _y =	5577.58 in ⁴	S _{left} =	457.65 in ³	I _y =	5577.58 in ⁴	S _{left} =	457.65 in ³
C _{right} =	12.1875 in	A =	58.7969 in ²	C _{right} =	12.1875 in	A =	58.7969 in ²
C _{left} =	12.1875 in	r _y =	9.7397 in	C _{left} =	12.1875 in	r _y =	9.7397 in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 23.5000$ in
 $B_5 = t = 0.3750$ in



Member U39-U40

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	14.8203	549.1031	549.1234
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	12.8203	378.7985	381.4101
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	10.8672	295.2402	295.2605
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	8.8672	181.2113	183.8228
3	Plate	22.7500	13.3750	304.2813	1281.5833	1.9765	88.8784	1370.4617
4	Plate	8.8125	26.5625	234.0820	0.1033	15.1640	2026.4198	2026.5231
5	Perforated Plate	17.6250	0.1875	3.3047	0.2065	11.2110	2215.2060	2215.4125
Total		58.80		670.19	1287.16		5734.86	7022.01
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	11.3985 in	S _{top} =	457.41 in ³	y-bar =	11.3985 in	S _{top} =	457.41 in ³
I _x =	7022.01 in ⁴	S _{bott.} =	616.05 in ³	I _x =	7022.01 in ⁴	S _{bott.} =	616.05 in ³
C _{top} =	15.3515 in	A =	58.7969 in ²	C _{top} =	15.3515 in	A =	58.7969 in ²
C _{bottom} =	11.3985 in	r _x =	10.9283 in	C _{bottom} =	11.3985 in	r _x =	10.9283 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Right)	Perforated Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
Total		58.80		716.59	1223.74		4353.84	5577.58	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	457.65 in ³	x-bar =	12.1875 in	S _{right} =	457.65 in ³
I _y =	5577.58 in ⁴	S _{left} =	457.65 in ³	I _y =	5577.58 in ⁴	S _{left} =	457.65 in ³
C _{right} =	12.1875 in	A =	58.7969 in ²	C _{right} =	12.1875 in	A =	58.7969 in ²
C _{left} =	12.1875 in	r _y =	9.7397 in	C _{left} =	12.1875 in	r _y =	9.7397 in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

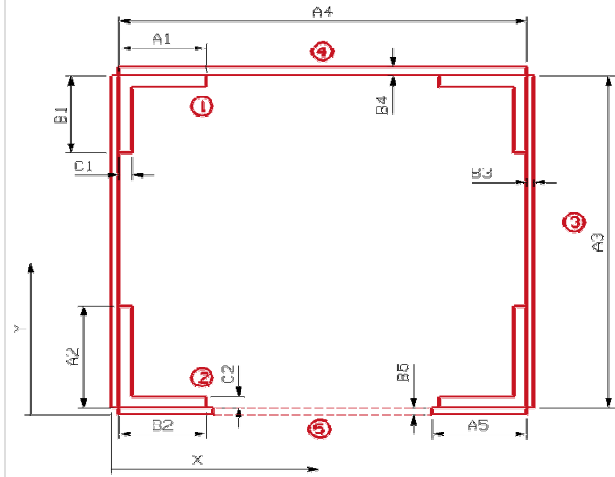
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member U40-U41

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5031	330.8057	330.8260
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5031	208.1357	210.7472
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.1844	502.9900	503.0104
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.1844	342.1506	344.7621
3	Plate	19.5000	13.3750	260.8125	1098.5000	1.3406	35.0460	1133.5460
4	Plate	8.8125	26.5625	234.0820	0.1033	11.8469	1236.8243	1236.9276
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.5281	949.7966	949.8493
Total		42.42		624.26	1103.92		3605.75	4709.67
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.7156 in	S _{top} =	391.35 in ³	y-bar =	14.7156 in	S _{top} =	391.35 in ³
I _x =	4709.67 in ⁴	S _{bot.} =	320.05 in ³	I _x =	4709.67 in ⁴	S _{bot.} =	320.05 in ³
C _{top} =	12.0344 in	A =	42.4219 in ²	C _{top} =	12.0344 in	A =	42.4219 in ²
C _{bottom} =	14.7156 in	r _x =	10.5366 in	C _{bottom} =	14.7156 in	r _x =	10.5366 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	9.7500	0.1875	1.8281	0.1143	11.9375	1389.4131	1389.5273	
3 (Right)	Plate	9.7500	24.0625	234.6094	0.1143	11.9375	1389.4131	1389.5273	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.3750	7.5938	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.8750	46.9688	6.7500	8.7500	172.2656	179.0156	
Total		42.42		514.37	425.99		4218.24	4644.23	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	383.03 in ³	x-bar =	12.1250 in	S _{right} =	383.03 in ³
I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³	I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³
C _{right} =	12.1250 in	A =	42.4219 in ²	C _{right} =	12.1250 in	A =	42.4219 in ²
C _{left} =	12.1250 in	r _y =	10.4631 in	C _{left} =	12.1250 in	r _y =	10.4631 in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

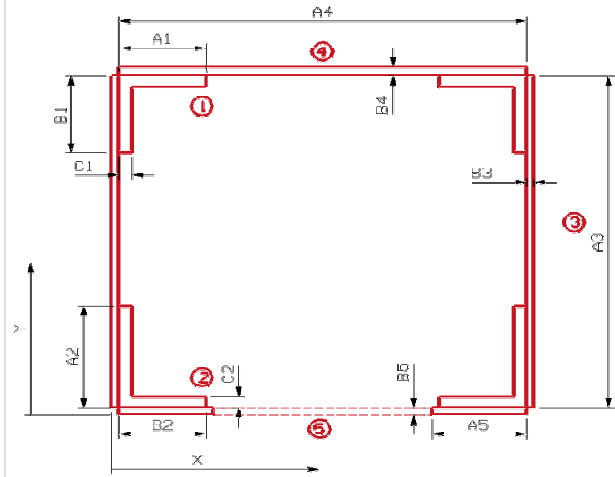
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member U41-U42

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5031	330.8057	330.8260
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5031	208.1357	210.7472
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.1844	502.9900	503.0104
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.1844	342.1506	344.7621
3	Plate	19.5000	13.3750	260.8125	1098.5000	1.3406	35.0460	1133.5460
4	Plate	8.8125	26.5625	234.0820	0.1033	11.8469	1236.8243	1236.9276
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.5281	949.7966	949.8493
Total		42.42		624.26	1103.92		3605.75	4709.67
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.7156 in	S _{top} =	391.35 in ³	y-bar =	14.7156 in	S _{top} =	391.35 in ³
I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³	I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³
C _{top} =	12.0344 in	A =	42.4219 in ²	C _{top} =	12.0344 in	A =	42.4219 in ²
C _{bottom} =	14.7156 in	r _x =	10.5366 in	C _{bottom} =	14.7156 in	r _x =	10.5366 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	9.7500	0.1875	1.8281	0.1143	11.9375	1389.4131	1389.5273	
3 (Right)	Plate	9.7500	24.0625	234.6094	0.1143	11.9375	1389.4131	1389.5273	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.3750	7.5938	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.8750	46.9688	6.7500	8.7500	172.2656	179.0156	
Total		42.42		514.37	425.99		4218.24	4644.23	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	383.03 in ³	x-bar =	12.1250 in	S _{right} =	383.03 in ³
I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³	I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³
C _{right} =	12.1250 in	A =	42.4219 in ²	C _{right} =	12.1250 in	A =	42.4219 in ²
C _{left} =	12.1250 in	r _y =	10.4631 in	C _{left} =	12.1250 in	r _y =	10.4631 in



Made By KMW
Checked By ADK

Date 2/2/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

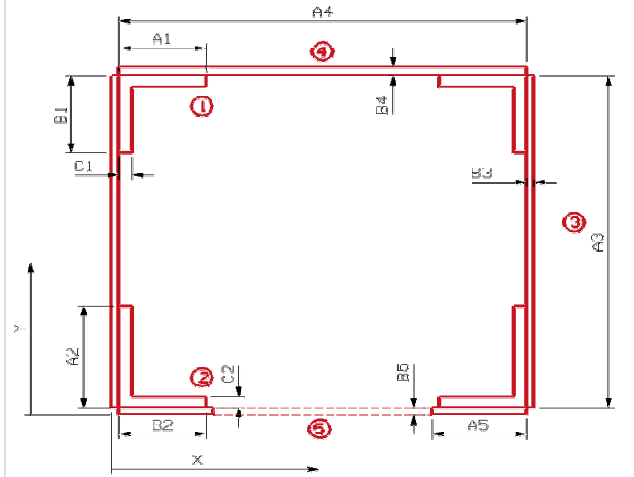
Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:
 $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member U42-U43

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x, gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5985	336.3153	336.3356
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5985	212.3354	214.9469
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.0890	496.2470	496.2674
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.0890	336.8139	339.4254
3	Plate	22.7500	13.3750	304.2813	1281.5833	1.2452	35.2750	1316.8583
4	Plate	8.8125	26.5625	234.0820	0.1033	11.9423	1256.8236	1256.9269
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.4327	937.3641	937.4168
Total		45.67		667.73	1287.00		3611.17	4898.18
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	23.5000	0.0625	-1.4688	26.7188	-39.2432	-0.0005	12.6068	-233.4308
2	0.0625	12.0000	-0.7500	20.3750	-15.2813	-9.0000	6.2631	-29.4194
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.22	-54.52	-9.00		-262.85	-271.85



Made By KMW
Checked By ADK

Date 2/2/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.6202 in	S _{top} =	403.81 in ³	y-bar =	14.1119 in	S _{top} =	366.06 in ³
I _x =	4898.18 in ⁴	S _{bott.} =	335.03 in ³	I _x =	4626.33 in ⁴	S _{bott.} =	327.83 in ³
C _{top} =	12.1298 in	A =	45.6719 in ²	C _{top} =	12.6381 in	A =	43.4531 in ²
C _{bottom} =	14.6202 in	r _x =	10.3560 in	C _{bottom} =	14.1119 in	r _x =	10.3183 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.4375	7.7344	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.9375	47.1094	6.7500	8.7500	172.2656	179.0156	
Total		45.67		556.63	426.13		4698.37	5124.50	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0625	23.5000	-1.4688	12.1875	-17.9004	-67.5931	0.2098	-0.0647	-67.6578
2	12.0000	0.0625	-0.7500	24.3438	-18.2578	-0.0002	12.3661	-114.6897	-114.6899
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.22		-36.16	-67.59		-114.75	-182.35

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	420.47 in ³	x-bar =	11.9777 in	S _{right} =	398.65 in ³
I _y =	5124.50 in ⁴	S _{left} =	420.47 in ³	I _y =	4942.15 in ⁴	S _{left} =	412.61 in ³
C _{right} =	12.1875 in	A =	45.6719 in ²	C _{right} =	12.3973 in	A =	43.4531 in ²
C _{left} =	12.1875 in	r _y =	10.5926 in	C _{left} =	11.9777 in	r _y =	10.6647 in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.4375$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.4375$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member U43-U44

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.5000	26.1563	91.5469	0.0558	11.7711	484.9517	485.0075
	Vertical Leg	6.6172	22.1563	146.6121	31.5372	7.7711	399.6068	431.1440
2	Horizontal Leg	3.5000	0.5938	2.0781	0.0558	13.7914	665.7143	665.7701
	Vertical Leg	6.6172	4.5938	30.3977	31.5372	9.7914	634.4062	665.9434
3	Plate	22.7500	13.3750	304.2813	1281.5833	1.0102	23.2165	1304.7998
4	Plate	8.8125	26.5625	234.0820	0.1033	12.1773	1306.7760	1306.8793
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.1977	907.0861	907.1388
Total		56.30		809.84	1344.93		4421.76	5766.68
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.3852 in	S _{top} =	466.38 in ³	y-bar =	14.3852 in	S _{top} =	466.38 in ³
I _x =	5766.68 in ⁴	S _{bott.} =	400.88 in ³	I _x =	5766.68 in ⁴	S _{bott.} =	400.88 in ³
C _{top} =	12.3648 in	A =	56.2969 in ²	C _{top} =	12.3648 in	A =	56.2969 in ²
C _{bottom} =	14.3852 in	r _x =	10.1209 in	C _{bottom} =	14.3852 in	r _x =	10.1209 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.7500	2.4375	4.2656	2.3333	9.7500	166.3594	168.6927	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	1.7500	21.9375	38.3906	2.3333	9.7500	166.3594	168.6927	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	1.7500	2.4375	4.2656	2.3333	9.7500	166.3594	168.6927	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	1.7500	21.9375	38.3906	2.3333	9.7500	166.3594	168.6927	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.4375	7.7344	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.9375	47.1094	6.7500	8.7500	172.2656	179.0156	
Total		56.30		686.12	428.97		6028.70	6457.67	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	529.86 in ³	x-bar =	12.1875 in	S _{right} =	529.86 in ³
I _y =	6457.67 in ⁴	S _{left} =	529.86 in ³	I _y =	6457.67 in ⁴	S _{left} =	529.86 in ³
C _{right} =	12.1875 in	A =	56.2969 in ²	C _{right} =	12.1875 in	A =	56.2969 in ²
C _{left} =	12.1875 in	r _y =	10.7102 in	C _{left} =	12.1875 in	r _y =	10.7102 in

South Truss

Member U44-U45



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.4375$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_f = 0.4375$ in

Top Cover Plate:

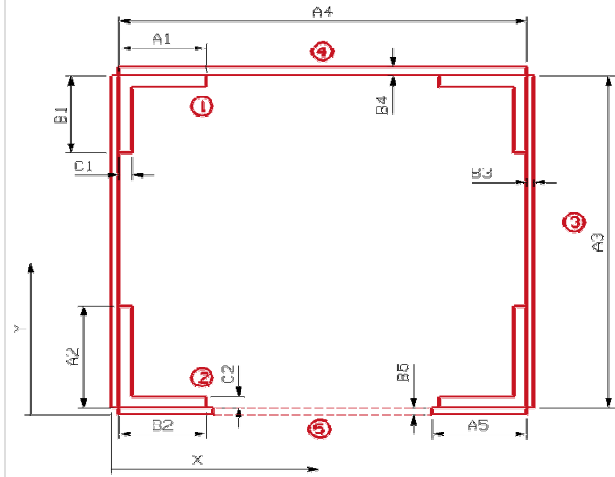
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.4375$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member U44-U45

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg		5.2500	26.2813	137.9766	0.0837	11.8826	741.2781	741.3618
	Vertical Leg		6.6172	22.2813	147.4392	31.5372	7.8826	411.1599	442.6971
2	Horizontal Leg		5.2500	0.7188	3.7734	0.0837	13.6799	982.4854	982.5691
	Vertical Leg		6.6172	4.7188	31.2249	31.5372	9.6799	620.0355	651.5727
3	Plate		22.7500	13.5000	307.1250	1281.5833	0.8987	18.3729	1299.9562
4	Plate		10.2813	26.7188	274.7021	0.1640	12.3201	1560.5343	1560.6983
5	Perforated Plate		6.0000	0.2500	1.5000	0.1250	14.1487	1201.1083	1201.2333
Total			62.77		903.74	1345.11		5534.97	6880.09
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.3987 in	S _{top} =	548.70 in ³	y-bar =	14.3987 in	S _{top} =	548.70 in ³
I _x =	6880.09 in ⁴	S _{bott.} =	477.83 in ³	I _x =	6880.09 in ⁴	S _{bott.} =	477.83 in ³
C _{top} =	12.5388 in	A =	62.7656 in ²	C _{top} =	12.5388 in	A =	62.7656 in ²
C _{bottom} =	14.3987 in	r _x =	10.4697 in	C _{bottom} =	14.3987 in	r _x =	10.4697 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.4375	9.0234	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	20.9375	54.9609	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.4375	9.0234	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	20.9375	54.9609	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	10.2813	12.1875	125.3027	473.1517	0.0000	0.0000	473.1517	
5 (Left)	Perforated Plate	3.0000	3.4375	10.3125	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.9375	62.8125	9.0000	8.7500	229.6875	238.6875	
Total		62.77		764.96	523.23		6282.01	6805.24	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	558.38 in ³	x-bar =	12.1875 in	S _{right} =	558.38 in ³
I _y =	6805.24 in ⁴	S _{left} =	558.38 in ³	I _y =	6805.24 in ⁴	S _{left} =	558.38 in ³
C _{right} =	12.1875 in	A =	62.7656 in ²	C _{right} =	12.1875 in	A =	62.7656 in ²
C _{left} =	12.1875 in	r _y =	10.4126 in	C _{left} =	12.1875 in	r _y =	10.4126 in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.4375$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_f = 0.4375$ in

Top Cover Plate:

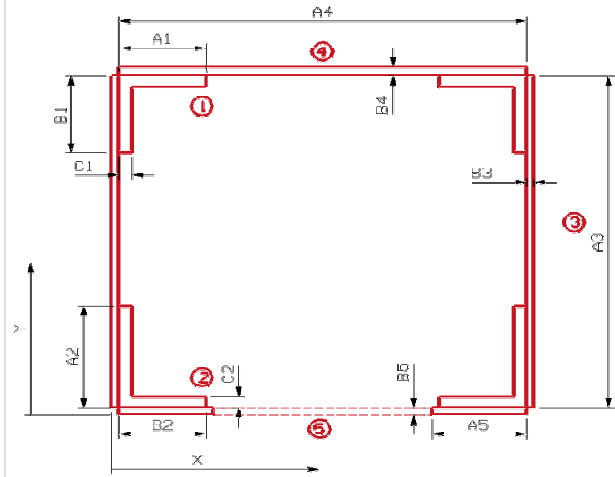
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.4375$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member U45-U46

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.2500	26.2813	137.9766	0.0837	11.8826	741.2781	741.3618
	Vertical Leg	6.6172	22.2813	147.4392	31.5372	7.8826	411.1599	442.6971
2	Horizontal Leg	5.2500	0.7188	3.7734	0.0837	13.6799	982.4854	982.5691
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	9.6799	620.0355	651.5727
3	Plate	22.7500	13.5000	307.1250	1281.5833	0.8987	18.3729	1299.9562
4	Plate	10.2813	26.7188	274.7021	0.1640	12.3201	1560.5343	1560.6983
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	14.1487	1201.1083	1201.2333
Total		62.77		903.74	1345.11		5534.97	6880.09
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.3987 in	S _{top} =	548.70 in ³	y-bar =	14.3987 in	S _{top} =	548.70 in ³
I _x =	6880.09 in ⁴	S _{bott.} =	477.83 in ³	I _x =	6880.09 in ⁴	S _{bott.} =	477.83 in ³
C _{top} =	12.5388 in	A =	62.7656 in ²	C _{top} =	12.5388 in	A =	62.7656 in ²
C _{bottom} =	14.3987 in	r _x =	10.4697 in	C _{bottom} =	14.3987 in	r _x =	10.4697 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.4375	9.0234	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	20.9375	54.9609	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.4375	9.0234	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	20.9375	54.9609	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	10.2813	12.1875	125.3027	473.1517	0.0000	0.0000	473.1517	
5 (Left)	Perforated Plate	3.0000	3.4375	10.3125	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.9375	62.8125	9.0000	8.7500	229.6875	238.6875	
Total		62.77		764.96	523.23		6282.01	6805.24	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	558.38 in ³	x-bar =	12.1875 in	S _{right} =	558.38 in ³
I _y =	6805.24 in ⁴	S _{left} =	558.38 in ³	I _y =	6805.24 in ⁴	S _{left} =	558.38 in ³
C _{right} =	12.1875 in	A =	62.7656 in ²	C _{right} =	12.1875 in	A =	62.7656 in ²
C _{left} =	12.1875 in	r _y =	10.4126 in	C _{left} =	12.1875 in	r _y =	10.4126 in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.4375$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.4375$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member U46-U47

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.5000	26.1563	91.5469	0.0558	11.7711	484.9517	485.0075
	Vertical Leg	6.6172	22.1563	146.6121	31.5372	7.7711	399.6068	431.1440
2	Horizontal Leg	3.5000	0.5938	2.0781	0.0558	13.7914	665.7143	665.7701
	Vertical Leg	6.6172	4.5938	30.3977	31.5372	9.7914	634.4062	665.9434
3	Plate	22.7500	13.3750	304.2813	1281.5833	1.0102	23.2165	1304.7998
4	Plate	8.8125	26.5625	234.0820	0.1033	12.1773	1306.7760	1306.8793
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.1977	907.0861	907.1388
Total		56.30		809.84	1344.93		4421.76	5766.68
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.3852 in	S _{top} =	466.38 in ³	y-bar =	14.3852 in	S _{top} =	466.38 in ³
I _x =	5766.68 in ⁴	S _{bott.} =	400.88 in ³	I _x =	5766.68 in ⁴	S _{bott.} =	400.88 in ³
C _{top} =	12.3648 in	A =	56.2969 in ²	C _{top} =	12.3648 in	A =	56.2969 in ²
C _{bottom} =	14.3852 in	r _x =	10.1209 in	C _{bottom} =	14.3852 in	r _x =	10.1209 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.7500	2.4375	4.2656	2.3333	9.7500	166.3594	168.6927	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	1.7500	21.9375	38.3906	2.3333	9.7500	166.3594	168.6927	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	1.7500	2.4375	4.2656	2.3333	9.7500	166.3594	168.6927	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	1.7500	21.9375	38.3906	2.3333	9.7500	166.3594	168.6927	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.4375	7.7344	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.9375	47.1094	6.7500	8.7500	172.2656	179.0156	
Total		56.30		686.12	428.97		6028.70	6457.67	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	529.86 in ³	x-bar =	12.1875 in	S _{right} =	529.86 in ³
I _y =	6457.67 in ⁴	S _{left} =	529.86 in ³	I _y =	6457.67 in ⁴	S _{left} =	529.86 in ³
C _{right} =	12.1875 in	A =	56.2969 in ²	C _{right} =	12.1875 in	A =	56.2969 in ²
C _{left} =	12.1875 in	r _y =	10.7102 in	C _{left} =	12.1875 in	r _y =	10.7102 in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

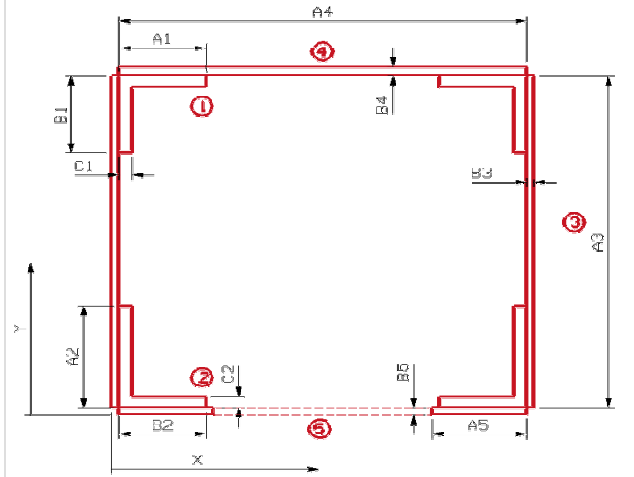
Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:
 $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member U47-U48

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5985	336.3153	336.3356
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5985	212.3354	214.9469
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.0890	496.2470	496.2674
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.0890	336.8139	339.4254
3	Plate	22.7500	13.3750	304.2813	1281.5833	1.2452	35.2750	1316.8583
4	Plate	8.8125	26.5625	234.0820	0.1033	11.9423	1256.8236	1256.9269
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.4327	937.3641	937.4168
Total		45.67		667.73	1287.00		3611.17	4898.18
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.6202 in	S _{top} =	403.81 in ³	y-bar =	14.6202 in	S _{top} =	403.81 in ³
I _x =	4898.18 in ⁴	S _{bott.} =	335.03 in ³	I _x =	4898.18 in ⁴	S _{bott.} =	335.03 in ³
C _{top} =	12.1298 in	A =	45.6719 in ²	C _{top} =	12.1298 in	A =	45.6719 in ²
C _{bottom} =	14.6202 in	r _x =	10.3560 in	C _{bottom} =	14.6202 in	r _x =	10.3560 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.4375	7.7344	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.9375	47.1094	6.7500	8.7500	172.2656	179.0156	
Total		45.67		556.63	426.13		4698.37	5124.50	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	420.47 in ³	x-bar =	12.1875 in	S _{right} =	420.47 in ³
I _y =	5124.50 in ⁴	S _{left} =	420.47 in ³	I _y =	5124.50 in ⁴	S _{left} =	420.47 in ³
C _{right} =	12.1875 in	A =	45.6719 in ²	C _{right} =	12.1875 in	A =	45.6719 in ²
C _{left} =	12.1875 in	r _y =	10.5926 in	C _{left} =	12.1875 in	r _y =	10.5926 in



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

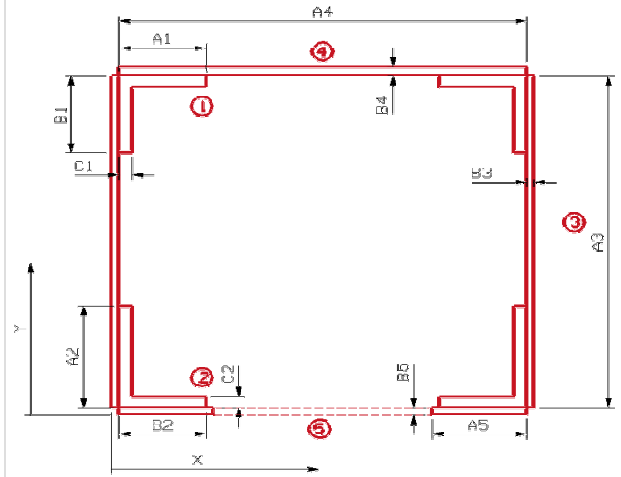
Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:
 $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member U48-U49

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg		2.5000	26.2188	65.5469	0.0203	11.5031	330.8057	330.8260
	Vertical Leg		2.3047	24.2188	55.8167	2.6115	9.5031	208.1357	210.7472
2	Horizontal Leg		2.5000	0.5313	1.3281	0.0203	14.1844	502.9900	503.0104
	Vertical Leg		2.3047	2.5313	5.8337	2.6115	12.1844	342.1506	344.7621
3	Plate		19.5000	13.3750	260.8125	1098.5000	1.3406	35.0460	1133.5460
4	Plate		8.8125	26.5625	234.0820	0.1033	11.8469	1236.8243	1236.9276
5	Perforated Plate		4.5000	0.1875	0.8438	0.0527	14.5281	949.7966	949.8493
Total			42.42		624.26	1103.92		3605.75	4709.67
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.7156 in	S _{top} =	391.35 in ³	y-bar =	14.7156 in	S _{top} =	391.35 in ³
I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³	I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³
C _{top} =	12.0344 in	A =	42.4219 in ²	C _{top} =	12.0344 in	A =	42.4219 in ²
C _{bottom} =	14.7156 in	r _x =	10.5366 in	C _{bottom} =	14.7156 in	r _x =	10.5366 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	9.7500	0.1875	1.8281	0.1143	11.9375	1389.4131	1389.5273	
3 (Right)	Plate	9.7500	24.0625	234.6094	0.1143	11.9375	1389.4131	1389.5273	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.3750	7.5938	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.8750	46.9688	6.7500	8.7500	172.2656	179.0156	
Total		42.42		514.37	425.99		4218.24	4644.23	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	383.03 in ³	x-bar =	12.1250 in	S _{right} =	383.03 in ³
I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³	I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³
C _{right} =	12.1250 in	A =	42.4219 in ²	C _{right} =	12.1250 in	A =	42.4219 in ²
C _{left} =	12.1250 in	r _y =	10.4631 in	C _{left} =	12.1250 in	r _y =	10.4631 in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

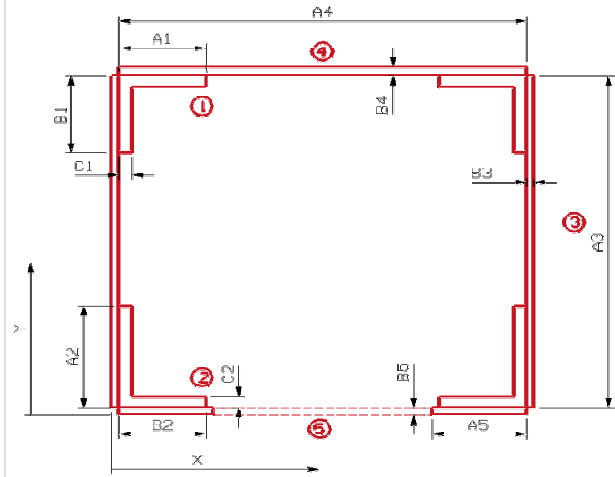
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member U49-U50

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5031	330.8057	330.8260
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5031	208.1357	210.7472
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.1844	502.9900	503.0104
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.1844	342.1506	344.7621
3	Plate	19.5000	13.3750	260.8125	1098.5000	1.3406	35.0460	1133.5460
4	Plate	8.8125	26.5625	234.0820	0.1033	11.8469	1236.8243	1236.9276
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.5281	949.7966	949.8493
Total		42.42		624.26	1103.92		3605.75	4709.67
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.7156 in	S _{top} =	391.35 in ³	y-bar =	14.7156 in	S _{top} =	391.35 in ³
I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³	I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³
C _{top} =	12.0344 in	A =	42.4219 in ²	C _{top} =	12.0344 in	A =	42.4219 in ²
C _{bottom} =	14.7156 in	r _x =	10.5366 in	C _{bottom} =	14.7156 in	r _x =	10.5366 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	9.7500	0.1875	1.8281	0.1143	11.9375	1389.4131	1389.5273	
3 (Right)	Plate	9.7500	24.0625	234.6094	0.1143	11.9375	1389.4131	1389.5273	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.3750	7.5938	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.8750	46.9688	6.7500	8.7500	172.2656	179.0156	
Total		42.42		514.37	425.99		4218.24	4644.23	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	383.03 in ³	x-bar =	12.1250 in	S _{right} =	383.03 in ³
I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³	I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³
C _{right} =	12.1250 in	A =	42.4219 in ²	C _{right} =	12.1250 in	A =	42.4219 in ²
C _{left} =	12.1250 in	r _y =	10.4631 in	C _{left} =	12.1250 in	r _y =	10.4631 in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

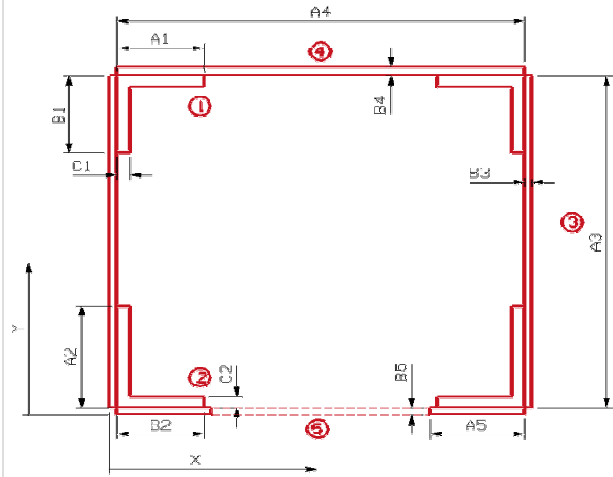
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member U50-U51

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5985	336.3153	336.3356
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5985	212.3354	214.9469
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.0890	496.2470	496.2674
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.0890	336.8139	339.4254
3	Plate	22.7500	13.3750	304.2813	1281.5833	1.2452	35.2750	1316.8583
4	Plate	8.8125	26.5625	234.0820	0.1033	11.9423	1256.8236	1256.9269
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.4327	937.3641	937.4168
Total		45.67		667.73	1287.00		3611.17	4898.18
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	14.6202	in	S _{top} =	403.81	in ³	y-bar =	14.6202	in	S _{top} =	403.81	in ³
I _x =	4898.18	in ⁴	S _{bott.} =	335.03	in ³	I _x =	4898.18	in ⁴	S _{bott.} =	335.03	in ³
C _{top} =	12.1298	in	A =	45.6719	in ²	C _{top} =	12.1298	in	A =	45.6719	in ²
C _{bottom} =	14.6202	in	r _x =	10.3560	in	C _{bottom} =	14.6202	in	r _x =	10.3560	in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.4375	7.7344	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.9375	47.1094	6.7500	8.7500	172.2656	179.0156	
Total		45.67		556.63	426.13		4698.37	5124.50	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.1875	in	S _{right} =	420.47	in ³	x-bar =	12.1875	in	S _{right} =	420.47	in ³
I _y =	5124.50	in ⁴	S _{left} =	420.47	in ³	I _y =	5124.50	in ⁴	S _{left} =	420.47	in ³
C _{right} =	12.1875	in	A =	45.6719	in ²	C _{right} =	12.1875	in	A =	45.6719	in ²
C _{left} =	12.1875	in	r _y =	10.5926	in	C _{left} =	12.1875	in	r _y =	10.5926	in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member U51-U52

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5985	336.3153	336.3356
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5985	212.3354	214.9469
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.0890	496.2470	496.2674
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.0890	336.8139	339.4254
3	Plate	22.7500	13.3750	304.2813	1281.5833	1.2452	35.2750	1316.8583
4	Plate	8.8125	26.5625	234.0820	0.1033	11.9423	1256.8236	1256.9269
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.4327	937.3641	937.4168
Total		45.67		667.73	1287.00		3611.17	4898.18
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	14.6202	in	S _{top} =	403.81	in ³	y-bar =	14.6202	in	S _{top} =	403.81	in ³
I _x =	4898.18	in ⁴	S _{bot.} =	335.03	in ³	I _x =	4898.18	in ⁴	S _{bot.} =	335.03	in ³
C _{top} =	12.1298	in	A =	45.6719	in ²	C _{top} =	12.1298	in	A =	45.6719	in ²
C _{bottom} =	14.6202	in	r _x =	10.3560	in	C _{bottom} =	14.6202	in	r _x =	10.3560	in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.4375	7.7344	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.9375	47.1094	6.7500	8.7500	172.2656	179.0156	
Total		45.67		556.63	426.13		4698.37	5124.50	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
x-bar =	12.1875	in	S _{right} =	420.47	in ³	x-bar =	12.1875	in	S _{right} =	420.47	in ³
I _y =	5124.50	in ⁴	S _{left} =	420.47	in ³	I _y =	5124.50	in ⁴	S _{left} =	420.47	in ³
C _{right} =	12.1875	in	A =	45.6719	in ²	C _{right} =	12.1875	in	A =	45.6719	in ²
C _{left} =	12.1875	in	r _y =	10.5926	in	C _{left} =	12.1875	in	r _y =	10.5926	in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.4375$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.4375$ in

Top Cover Plate:

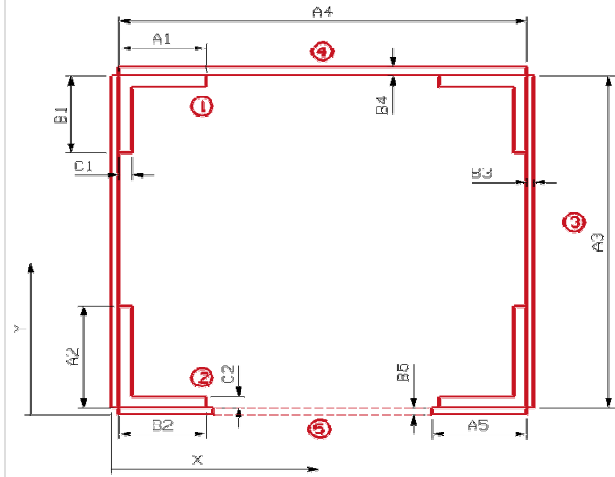
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member U52-U53

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x, gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.5000	26.2813	91.9844	0.0558	12.1082	513.1266	513.1824
	Vertical Leg	6.6172	22.2813	147.4392	31.5372	8.1082	435.0291	466.5663
2	Horizontal Leg	3.5000	0.7188	2.5156	0.0558	13.4543	633.5672	633.6231
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	9.4543	591.4740	623.0112
3	Plate	19.5000	13.5000	263.2500	1098.5000	0.6731	8.8344	1107.3344
4	Plate	8.8125	26.6875	235.1836	0.1033	12.5144	1380.1301	1380.2334
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	13.9231	1163.1143	1163.2393
Total		54.55		773.10	1161.91		4725.28	5887.19
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.1731 in	S _{top} =	463.49 in ³	y-bar =	14.1731 in	S _{top} =	463.49 in ³
I _x =	5887.19 in ⁴	S _{bot.} =	415.38 in ³	I _x =	5887.19 in ⁴	S _{bot.} =	415.38 in ³
C _{top} =	12.7019 in	A =	54.5469 in ²	C _{top} =	12.7019 in	A =	54.5469 in ²
C _{bottom} =	14.1731 in	r _x =	10.3889 in	C _{bottom} =	14.1731 in	r _x =	10.3889 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.7500	2.3750	4.1563	2.3333	9.7500	166.3594	168.6927	
	Vertical Leg	3.3086	0.5938	1.9645	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	1.7500	21.8750	38.2813	2.3333	9.7500	166.3594	168.6927	
	Vertical Leg	3.3086	23.6563	78.2689	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	1.7500	2.3750	4.1563	2.3333	9.7500	166.3594	168.6927	
	Vertical Leg	3.3086	0.5938	1.9645	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	1.7500	21.8750	38.2813	2.3333	9.7500	166.3594	168.6927	
	Vertical Leg	3.3086	23.6563	78.2689	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	9.7500	0.1875	1.8281	0.1143	11.9375	1389.4131	1389.5273	
3 (Right)	Plate	9.7500	24.0625	234.6094	0.1143	11.9375	1389.4131	1389.5273	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.3750	10.1250	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.8750	62.6250	9.0000	8.7500	229.6875	238.6875	
Total		54.55		661.38	433.33		5663.41	6096.74	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	502.82 in ³	x-bar =	12.1250 in	S _{right} =	502.82 in ³
I _y =	6096.74 in ⁴	S _{left} =	502.82 in ³	I _y =	6096.74 in ⁴	S _{left} =	502.82 in ³
C _{right} =	12.1250 in	A =	54.5469 in ²	C _{right} =	12.1250 in	A =	54.5469 in ²
C _{left} =	12.1250 in	r _y =	10.5722 in	C _{left} =	12.1250 in	r _y =	10.5722 in



Made By KMW
Checked By ADK

Date 1/31/2012
Date 2/16/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.5000$ in

Top Cover Plate:

$A_4 = b = 22.0000$ in
 $B_4 = t = 0.5000$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.6250$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.6250$ in



Member U53-U54

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg		6.0000	26.3750	158.2500	0.1250	11.9923	862.8982	863.0232
	Vertical Leg		7.5000	22.3750	167.8125	35.1563	7.9923	479.0819	514.2382
2	Horizontal Leg		6.0000	0.8750	5.2500	0.1250	13.5077	1094.7403	1094.8653
	Vertical Leg		7.5000	4.8750	36.5625	35.1563	9.5077	677.9661	713.1224
3	Plate		32.5000	13.6250	442.8125	1830.8333	0.7577	18.6563	1849.4896
4	Plate		11.0000	26.8750	295.6250	0.2292	12.4923	1716.6458	1716.8749
5	Perforated Plate		6.5625	0.3125	2.0508	0.2136	14.0702	1299.1731	1299.3867
Total			77.06		1108.36	1901.84		6149.16	8051.00
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1250	13.0000	-1.6250	20.1250	-32.7031	-22.8854	5.8061	-54.7801	-77.6655
2	0.3125	3.0000	-0.9375	2.1250	-1.9922	-0.7031	12.1939	-139.3980	-140.1011
3	0.1250	2.5000	-0.3125	25.3750	-7.9297	-0.1628	11.0561	-38.1992	-38.3619
4	0.1250	2.5000	-0.3125	25.3750	-7.9297	-0.1628	11.0561	-38.1992	-38.3619
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-3.19		-50.55	-23.91		-270.58	-294.49



Made By KMW
Checked By ADK

Date 1/31/2012
Date 2/16/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	14.3827	in	S _{top} =	631.83	in ³	y-bar =	14.3189	in	S _{top} =	605.69	in ³
I _x =	8051.00	in ⁴	S _{bottom} =	559.77	in ³	I _x =	7756.51	in ⁴	S _{bottom} =	541.70	in ³
C _{top} =	12.7423	in	A =	77.0625	in ²	C _{top} =	12.8061	in	A =	73.8750	in ²
C _{bottom} =	14.3827	in	r _x =	10.2212	in	C _{bottom} =	14.3189	in	r _x =	10.2467	in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.0000	3.6250	10.8750	9.0000	8.0000	192.0000	201.0000	
	Vertical Leg	3.7500	0.8750	3.2813	0.0781	10.7500	433.3594	433.4375	
1 (Right)	Horizontal Leg	3.0000	19.6250	58.8750	9.0000	8.0000	192.0000	201.0000	
	Vertical Leg	3.7500	22.3750	83.9063	0.0781	10.7500	433.3594	433.4375	
2 (Left)	Horizontal Leg	3.0000	3.6250	10.8750	9.0000	8.0000	192.0000	201.0000	
	Vertical Leg	3.7500	0.8750	3.2813	0.0781	10.7500	433.3594	433.4375	
2 (Right)	Horizontal Leg	3.0000	19.6250	58.8750	9.0000	8.0000	192.0000	201.0000	
	Vertical Leg	3.7500	22.3750	83.9063	0.0781	10.7500	433.3594	433.4375	
3 (Left)	Plate	16.2500	0.3125	5.0781	0.5290	11.3125	2079.5557	2080.0846	
3 (Right)	Plate	16.2500	22.9375	372.7344	0.5290	11.3125	2079.5557	2080.0846	
4	Plate	11.0000	11.6250	127.8750	443.6667	0.0000	0.0000	443.6667	
5 (Left)	Perforated Plate	3.2813	3.2500	10.6641	7.5366	8.3750	230.1489	237.6855	
5 (Right)	Perforated Plate	3.2813	20.0000	65.6250	7.5366	8.3750	230.1489	237.6855	
Total		77.06		895.85	496.11		7120.85	7616.96	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	13.0000	0.1250	-1.6250	0.0625	-0.1016	-0.0021	11.9608	-232.4734	-232.4755
2	3.0000	0.3125	-0.9375	0.2813	-0.2637	-0.0076	11.7420	-129.2583	-129.2660
3	2.5000	0.1250	-0.3125	0.6250	-0.1953	-0.0004	11.3983	-40.6003	-40.6007
4	2.5000	0.1250	-0.3125	22.6250	-7.0703	-0.0004	10.6017	-35.1238	-35.1242
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-3.19		-7.63	-0.01		-437.46	-437.47

As-Built Section Properties				As-Inspected Section Properties							
x-bar =	11.6250	in	S _{right} =	655.22	in ³	x-bar =	12.0233	in	S _{right} =	639.50	in ³
I _y =	7616.96	in ⁴	S _{left} =	655.22	in ³	I _y =	7179.49	in ⁴	S _{left} =	597.13	in ³
C _{right} =	11.6250	in	A =	77.0625	in ²	C _{right} =	11.2267	in	A =	73.8750	in ²
C _{left} =	11.6250	in	r _y =	9.9419	in	C _{left} =	12.0233	in	r _y =	9.8582	in



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_l = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_l = 0.5000$ in

Top Cover Plate: PL

$A_6 = b = 22.0000$ in
 $B_6 = t = 0.5000$ in

Side Plate 1: PL

$A_3 = b = 10.0000$ in
 $B_3 = t = 0.5000$ in

Web Plate 1: PL

$A_4 = b = 26.0000$ in
 $B_4 = t = 0.6250$ in

Side Plate 2: PL (No 2nd PL)

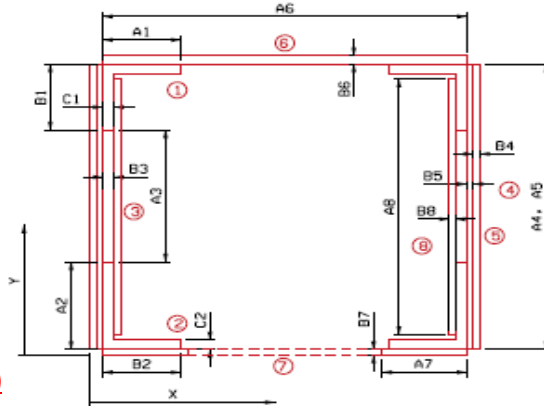
$A_8 = b = 0.0000$ in
 $B_8 = t = 0.0000$ in

Web Plate 2: PL

$A_5 = b = 26.0000$ in
 $B_5 = t = 0.3125$ in

Perforated Bottom Cover Plate: PL

$A_7 = b = 5.2500$ in
 $B_7 = t = 0.6250$ in



Member L54-L55

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	6.0000	26.3750	158.2500	0.1250	12.1849	890.8239	890.9489
	Vertical Leg	7.5000	22.3750	167.8125	35.1563	8.1849	502.4387	537.5949
2	Horizontal Leg	6.0000	0.8750	5.2500	0.1250	13.3151	1063.7588	1063.8838
	Vertical Leg	7.5000	4.8750	36.5625	35.1563	9.3151	650.7897	685.9459
3	Plate	10.0000	13.6250	136.2500	83.3333	0.5651	3.1939	86.5272
4	Plate	32.5000	13.6250	442.8125	1830.8333	0.5651	10.3802	1841.2135
5	Plate	16.2500	13.6250	221.4063	915.4167	0.5651	5.1901	920.6068
6	Plate	11.0000	26.8750	295.6250	0.2292	12.6849	1769.9605	1770.1897
7	Perforated Plate	6.5625	0.3125	2.0508	0.2136	13.8776	1263.8658	1264.0794
8	Plate	0.0000	13.6250	0.0000	0.0000	0.5651	0.0000	0.0000
Total		103.31		1466.02	2900.59		6160.40	9060.99
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.1901 in	S _{top} =	700.51 in ³	y-bar =	14.1901 in	S _{top} =	700.51 in ³
I _x =	9060.99 in ⁴	S _{bottom} =	638.54 in ³	I _x =	9060.99 in ⁴	S _{bottom} =	638.54 in ³
C _{top} =	12.9349 in	A =	103.3125 in ²	C _{top} =	12.9349 in	A =	103.3125 in ²
C _{bottom} =	14.1901 in	r _x =	9.3651 in	C _{bottom} =	14.1901 in	r _x =	9.3651 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.0000	3.9375	11.8125	9.0000	8.0000	192.0000	201.0000	
	Vertical Leg	3.7500	1.1875	4.4531	0.0781	10.7500	433.3594	433.4375	
1 (Right)	Horizontal Leg	3.0000	19.9375	59.8125	9.0000	8.0000	192.0000	201.0000	
	Vertical Leg	3.7500	22.6875	85.0781	0.0781	10.7500	433.3594	433.4375	
2 (Left)	Horizontal Leg	3.0000	3.9375	11.8125	9.0000	8.0000	192.0000	201.0000	
	Vertical Leg	3.7500	1.1875	4.4531	0.0781	10.7500	433.3594	433.4375	
2 (Right)	Horizontal Leg	3.0000	19.9375	59.8125	9.0000	8.0000	192.0000	201.0000	
	Vertical Leg	3.7500	22.6875	85.0781	0.0781	10.7500	433.3594	433.4375	
3 (Left)	Plate	5.0000	1.1875	5.9375	0.1042	10.7500	577.8125	577.9167	
3 (Right)	Plate	5.0000	22.6875	113.4375	0.1042	10.7500	577.8125	577.9167	
4 (Left)	Plate	16.2500	0.3125	5.0781	0.5290	11.6250	2196.0352	2196.5641	
4 (Right)	Plate	16.2500	23.5625	382.8906	0.5290	11.6250	2196.0352	2196.5641	
5 (Left)	Plate	8.1250	0.7813	6.3477	0.0661	11.1563	1011.2531	1011.3192	
5 (Right)	Plate	8.1250	23.0938	187.6367	0.0661	11.1563	1011.2531	1011.3192	
6	Plate	11.0000	11.9375	131.3125	443.6667	0.0000	0.0000	443.6667	
7 (Left)	Perforated Plate	3.2813	3.5625	11.6895	7.5366	8.3750	230.1489	237.6855	
7 (Right)	Perforated Plate	3.2813	20.3125	66.6504	7.5366	8.3750	230.1489	237.6855	
8 (Left)	Plate	0.0000	1.4375	0.0000	0.0000	10.5000	0.0000	0.0000	
8 (Right)	Plate	0.0000	22.4375	0.0000	0.0000	10.5000	0.0000	0.0000	
Total		103.31		1233.29	496.45		10531.94	11028.39	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	11.9375 in	S _{right} =	923.84 in ³	x-bar =	11.9375 in	S _{right} =	923.84 in ³
I _y =	11028.39 in ⁴	S _{left} =	923.84 in ³	I _y =	11028.39 in ⁴	S _{left} =	923.84 in ³
C _{right} =	11.9375 in	A =	103.3125 in ²	C _{right} =	11.9375 in	A =	103.3125 in ²
C _{left} =	11.9375 in	r _y =	10.3319 in	C _{left} =	11.9375 in	r _y =	10.3319 in



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_l = 0.6875$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_l = 0.6875$ in

Top Cover Plate: PL

$A_6 = b = 22.0000$ in
 $B_6 = t = 0.5000$ in

Side Plate 1: PL

$A_3 = b = 10.0000$ in
 $B_3 = t = 0.6875$ in

Web Plate 1: PL

$A_4 = b = 26.0000$ in
 $B_4 = t = 0.3750$ in

Side Plate 2: PL (No 2nd PL)

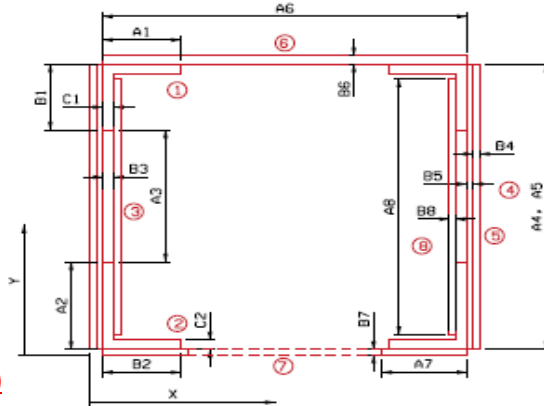
$A_8 = b = 0.0000$ in
 $B_8 = t = 0.0000$ in

Web Plate 2: PL

$A_5 = b = 26.0000$ in
 $B_5 = t = 0.3750$ in

Perforated Bottom Cover Plate: PL

$A_7 = b = 5.2500$ in
 $B_7 = t = 0.6250$ in



Member L55-L56

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	8.2500	26.2813	216.8203	0.3250	12.1102	1209.9160	1210.2409
	Vertical Leg	10.0547	22.2813	224.0310	44.8042	8.1102	661.3474	706.1517
2	Horizontal Leg	8.2500	0.9688	7.9922	0.3250	13.2023	1437.9851	1438.3101
	Vertical Leg	10.0547	4.9688	49.9592	44.8042	9.2023	851.4578	896.2621
3	Plate	13.7500	13.6250	187.3438	114.5833	0.5461	4.1001	118.6835
4	Plate	19.5000	13.6250	265.6875	1098.5000	0.5461	5.8147	1104.3147
5	Plate	19.5000	13.6250	265.6875	1098.5000	0.5461	5.8147	1104.3147
6	Plate	11.0000	26.8750	295.6250	0.2292	12.7039	1775.2885	1775.5177
7	Perforated Plate	6.5625	0.3125	2.0508	0.2136	13.8586	1260.3933	1260.6069
8	Plate	0.0000	13.6250	0.0000	0.0000	0.5461	0.0000	0.0000
Total		106.92		1515.20	2402.28		7212.12	9614.40
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 14.1711 in	S _{top} = 742.20 in ³			y-bar = 14.1711 in	S _{top} = 742.20 in ³		
I _x = 9614.40 in ⁴	S _{bottom} = 678.45 in ³			I _x = 9614.40 in ⁴	S _{bottom} = 678.45 in ³		
C _{top} = 12.9539 in	A = 106.9219 in ²			C _{top} = 12.9539 in	A = 106.9219 in ²		
C _{bottom} = 14.1711 in	r _x = 9.4826 in			C _{bottom} = 14.1711 in	r _x = 9.4826 in		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y, gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	3.7500	15.4688	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.0938	5.4987	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	19.7500	81.4688	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.4063	112.6439	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	3.7500	15.4688	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.0938	5.4987	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	19.7500	81.4688	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.4063	112.6439	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	6.8750	1.0938	7.5195	0.2708	10.6563	780.6952	780.9660	
3 (Right)	Plate	6.8750	22.4063	154.0430	0.2708	10.6563	780.6952	780.9660	
4 (Left)	Plate	9.7500	0.1875	1.8281	0.1143	11.5625	1303.4912	1303.6055	
4 (Right)	Plate	9.7500	23.3125	227.2969	0.1143	11.5625	1303.4912	1303.6055	
5 (Left)	Plate	9.7500	0.5625	5.4844	0.1143	11.1875	1220.3115	1220.4258	
5 (Right)	Plate	9.7500	22.9375	223.6406	0.1143	11.1875	1220.3115	1220.4258	
6	Plate	11.0000	11.7500	129.2500	443.6667	0.0000	0.0000	443.6667	
7 (Left)	Perforated Plate	3.2813	3.3750	11.0742	7.5366	8.3750	230.1489	237.6855	
7 (Right)	Perforated Plate	3.2813	20.1250	66.0352	7.5366	8.3750	230.1489	237.6855	
8 (Left)	Plate	0.0000	1.4375	0.0000	0.0000	10.3125	0.0000	0.0000	
8 (Right)	Plate	0.0000	22.0625	0.0000	0.0000	10.3125	0.0000	0.0000	
Total		106.92		1256.33	510.03		10408.83	10918.86	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 11.7500 in	S _{right} = 929.26 in ³			x-bar = 11.7500 in	S _{right} = 929.26 in ³		
I _y = 10918.86 in ⁴	S _{left} = 929.26 in ³			I _y = 10918.86 in ⁴	S _{left} = 929.26 in ³		
C _{right} = 11.7500 in	A = 106.9219 in ²			C _{right} = 11.7500 in	A = 106.9219 in ²		
C _{left} = 11.7500 in	r _y = 10.1054 in			C _{left} = 11.7500 in	r _y = 10.1054 in		



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_l = 0.6875$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_l = 0.6875$ in

Top Cover Plate: PL

$A_6 = b = 22.0000$ in
 $B_6 = t = 0.5000$ in

Side Plate 1: PL

$A_3 = b = 10.0000$ in
 $B_3 = t = 0.6875$ in

Web Plate 1: PL

$A_4 = b = 26.0000$ in
 $B_4 = t = 0.3750$ in

Side Plate 2: PL (No 2nd PL)

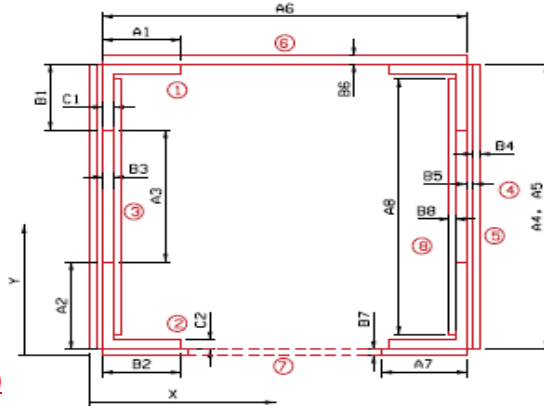
$A_8 = b = 0.0000$ in
 $B_8 = t = 0.0000$ in

Web Plate 2: PL

$A_5 = b = 26.0000$ in
 $B_5 = t = 0.3750$ in

Perforated Bottom Cover Plate: PL

$A_7 = b = 5.2500$ in
 $B_7 = t = 0.6250$ in



Member L56-L57

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	8.2500	26.2813	216.8203	0.3250	12.1102	1209.9160	1210.2409
	Vertical Leg	10.0547	22.2813	224.0310	44.8042	8.1102	661.3474	706.1517
2	Horizontal Leg	8.2500	0.9688	7.9922	0.3250	13.2023	1437.9851	1438.3101
	Vertical Leg	10.0547	4.9688	49.9592	44.8042	9.2023	851.4578	896.2621
3	Plate	13.7500	13.6250	187.3438	114.5833	0.5461	4.1001	118.6835
4	Plate	19.5000	13.6250	265.6875	1098.5000	0.5461	5.8147	1104.3147
5	Plate	19.5000	13.6250	265.6875	1098.5000	0.5461	5.8147	1104.3147
6	Plate	11.0000	26.8750	295.6250	0.2292	12.7039	1775.2885	1775.5177
7	Perforated Plate	6.5625	0.3125	2.0508	0.2136	13.8586	1260.3933	1260.6069
8	Plate	0.0000	13.6250	0.0000	0.0000	0.5461	0.0000	0.0000
Total		106.92		1515.20	2402.28		7212.12	9614.40
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 14.1711 in	$S_{top} = 742.20 \text{ in}^3$			y-bar = 14.1711 in	$S_{top} = 742.20 \text{ in}^3$		
$I_x = 9614.40 \text{ in}^4$	$S_{bottom} = 678.45 \text{ in}^3$			$I_x = 9614.40 \text{ in}^4$	$S_{bottom} = 678.45 \text{ in}^3$		
$C_{top} = 12.9539 \text{ in}$	$A = 106.9219 \text{ in}^2$			$C_{top} = 12.9539 \text{ in}$	$A = 106.9219 \text{ in}^2$		
$C_{bottom} = 14.1711 \text{ in}$	$r_x = 9.4826 \text{ in}$			$C_{bottom} = 14.1711 \text{ in}$	$r_x = 9.4826 \text{ in}$		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I_o	d	Ad^2	$I_{y, gross}$	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	3.7500	15.4688	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.0938	5.4987	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	19.7500	81.4688	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.4063	112.6439	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	3.7500	15.4688	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.0938	5.4987	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	19.7500	81.4688	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.4063	112.6439	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	6.8750	1.0938	7.5195	0.2708	10.6563	780.6952	780.9660	
3 (Right)	Plate	6.8750	22.4063	154.0430	0.2708	10.6563	780.6952	780.9660	
4 (Left)	Plate	9.7500	0.1875	1.8281	0.1143	11.5625	1303.4912	1303.6055	
4 (Right)	Plate	9.7500	23.3125	227.2969	0.1143	11.5625	1303.4912	1303.6055	
5 (Left)	Plate	9.7500	0.5625	5.4844	0.1143	11.1875	1220.3115	1220.4258	
5 (Right)	Plate	9.7500	22.9375	223.6406	0.1143	11.1875	1220.3115	1220.4258	
6	Plate	11.0000	11.7500	129.2500	443.6667	0.0000	0.0000	443.6667	
7 (Left)	Perforated Plate	3.2813	3.3750	11.0742	7.5366	8.3750	230.1489	237.6855	
7 (Right)	Perforated Plate	3.2813	20.1250	66.0352	7.5366	8.3750	230.1489	237.6855	
8 (Left)	Plate	0.0000	1.4375	0.0000	0.0000	10.3125	0.0000	0.0000	
8 (Right)	Plate	0.0000	22.0625	0.0000	0.0000	10.3125	0.0000	0.0000	
Total		106.92		1256.33	510.03		10408.83	10918.86	
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 11.7500 in	$S_{right} = 929.26 \text{ in}^3$			x-bar = 11.7500 in	$S_{right} = 929.26 \text{ in}^3$		
$I_y = 10918.86 \text{ in}^4$	$S_{left} = 929.26 \text{ in}^3$			$I_y = 10918.86 \text{ in}^4$	$S_{left} = 929.26 \text{ in}^3$		
$C_{right} = 11.7500 \text{ in}$	$A = 106.9219 \text{ in}^2$			$C_{right} = 11.7500 \text{ in}$	$A = 106.9219 \text{ in}^2$		
$C_{left} = 11.7500 \text{ in}$	$r_y = 10.1054 \text{ in}$			$C_{left} = 11.7500 \text{ in}$	$r_y = 10.1054 \text{ in}$		



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.5625$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.5625$ in

Top Cover Plate:

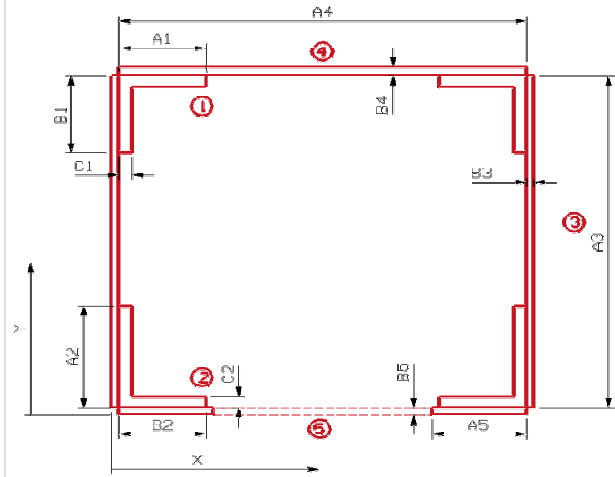
$A_4 = b = 22.0000$ in
 $B_4 = t = 0.5000$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.6250$ in



Member U57-U58

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x, gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	6.7500	26.3438	177.8203	0.1780	11.8911	954.4414	954.6194
	Vertical Leg	8.3672	22.3438	186.9543	38.5702	7.8911	521.0229	559.5931
2	Horizontal Leg	6.7500	0.9063	6.1172	0.1780	13.5464	1238.6548	1238.8328
	Vertical Leg	8.3672	4.9063	41.0515	38.5702	9.5464	762.5300	801.1003
3	Plate	22.7500	13.6250	309.9688	1281.5833	0.8276	15.5831	1297.1664
4	Plate	11.0000	26.8750	295.6250	0.2292	12.4224	1697.4680	1697.6972
5	Perforated Plate	6.5625	0.3125	2.0508	0.2136	14.1401	1312.1278	1312.3414
Total		70.55		1019.59	1359.52		6501.83	7861.35
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.4526 in	S _{top} =	620.35 in ³	y-bar =	14.4526 in	S _{top} =	620.35 in ³
I _x =	7861.35 in ⁴	S _{bott.} =	543.94 in ³	I _x =	7861.35 in ⁴	S _{bott.} =	543.94 in ³
C _{top} =	12.6724 in	A =	70.5469 in ²	C _{top} =	12.6724 in	A =	70.5469 in ²
C _{bottom} =	14.4526 in	r _x =	10.5563 in	C _{bottom} =	14.4526 in	r _x =	10.5563 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.3750	3.4375	11.6016	10.1250	8.0000	216.0000	226.1250	
	Vertical Leg	4.1836	0.7188	3.0070	0.1103	10.7188	480.6598	480.7701	
1 (Right)	Horizontal Leg	3.3750	19.4375	65.6016	10.1250	8.0000	216.0000	226.1250	
	Vertical Leg	4.1836	22.1563	92.6927	0.1103	10.7188	480.6598	480.7701	
2 (Left)	Horizontal Leg	3.3750	3.4375	11.6016	10.1250	8.0000	216.0000	226.1250	
	Vertical Leg	4.1836	0.7188	3.0070	0.1103	10.7188	480.6598	480.7701	
2 (Right)	Horizontal Leg	3.3750	19.4375	65.6016	10.1250	8.0000	216.0000	226.1250	
	Vertical Leg	4.1836	22.1563	92.6927	0.1103	10.7188	480.6598	480.7701	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.2188	1431.6615	1431.8429	
3 (Right)	Plate	11.3750	22.6563	257.7148	0.1814	11.2188	1431.6615	1431.8429	
4	Plate	11.0000	11.4375	125.8125	443.6667	0.0000	0.0000	443.6667	
5 (Left)	Perforated Plate	3.2813	3.0625	10.0488	7.5366	8.3750	230.1489	237.6855	
5 (Right)	Perforated Plate	3.2813	19.8125	65.0098	7.5366	8.3750	230.1489	237.6855	
Total		70.55		806.88	500.04		6110.26	6610.30	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	11.4375 in	S _{right} =	577.95 in ³	x-bar =	11.4375 in	S _{right} =	577.95 in ³
I _y =	6610.30 in ⁴	S _{left} =	577.95 in ³	I _y =	6610.30 in ⁴	S _{left} =	577.95 in ³
C _{right} =	11.4375 in	A =	70.5469 in ²	C _{right} =	11.4375 in	A =	70.5469 in ²
C _{left} =	11.4375 in	r _y =	9.6799 in	C _{left} =	11.4375 in	r _y =	9.6799 in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.5625$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.5625$ in

Top Cover Plate:

$A_4 = b = 22.0000$ in
 $B_4 = t = 0.5000$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.5000$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.6250$ in



Member U58-U59

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x, gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	6.7500	26.3438	177.8203	0.1780	11.9276	960.3015	960.4795
	Vertical Leg	8.3672	22.3438	186.9543	38.5702	7.9276	525.8471	564.4174
2	Horizontal Leg	6.7500	0.9063	6.1172	0.1780	13.5099	1231.9982	1232.1762
	Vertical Leg	8.3672	4.9063	41.0515	38.5702	9.5099	756.7184	795.2886
3	Plate	26.0000	13.6250	354.2500	1464.6667	0.7912	16.2752	1480.9418
4	Plate	11.0000	26.8750	295.6250	0.2292	12.4588	1707.4438	1707.6729
5	Perforated Plate	6.5625	0.3125	2.0508	0.2136	14.1037	1305.3720	1305.5856
Total		73.80		1063.87	1542.61		6503.96	8046.56
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.4162 in	S _{top} =	633.15 in ³	y-bar =	14.4162 in	S _{top} =	633.15 in ³
I _x =	8046.56 in ⁴	S _{bott.} =	558.16 in ³	I _x =	8046.56 in ⁴	S _{bott.} =	558.16 in ³
C _{top} =	12.7088 in	A =	73.7969 in ²	C _{top} =	12.7088 in	A =	73.7969 in ²
C _{bottom} =	14.4162 in	r _x =	10.4421 in	C _{bottom} =	14.4162 in	r _x =	10.4421 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.3750	3.5000	11.8125	10.1250	8.0000	216.0000	226.1250	
	Vertical Leg	4.1836	0.7813	3.2684	0.1103	10.7188	480.6598	480.7701	
1 (Right)	Horizontal Leg	3.3750	19.5000	65.8125	10.1250	8.0000	216.0000	226.1250	
	Vertical Leg	4.1836	22.2188	92.9542	0.1103	10.7188	480.6598	480.7701	
2 (Left)	Horizontal Leg	3.3750	3.5000	11.8125	10.1250	8.0000	216.0000	226.1250	
	Vertical Leg	4.1836	0.7813	3.2684	0.1103	10.7188	480.6598	480.7701	
2 (Right)	Horizontal Leg	3.3750	19.5000	65.8125	10.1250	8.0000	216.0000	226.1250	
	Vertical Leg	4.1836	22.2188	92.9542	0.1103	10.7188	480.6598	480.7701	
3 (Left)	Plate	13.0000	0.2500	3.2500	0.2708	11.2500	1645.3125	1645.5833	
3 (Right)	Plate	13.0000	22.7500	295.7500	0.2708	11.2500	1645.3125	1645.5833	
4	Plate	11.0000	11.5000	126.5000	443.6667	0.0000	0.0000	443.6667	
5 (Left)	Perforated Plate	3.2813	3.1250	10.2539	7.5366	8.3750	230.1489	237.6855	
5 (Right)	Perforated Plate	3.2813	19.8750	65.2148	7.5366	8.3750	230.1489	237.6855	
Total		73.80		848.66	500.22		6537.56	7037.78	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	11.5000 in	S _{right} =	611.98 in ³	x-bar =	11.5000 in	S _{right} =	611.98 in ³
I _y =	7037.78 in ⁴	S _{left} =	611.98 in ³	I _y =	7037.78 in ⁴	S _{left} =	611.98 in ³
C _{right} =	11.5000 in	A =	73.7969 in ²	C _{right} =	11.5000 in	A =	73.7969 in ²
C _{left} =	11.5000 in	r _y =	9.7656 in	C _{left} =	11.5000 in	r _y =	9.7656 in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3750$ in

Top Cover Plate:

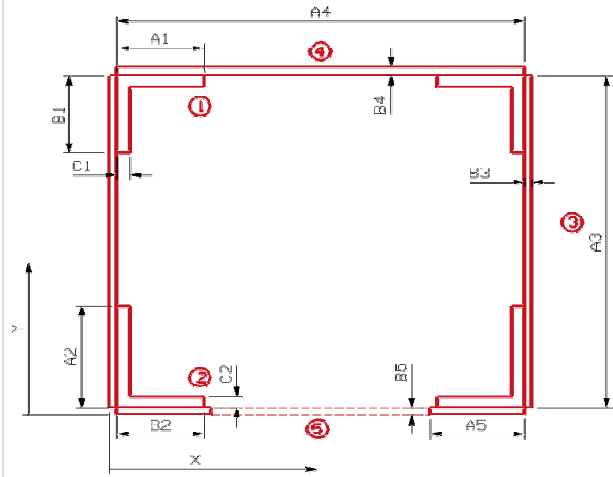
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.5000$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member U59-U60

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.0000	26.3125	78.9375	0.0352	12.1098	439.9435	439.9786
	Vertical Leg	2.7188	24.3125	66.0996	2.9772	10.1098	277.8794	280.8566
2	Horizontal Leg	3.0000	0.6875	2.0625	0.0352	13.5152	547.9800	548.0151
	Vertical Leg	2.7188	2.6875	7.3066	2.9772	11.5152	360.5043	363.4815
3	Plate	26.0000	13.5000	351.0000	1464.6667	0.7027	12.8376	1477.5043
4	Plate	8.8125	26.6875	235.1836	0.1033	12.4848	1373.6116	1373.7149
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	13.9527	1168.0631	1168.1881
Total		52.25		742.09	1470.92		4180.82	5651.74
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00	0.00	0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties					
y-bar =	14.2027	in	$S_{top} = 445.99$	in^3	y-bar =	14.2027	in	$S_{top} = 445.99$	in^3
$I_x =$	5651.74	in^4	$S_{bott.} = 397.93$	in^3	$I_x =$	5651.74	in^4	$S_{bott.} = 397.93$	in^3
$C_{top} =$	12.6723	in	$A = 52.2500$	in^2	$C_{top} =$	12.6723	in	$A = 52.2500$	in^2
$C_{bottom} =$	14.2027	in	$r_x = 10.4003$	in	$C_{bottom} =$	14.2027	in	$r_x = 10.4003$	in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I_o	d	Ad^2	$I_{y,gross}$	
Element	Description	(in^2)	(in)	(in^3)	(in^4)	(in)	(in^4)	(in^4)	
1 (Left)	Horizontal Leg	1.5000	2.5000	3.7500	2.0000	9.7500	142.5938	144.5938	
	Vertical Leg	1.3594	0.6875	0.9346	0.0159	11.5625	181.7368	181.7527	
1 (Right)	Horizontal Leg	1.5000	22.0000	33.0000	2.0000	9.7500	142.5938	144.5938	
	Vertical Leg	1.3594	23.8125	32.3701	0.0159	11.5625	181.7368	181.7527	
2 (Left)	Horizontal Leg	1.5000	2.5000	3.7500	2.0000	9.7500	142.5938	144.5938	
	Vertical Leg	1.3594	0.6875	0.9346	0.0159	11.5625	181.7368	181.7527	
2 (Right)	Horizontal Leg	1.5000	22.0000	33.0000	2.0000	9.7500	142.5938	144.5938	
	Vertical Leg	1.3594	23.8125	32.3701	0.0159	11.5625	181.7368	181.7527	
3 (Left)	Plate	13.0000	0.2500	3.2500	0.2708	12.0000	1872.0000	1872.2708	
3 (Right)	Plate	13.0000	24.2500	315.2500	0.2708	12.0000	1872.0000	1872.2708	
4	Plate	8.8125	12.2500	107.9531	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.5000	10.5000	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	21.0000	63.0000	9.0000	8.7500	229.6875	238.6875	
Total		52.25		640.06	432.16		5500.70	5932.86	
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y,loss}$
Loss #	b (in)	h (in)	(in^2)	(in)	(in^3)	(in^4)	(in)	(in^4)	(in^4)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties					
x-bar =	12.2500	in	$S_{right} = 484.32$	in^3	x-bar =	12.2500	in	$S_{right} = 484.32$	in^3
$I_y =$	5932.86	in^4	$S_{left} = 484.32$	in^3	$I_y =$	5932.86	in^4	$S_{left} = 484.32$	in^3
$C_{right} =$	12.2500	in	$A = 52.2500$	in^2	$C_{right} =$	12.2500	in	$A = 52.2500$	in^2
$C_{left} =$	12.2500	in	$r_y = 10.6559$	in	$C_{left} =$	12.2500	in	$r_y = 10.6559$	in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3750$ in

Top Cover Plate:

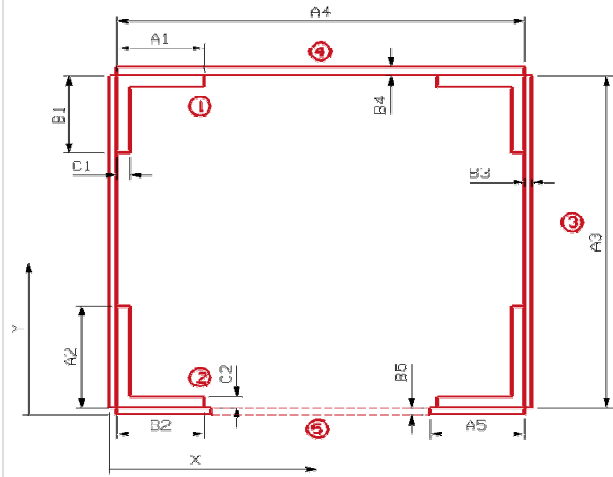
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member U60-U61

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.0000	26.3125	78.9375	0.0352	12.0100	432.7196	432.7547
	Vertical Leg	2.7188	24.3125	66.0996	2.9772	10.0100	272.4185	275.3956
2	Horizontal Leg	3.0000	0.6875	2.0625	0.0352	13.6150	556.1055	556.1407
	Vertical Leg	2.7188	2.6875	7.3066	2.9772	11.6150	366.7824	369.7596
3	Plate	19.5000	13.5000	263.2500	1098.5000	0.8025	12.5584	1111.0584
4	Plate	8.8125	26.6875	235.1836	0.1033	12.3850	1351.7315	1351.8348
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	14.0525	1184.8383	1184.9633
Total		45.75		654.34	1104.75		4177.15	5281.91
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.3025 in	S _{top} =	420.12 in ³	y-bar =	14.3025 in	S _{top} =	420.12 in ³
I _x =	5281.91 in ⁴	S _{bott.} =	369.30 in ³	I _x =	5281.91 in ⁴	S _{bott.} =	369.30 in ³
C _{top} =	12.5725 in	A =	45.7500 in ²	C _{top} =	12.5725 in	A =	45.7500 in ²
C _{bottom} =	14.3025 in	r _x =	10.7448 in	C _{bottom} =	14.3025 in	r _x =	10.7448 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.5000	2.3750	3.5625	2.0000	9.7500	142.5938	144.5938	
	Vertical Leg	1.3594	0.5625	0.7646	0.0159	11.5625	181.7368	181.7527	
1 (Right)	Horizontal Leg	1.5000	21.8750	32.8125	2.0000	9.7500	142.5938	144.5938	
	Vertical Leg	1.3594	23.6875	32.2002	0.0159	11.5625	181.7368	181.7527	
2 (Left)	Horizontal Leg	1.5000	2.3750	3.5625	2.0000	9.7500	142.5938	144.5938	
	Vertical Leg	1.3594	0.5625	0.7646	0.0159	11.5625	181.7368	181.7527	
2 (Right)	Horizontal Leg	1.5000	21.8750	32.8125	2.0000	9.7500	142.5938	144.5938	
	Vertical Leg	1.3594	23.6875	32.2002	0.0159	11.5625	181.7368	181.7527	
3 (Left)	Plate	9.7500	0.1875	1.8281	0.1143	11.9375	1389.4131	1389.5273	
3 (Right)	Plate	9.7500	24.0625	234.6094	0.1143	11.9375	1389.4131	1389.5273	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.3750	10.1250	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.8750	62.6250	9.0000	8.7500	229.6875	238.6875	
Total		45.75		554.72	431.85		4535.52	4967.37	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	409.68 in ³	x-bar =	12.1250 in	S _{right} =	409.68 in ³
I _y =	4967.37 in ⁴	S _{left} =	409.68 in ³	I _y =	4967.37 in ⁴	S _{left} =	409.68 in ³
C _{right} =	12.1250 in	A =	45.7500 in ²	C _{right} =	12.1250 in	A =	45.7500 in ²
C _{left} =	12.1250 in	r _y =	10.4200 in	C _{left} =	12.1250 in	r _y =	10.4200 in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member U61-U62

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5985	336.3153	336.3356
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5985	212.3354	214.9469
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.0890	496.2470	496.2674
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.0890	336.8139	339.4254
3	Plate	22.7500	13.3750	304.2813	1281.5833	1.2452	35.2750	1316.8583
4	Plate	8.8125	26.5625	234.0820	0.1033	11.9423	1256.8236	1256.9269
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.4327	937.3641	937.4168
Total		45.67		667.73	1287.00		3611.17	4898.18
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.6202 in	S _{top} =	403.81 in ³	y-bar =	14.6202 in	S _{top} =	403.81 in ³
I _x =	4898.18 in ⁴	S _{bott.} =	335.03 in ³	I _x =	4898.18 in ⁴	S _{bott.} =	335.03 in ³
C _{top} =	12.1298 in	A =	45.6719 in ²	C _{top} =	12.1298 in	A =	45.6719 in ²
C _{bottom} =	14.6202 in	r _x =	10.3560 in	C _{bottom} =	14.6202 in	r _x =	10.3560 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.4375	7.7344	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.9375	47.1094	6.7500	8.7500	172.2656	179.0156	
Total		45.67		556.63	426.13		4698.37	5124.50	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	420.47 in ³	x-bar =	12.1875 in	S _{right} =	420.47 in ³
I _y =	5124.50 in ⁴	S _{left} =	420.47 in ³	I _y =	5124.50 in ⁴	S _{left} =	420.47 in ³
C _{right} =	12.1875 in	A =	45.6719 in ²	C _{right} =	12.1875 in	A =	45.6719 in ²
C _{left} =	12.1875 in	r _y =	10.5926 in	C _{left} =	12.1875 in	r _y =	10.5926 in

South Truss

Member U62-U63



Made By KMW
Checked By ADK

Date 1/31/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.4375$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_f = 0.4375$ in

Top Cover Plate:

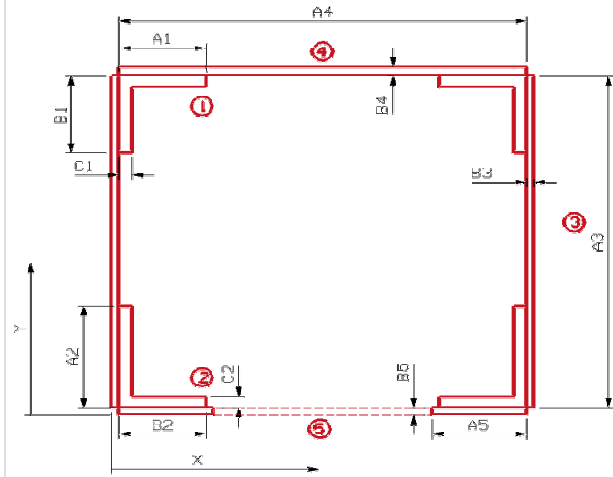
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member U62-U63

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x, gross}$	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	5.2500	26.1563	137.3203	0.0837	11.8302	734.7539	734.8377	
	Vertical Leg	6.6172	22.1563	146.6121	31.5372	7.8302	405.7110	437.2482	
2	Horizontal Leg	5.2500	0.5938	3.1172	0.0837	13.7323	990.0274	990.1111	
	Vertical Leg	6.6172	4.5938	30.3977	31.5372	9.7323	626.7673	658.3045	
3	Plate	22.7500	13.3750	304.2813	1281.5833	0.9511	20.5782	1302.1615	
4	Plate	8.8125	26.5625	234.0820	0.1033	12.2364	1319.4973	1319.6005	
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.1386	899.5464	899.5991	
Total		59.80		856.65	1344.98		4996.88	6341.86	
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x, loss}$	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)	
1	0.1250	2.5000	-0.3125	1.6250	-0.5078	-0.1628	12.7214	-50.5729	-50.7357
2	0.1250	2.5000	-0.3125	25.1250	-7.8516	-0.1628	10.7786	-36.3058	-36.4686
3	2.5000	0.1250	-0.3125	0.3750	-0.1172	-0.0004	13.9714	-60.9998	-61.0002
4	2.5000	0.1250	-0.3125	26.3750	-8.2422	-0.0004	12.0286	-45.2149	-45.2153
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.25	-16.72	-0.33		-193.09	-193.42	



Made By KMW
Checked By ADK

Date 1/31/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.3261 in	S _{top} =	510.46 in ³	y-bar =	14.3464 in	S _{top} =	495.70 in ³
I _x =	6341.86 in ⁴	S _{bott.} =	442.68 in ³	I _x =	6148.44 in ⁴	S _{bott.} =	428.57 in ³
C _{top} =	12.4239 in	A =	59.7969 in ²	C _{top} =	12.4036 in	A =	58.5469 in ²
C _{bottom} =	14.3261 in	r _x =	10.2984 in	C _{bottom} =	14.3464 in	r _x =	10.2478 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.4375	9.0234	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	20.9375	54.9609	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.4375	9.0234	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	20.9375	54.9609	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.4375	7.7344	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.9375	47.1094	6.7500	8.7500	172.2656	179.0156	
Total		59.80		728.77	451.13		6167.17	6618.30	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	2.5000	0.1250	-0.3125	0.4375	-0.1367	-0.0004	11.9875	-44.9065	-44.9069
2	2.5000	0.1250	-0.3125	0.4375	-0.1367	-0.0004	11.9875	-44.9065	-44.9069
3	0.1250	2.5000	-0.3125	1.6875	-0.5273	-0.1628	10.7375	-36.0295	-36.1923
4	0.1250	2.5000	-0.3125	1.6875	-0.5273	-0.1628	10.7375	-36.0295	-36.1923
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.25		-1.33	-0.33		-161.87	-162.20

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	543.04 in ³	x-bar =	12.4250 in	S _{right} =	540.26 in ³
I _y =	6618.30 in ⁴	S _{left} =	543.04 in ³	I _y =	6456.10 in ⁴	S _{left} =	519.60 in ³
C _{right} =	12.1875 in	A =	59.7969 in ²	C _{right} =	11.9500 in	A =	58.5469 in ²
C _{left} =	12.1875 in	r _y =	10.5204 in	C _{left} =	12.4250 in	r _y =	10.5011 in



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

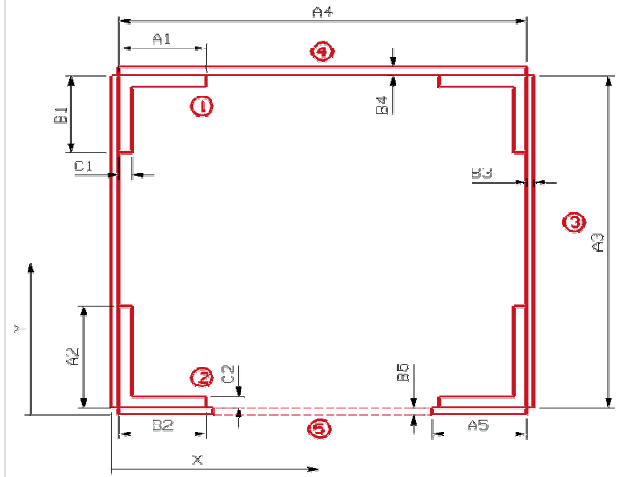
Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:
 $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:
 $A_3 = b = 26.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member U63-U64

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5031	330.8057	330.8260
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5031	208.1357	210.7472
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.1844	502.9900	503.0104
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.1844	342.1506	344.7621
3	Plate	19.5000	13.3750	260.8125	1098.5000	1.3406	35.0460	1133.5460
4	Plate	8.8125	26.5625	234.0820	0.1033	11.8469	1236.8243	1236.9276
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.5281	949.7966	949.8493
Total		42.42		624.26	1103.92		3605.75	4709.67
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/18/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.7156 in	S _{top} =	391.35 in ³	y-bar =	14.7156 in	S _{top} =	391.35 in ³
I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³	I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³
C _{top} =	12.0344 in	A =	42.4219 in ²	C _{top} =	12.0344 in	A =	42.4219 in ²
C _{bottom} =	14.7156 in	r _x =	10.5366 in	C _{bottom} =	14.7156 in	r _x =	10.5366 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	9.7500	0.1875	1.8281	0.1143	11.9375	1389.4131	1389.5273	
3 (Right)	Plate	9.7500	24.0625	234.6094	0.1143	11.9375	1389.4131	1389.5273	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.3750	7.5938	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.8750	46.9688	6.7500	8.7500	172.2656	179.0156	
Total		42.42		514.37	425.99		4218.24	4644.23	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	383.03 in ³	x-bar =	12.1250 in	S _{right} =	383.03 in ³
I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³	I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³
C _{right} =	12.1250 in	A =	42.4219 in ²	C _{right} =	12.1250 in	A =	42.4219 in ²
C _{left} =	12.1250 in	r _y =	10.4631 in	C _{left} =	12.1250 in	r _y =	10.4631 in



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

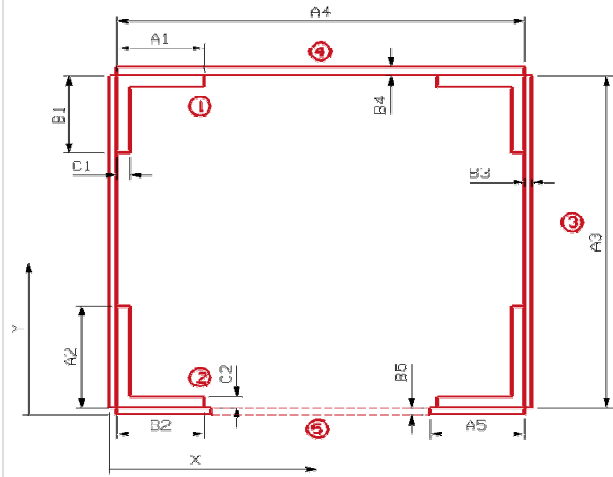
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member U64-U65

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5031	330.8057	330.8260
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5031	208.1357	210.7472
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.1844	502.9900	503.0104
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.1844	342.1506	344.7621
3	Plate	19.5000	13.3750	260.8125	1098.5000	1.3406	35.0460	1133.5460
4	Plate	8.8125	26.5625	234.0820	0.1033	11.8469	1236.8243	1236.9276
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.5281	949.7966	949.8493
Total		42.42		624.26	1103.92		3605.75	4709.67
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.7156 in	S _{top} =	391.35 in ³	y-bar =	14.7156 in	S _{top} =	391.35 in ³
I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³	I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³
C _{top} =	12.0344 in	A =	42.4219 in ²	C _{top} =	12.0344 in	A =	42.4219 in ²
C _{bottom} =	14.7156 in	r _x =	10.5366 in	C _{bottom} =	14.7156 in	r _x =	10.5366 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	9.7500	0.1875	1.8281	0.1143	11.9375	1389.4131	1389.5273	
3 (Right)	Plate	9.7500	24.0625	234.6094	0.1143	11.9375	1389.4131	1389.5273	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.3750	7.5938	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.8750	46.9688	6.7500	8.7500	172.2656	179.0156	
Total		42.42		514.37	425.99		4218.24	4644.23	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	383.03 in ³	x-bar =	12.1250 in	S _{right} =	383.03 in ³
I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³	I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³
C _{right} =	12.1250 in	A =	42.4219 in ²	C _{right} =	12.1250 in	A =	42.4219 in ²
C _{left} =	12.1250 in	r _y =	10.4631 in	C _{left} =	12.1250 in	r _y =	10.4631 in



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

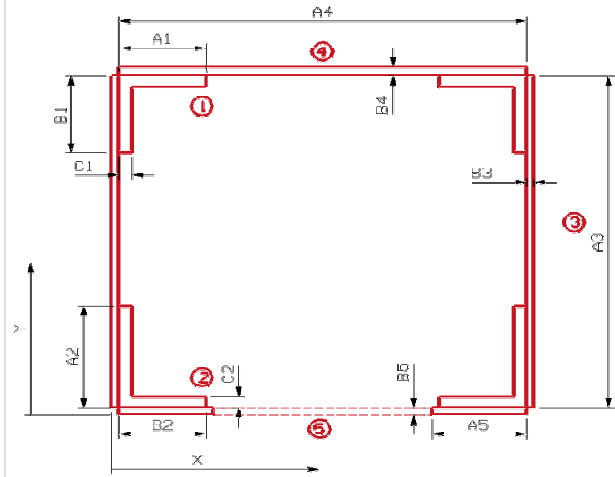
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.5000$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member U65-U66

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	10.8618	294.9441	294.9644
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	8.8618	180.9885	183.6001
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.8257	549.5071	549.5275
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.8257	379.1207	381.7323
3	Plate	22.7500	13.3750	304.2813	1281.5833	1.9820	89.3693	1370.9526
4	Plate	11.7500	26.6250	312.8438	0.2448	11.2680	1491.8721	1492.1169
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	15.1695	1035.5117	1035.5644
Total		48.61		746.49	1287.14		4021.31	5308.46
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	15.3570	in	S _{top} =	460.88	in ³	y-bar =	15.3570	in	S _{top} =	460.88	in ³
I _x =	5308.46	in ⁴	S _{bottom} =	345.67	in ³	I _x =	5308.46	in ⁴	S _{bottom} =	345.67	in ³
C _{top} =	11.5180	in	A =	48.6094	in ²	C _{top} =	11.5180	in	A =	48.6094	in ²
C _{bottom} =	15.3570	in	r _x =	10.4502	in	C _{bottom} =	15.3570	in	r _x =	10.4502	in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	11.7500	12.1875	143.2031	540.7448	0.0000	0.0000	540.7448	
5 (Left)	Perforated Plate	2.2500	3.4375	7.7344	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.9375	47.1094	6.7500	8.7500	172.2656	179.0156	
Total		48.61		592.43	561.31		4698.37	5259.68	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
x-bar =	12.1875	in	S _{right} =	431.56	in ³	x-bar =	12.1875	in	S _{right} =	431.56	in ³
I _y =	5259.68	in ⁴	S _{left} =	431.56	in ³	I _y =	5259.68	in ⁴	S _{left} =	431.56	in ³
C _{right} =	12.1875	in	A =	48.6094	in ²	C _{right} =	12.1875	in	A =	48.6094	in ²
C _{left} =	12.1875	in	r _y =	10.4021	in	C _{left} =	12.1875	in	r _y =	10.4021	in



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member U66-U67

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.7214	343.4786	343.4990
	Vertical Leg	4.8047	22.2188	106.7542	23.6621	7.7214	286.4563	310.1184
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	13.9661	487.6292	487.6495
	Vertical Leg	4.8047	4.5313	21.7712	23.6621	9.9661	477.2158	500.8779
3	Plate	22.7500	13.3750	304.2813	1281.5833	1.1223	28.6570	1310.2403
4	Plate	8.8125	26.5625	234.0820	0.1033	12.0652	1282.8187	1282.9219
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.3098	921.4719	921.5246
Total		50.67		734.61	1329.10		3827.73	5156.83
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties					
y-bar =	14.4973	in	$S_{top} = 420.87$	in^3	y-bar =	14.4973	in	$S_{top} = 420.87$	in^3
$I_x =$	5156.83	in^4	$S_{bott.} = 355.71$	in^3	$I_x =$	5156.83	in^4	$S_{bott.} = 355.71$	in^3
$C_{top} =$	12.2527	in	$A = 50.6719$	in^2	$C_{top} =$	12.2527	in	$A = 50.6719$	in^2
$C_{bottom} =$	14.4973	in	$r_x = 10.0881$	in	$C_{bottom} =$	14.4973	in	$r_x = 10.0881$	in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I_o	d	Ad^2	$I_{y,gross}$	
Element	Description	(in^2)	(in)	(in^3)	(in^4)	(in)	(in^4)	(in^4)	
1 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	2.4023	0.5938	1.4264	0.0196	11.5938	322.9111	322.9307	
1 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	2.4023	23.7813	57.1307	0.0196	11.5938	322.9111	322.9307	
2 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	2.4023	0.5938	1.4264	0.0196	11.5938	322.9111	322.9307	
2 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	2.4023	23.7813	57.1307	0.0196	11.5938	322.9111	322.9307	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.4375	7.7344	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.9375	47.1094	6.7500	8.7500	172.2656	179.0156	
Total		50.67		617.56	426.17		5370.45	5796.61	
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y,loss}$
Loss #	b (in)	h (in)	(in^2)	(in)	(in^3)	(in^4)	(in)	(in^4)	(in^4)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties					
x-bar =	12.1875	in	$S_{right} = 475.62$	in^3	x-bar =	12.1875	in	$S_{right} = 475.62$	in^3
$I_y =$	5796.61	n^4	$S_{left} = 475.62$	in^3	$I_y =$	5796.61	n^4	$S_{left} = 475.62$	in^3
$C_{right} =$	12.1875	in	$A = 50.6719$	in^2	$C_{right} =$	12.1875	in	$A = 50.6719$	in^2
$C_{left} =$	12.1875	in	$r_y = 10.6956$	in	$C_{left} =$	12.1875	in	$r_y = 10.6956$	in



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.4375$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_f = 0.4375$ in

Top Cover Plate:

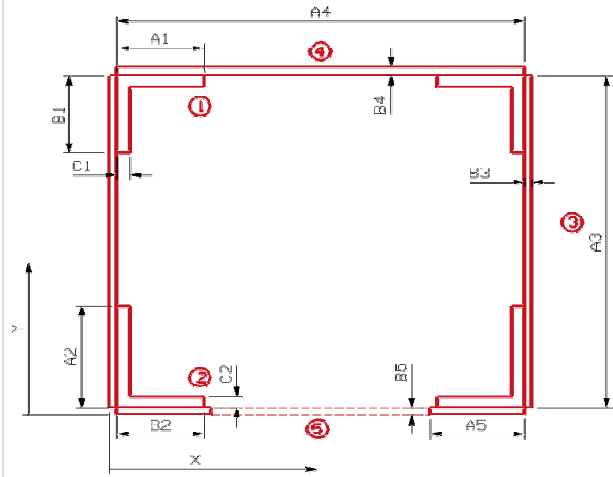
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member U67-U68

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.2500	26.2813	137.9766	0.0837	12.1823	779.1420	779.2258
	Vertical Leg	6.6172	22.2813	147.4392	31.5372	8.1823	443.0190	474.5562
2	Horizontal Leg	5.2500	0.7188	3.7734	0.0837	13.3802	939.9087	939.9924
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	9.3802	582.2363	613.7735
3	Plate	22.7500	13.5000	307.1250	1281.5833	0.5990	8.1618	1289.7452
4	Plate	8.8125	26.6875	235.1836	0.1033	12.5885	1396.5270	1396.6303
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	13.8490	1150.7634	1150.8884
Total		61.30		864.22	1345.05		5299.76	6644.81
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.0990 in	S _{top} =	520.10 in ³	y-bar =	14.0990 in	S _{top} =	520.10 in ³
I _x =	6644.81 in ⁴	S _{bott.} =	471.30 in ³	I _x =	6644.81 in ⁴	S _{bott.} =	471.30 in ³
C _{top} =	12.7760 in	A =	61.2969 in ²	C _{top} =	12.7760 in	A =	61.2969 in ²
C _{bottom} =	14.0990 in	r _x =	10.4117 in	C _{bottom} =	14.0990 in	r _x =	10.4117 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.4375	9.0234	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	20.9375	54.9609	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.4375	9.0234	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	20.9375	54.9609	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.4375	10.3125	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.9375	62.8125	9.0000	8.7500	229.6875	238.6875	
Total		61.30		747.06	455.63		6282.01	6737.64	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	552.83 in ³	x-bar =	12.1875 in	S _{right} =	552.83 in ³
I _y =	6737.64 in ⁴	S _{left} =	552.83 in ³	I _y =	6737.64 in ⁴	S _{left} =	552.83 in ³
C _{right} =	12.1875 in	A =	61.2969 in ²	C _{right} =	12.1875 in	A =	61.2969 in ²
C _{left} =	12.1875 in	r _y =	10.4842 in	C _{left} =	12.1875 in	r _y =	10.4842 in



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.4375$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.4375$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member U68-U69

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.2500	26.2813	137.9766	0.0837	12.1823	779.1420	779.2258
	Vertical Leg	6.6172	22.2813	147.4392	31.5372	8.1823	443.0190	474.5562
2	Horizontal Leg	5.2500	0.7188	3.7734	0.0837	13.3802	939.9087	939.9924
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	9.3802	582.2363	613.7735
3	Plate	22.7500	13.5000	307.1250	1281.5833	0.5990	8.1618	1289.7452
4	Plate	8.8125	26.6875	235.1836	0.1033	12.5885	1396.5270	1396.6303
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	13.8490	1150.7634	1150.8884
Total		61.30		864.22	1345.05		5299.76	6644.81
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.0990 in	S _{top} =	520.10 in ³	y-bar =	14.0990 in	S _{top} =	520.10 in ³
I _x =	6644.81 in ⁴	S _{bott.} =	471.30 in ³	I _x =	6644.81 in ⁴	S _{bott.} =	471.30 in ³
C _{top} =	12.7760 in	A =	61.2969 in ²	C _{top} =	12.7760 in	A =	61.2969 in ²
C _{bottom} =	14.0990 in	r _x =	10.4117 in	C _{bottom} =	14.0990 in	r _x =	10.4117 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.4375	9.0234	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	20.9375	54.9609	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.4375	9.0234	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	20.9375	54.9609	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.4375	10.3125	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.9375	62.8125	9.0000	8.7500	229.6875	238.6875	
Total		61.30		747.06	455.63		6282.01	6737.64	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	552.83 in ³	x-bar =	12.1875 in	S _{right} =	552.83 in ³
I _y =	6737.64 in ⁴	S _{left} =	552.83 in ³	I _y =	6737.64 in ⁴	S _{left} =	552.83 in ³
C _{right} =	12.1875 in	A =	61.2969 in ²	C _{right} =	12.1875 in	A =	61.2969 in ²
C _{left} =	12.1875 in	r _y =	10.4842 in	C _{left} =	12.1875 in	r _y =	10.4842 in



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.4375$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.4375$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member U69-U70

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.5000	26.1563	91.5469	0.0558	11.7711	484.9517	485.0075
	Vertical Leg	6.6172	22.1563	146.6121	31.5372	7.7711	399.6068	431.1440
2	Horizontal Leg	3.5000	0.5938	2.0781	0.0558	13.7914	665.7143	665.7701
	Vertical Leg	6.6172	4.5938	30.3977	31.5372	9.7914	634.4062	665.9434
3	Plate	22.7500	13.3750	304.2813	1281.5833	1.0102	23.2165	1304.7998
4	Plate	8.8125	26.5625	234.0820	0.1033	12.1773	1306.7760	1306.8793
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.1977	907.0861	907.1388
Total		56.30		809.84	1344.93		4421.76	5766.68
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/24/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.3852 in	S _{top} =	466.38 in ³	y-bar =	14.3852 in	S _{top} =	466.38 in ³
I _x =	5766.68 in ⁴	S _{bott.} =	400.88 in ³	I _x =	5766.68 in ⁴	S _{bott.} =	400.88 in ³
C _{top} =	12.3648 in	A =	56.2969 in ²	C _{top} =	12.3648 in	A =	56.2969 in ²
C _{bottom} =	14.3852 in	r _x =	10.1209 in	C _{bottom} =	14.3852 in	r _x =	10.1209 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.7500	2.4375	4.2656	2.3333	9.7500	166.3594	168.6927	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	1.7500	21.9375	38.3906	2.3333	9.7500	166.3594	168.6927	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	1.7500	2.4375	4.2656	2.3333	9.7500	166.3594	168.6927	
	Vertical Leg	3.3086	0.6563	2.1713	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	1.7500	21.9375	38.3906	2.3333	9.7500	166.3594	168.6927	
	Vertical Leg	3.3086	23.7188	78.4757	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.4375	7.7344	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.9375	47.1094	6.7500	8.7500	172.2656	179.0156	
Total		56.30		686.12	428.97		6028.70	6457.67	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	529.86 in ³	x-bar =	12.1875 in	S _{right} =	529.86 in ³
I _y =	6457.67 in ⁴	S _{left} =	529.86 in ³	I _y =	6457.67 in ⁴	S _{left} =	529.86 in ³
C _{right} =	12.1875 in	A =	56.2969 in ²	C _{right} =	12.1875 in	A =	56.2969 in ²
C _{left} =	12.1875 in	r _y =	10.7102 in	C _{left} =	12.1875 in	r _y =	10.7102 in



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

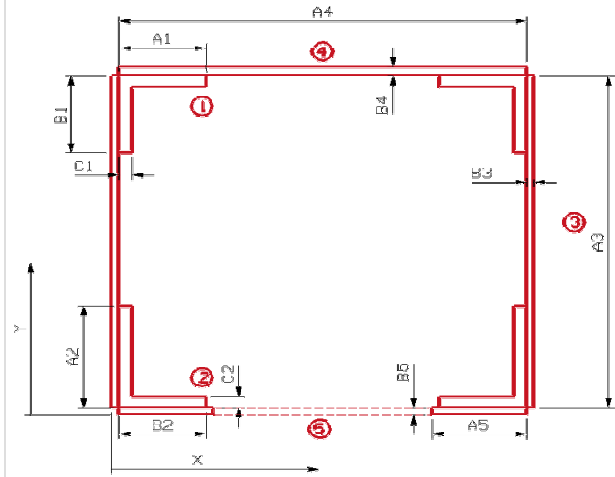
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.4375$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member U70-U71

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	26.2188	65.5469	0.0203	11.5985	336.3153	336.3356
	Vertical Leg	2.3047	24.2188	55.8167	2.6115	9.5985	212.3354	214.9469
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	14.0890	496.2470	496.2674
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	12.0890	336.8139	339.4254
3	Plate	22.7500	13.3750	304.2813	1281.5833	1.2452	35.2750	1316.8583
4	Plate	8.8125	26.5625	234.0820	0.1033	11.9423	1256.8236	1256.9269
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	14.4327	937.3641	937.4168
Total		45.67		667.73	1287.00		3611.17	4898.18
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	14.6202	in	S _{top} =	403.81	in ³	y-bar =	14.6202	in	S _{top} =	403.81	in ³
I _x =	4898.18	in ⁴	S _{bott.} =	335.03	in ³	I _x =	4898.18	in ⁴	S _{bott.} =	335.03	in ³
C _{top} =	12.1298	in	A =	45.6719	in ²	C _{top} =	12.1298	in	A =	45.6719	in ²
C _{bottom} =	14.6202	in	r _x =	10.3560	in	C _{bottom} =	14.6202	in	r _x =	10.3560	in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.4375	3.0469	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5938	0.6842	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.9375	27.4219	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7813	27.4042	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	11.3750	0.2188	2.4883	0.1814	11.9688	1629.4799	1629.6613	
3 (Right)	Plate	11.3750	24.1563	274.7773	0.1814	11.9688	1629.4799	1629.6613	
4	Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.4375	7.7344	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.9375	47.1094	6.7500	8.7500	172.2656	179.0156	
Total		45.67		556.63	426.13		4698.37	5124.50	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
x-bar =	12.1875	in	S _{right} =	420.47	in ³	x-bar =	12.1875	in	S _{right} =	420.47	in ³
I _y =	5124.50	in ⁴	S _{left} =	420.47	in ³	I _y =	5124.50	in ⁴	S _{left} =	420.47	in ³
C _{right} =	12.1875	in	A =	45.6719	in ²	C _{right} =	12.1875	in	A =	45.6719	in ²
C _{left} =	12.1875	in	r _y =	10.5926	in	C _{left} =	12.1875	in	r _y =	10.5926	in



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.7156 in	S _{top} =	391.35 in ³	y-bar =	14.7156 in	S _{top} =	391.35 in ³
I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³	I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³
C _{top} =	12.0344 in	A =	42.4219 in ²	C _{top} =	12.0344 in	A =	42.4219 in ²
C _{bottom} =	14.7156 in	r _x =	10.5366 in	C _{bottom} =	14.7156 in	r _x =	10.5366 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	9.7500	0.1875	1.8281	0.1143	11.9375	1389.4131	1389.5273	
3 (Right)	Plate	9.7500	24.0625	234.6094	0.1143	11.9375	1389.4131	1389.5273	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.3750	7.5938	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.8750	46.9688	6.7500	8.7500	172.2656	179.0156	
Total		42.42		514.37	425.99		4218.24	4644.23	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	383.03 in ³	x-bar =	12.1250 in	S _{right} =	383.03 in ³
I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³	I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³
C _{right} =	12.1250 in	A =	42.4219 in ²	C _{right} =	12.1250 in	A =	42.4219 in ²
C _{left} =	12.1250 in	r _y =	10.4631 in	C _{left} =	12.1250 in	r _y =	10.4631 in



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

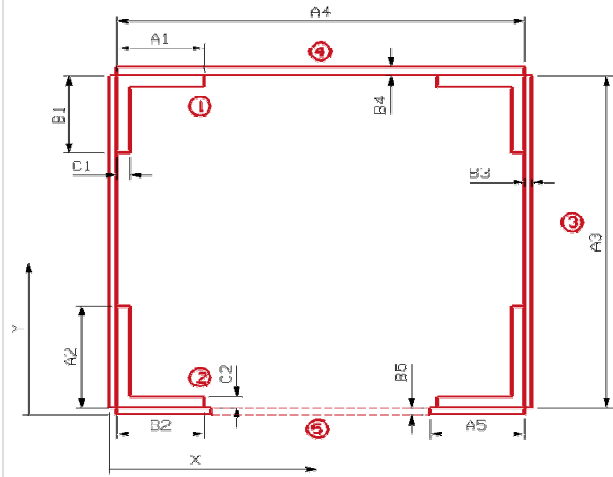
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member U72-U73

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg		2.5000	26.2188	65.5469	0.0203	11.5031	330.8057	330.8260
	Vertical Leg		2.3047	24.2188	55.8167	2.6115	9.5031	208.1357	210.7472
2	Horizontal Leg		2.5000	0.5313	1.3281	0.0203	14.1844	502.9900	503.0104
	Vertical Leg		2.3047	2.5313	5.8337	2.6115	12.1844	342.1506	344.7621
3	Plate		19.5000	13.3750	260.8125	1098.5000	1.3406	35.0460	1133.5460
4	Plate		8.8125	26.5625	234.0820	0.1033	11.8469	1236.8243	1236.9276
5	Perforated Plate		4.5000	0.1875	0.8438	0.0527	14.5281	949.7966	949.8493
Total			42.42		624.26	1103.92		3605.75	4709.67
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.7156 in	S _{top} =	391.35 in ³	y-bar =	14.7156 in	S _{top} =	391.35 in ³
I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³	I _x =	4709.67 in ⁴	S _{bott.} =	320.05 in ³
C _{top} =	12.0344 in	A =	42.4219 in ²	C _{top} =	12.0344 in	A =	42.4219 in ²
C _{bottom} =	14.7156 in	r _x =	10.5366 in	C _{bottom} =	14.7156 in	r _x =	10.5366 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	9.7500	0.1875	1.8281	0.1143	11.9375	1389.4131	1389.5273	
3 (Right)	Plate	9.7500	24.0625	234.6094	0.1143	11.9375	1389.4131	1389.5273	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.3750	7.5938	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.8750	46.9688	6.7500	8.7500	172.2656	179.0156	
Total		42.42		514.37	425.99		4218.24	4644.23	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	383.03 in ³	x-bar =	12.1250 in	S _{right} =	383.03 in ³
I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³	I _y =	4644.23 in ⁴	S _{left} =	383.03 in ³
C _{right} =	12.1250 in	A =	42.4219 in ²	C _{right} =	12.1250 in	A =	42.4219 in ²
C _{left} =	12.1250 in	r _y =	10.4631 in	C _{left} =	12.1250 in	r _y =	10.4631 in



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.6250$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.6250$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3125$ in

Web Plate 1:

$A_3 = b = 26.0000$ in
 $B_3 = t = 0.5000$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member U73-U74

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.0000	26.1875	130.9375	0.1628	12.3913	767.7186	767.8813
	Vertical Leg	4.2188	24.1875	102.0410	4.0045	10.3913	455.5348	459.5393
2	Horizontal Leg	5.0000	0.8125	4.0625	0.1628	12.9837	842.8855	843.0482
	Vertical Leg	4.2188	2.8125	11.8652	4.0045	10.9837	508.9593	512.9638
3	Plate	26.0000	13.5000	351.0000	1464.6667	0.2962	2.2815	1466.9481
4	Plate	7.3438	26.6563	195.7568	0.0598	12.8600	1214.5113	1214.5711
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	13.5462	1101.0012	1101.1262
Total		57.78		797.16	1473.19		4892.89	6366.08
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	13.7962 in	S _{top} =	489.09 in ³	y-bar =	13.7962 in	S _{top} =	489.09 in ³
I _x =	6366.08 in ⁴	S _{bott.} =	461.44 in ³	I _x =	6366.08 in ⁴	S _{bott.} =	461.44 in ³
C _{top} =	13.0163 in	A =	57.7813 in ²	C _{top} =	13.0163 in	A =	57.7813 in ²
C _{bottom} =	13.7962 in	r _x =	10.4965 in	C _{bottom} =	13.7962 in	r _x =	10.4965 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.5000	2.5000	6.2500	3.3333	9.7500	237.6563	240.9896	
	Vertical Leg	2.1094	0.8125	1.7139	0.0687	11.4375	275.9409	276.0095	
1 (Right)	Horizontal Leg	2.5000	22.0000	55.0000	3.3333	9.7500	237.6563	240.9896	
	Vertical Leg	2.1094	23.6875	49.9658	0.0687	11.4375	275.9409	276.0095	
2 (Left)	Horizontal Leg	2.5000	2.5000	6.2500	3.3333	9.7500	237.6563	240.9896	
	Vertical Leg	2.1094	0.8125	1.7139	0.0687	11.4375	275.9409	276.0095	
2 (Right)	Horizontal Leg	2.5000	22.0000	55.0000	3.3333	9.7500	237.6563	240.9896	
	Vertical Leg	2.1094	23.6875	49.9658	0.0687	11.4375	275.9409	276.0095	
3 (Left)	Plate	13.0000	0.2500	3.2500	0.2708	12.0000	1872.0000	1872.2708	
3 (Right)	Plate	13.0000	24.2500	315.2500	0.2708	12.0000	1872.0000	1872.2708	
4	Plate	7.3438	12.2500	89.9609	337.9655	0.0000	0.0000	337.9655	
5 (Left)	Perforated Plate	3.0000	3.5000	10.5000	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	21.0000	63.0000	9.0000	8.7500	229.6875	238.6875	
Total		57.78		707.82	370.12		6257.76	6627.88	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2500 in	S _{right} =	541.05 in ³	x-bar =	12.2500 in	S _{right} =	541.05 in ³
I _y =	6627.88 in ⁴	S _{left} =	541.05 in ³	I _y =	6627.88 in ⁴	S _{left} =	541.05 in ³
C _{right} =	12.2500 in	A =	57.7813 in ²	C _{right} =	12.2500 in	A =	57.7813 in ²
C _{left} =	12.2500 in	r _y =	10.7101 in	C _{left} =	12.2500 in	r _y =	10.7101 in



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

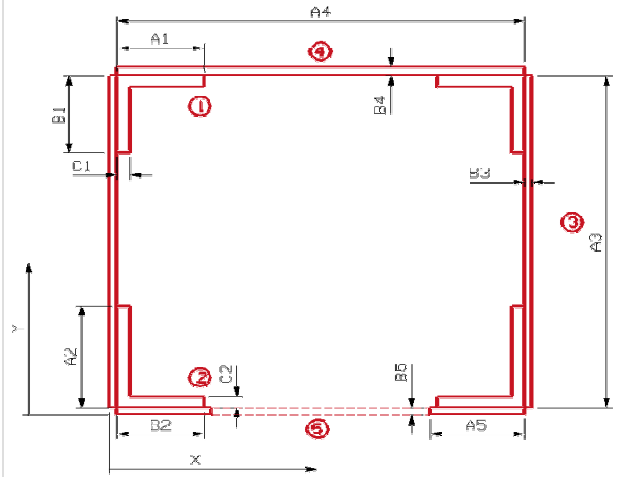
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 30.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member U74-U75

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	30.2188	75.5469	0.0203	13.4018	449.0206	449.0409
	Vertical Leg	2.3047	28.2188	65.0354	2.6115	11.4018	299.6118	302.2233
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	16.2857	663.0601	663.0804
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	14.2857	470.3435	472.9550
3	Plate	22.5000	15.3750	345.9375	1687.5000	1.4420	46.7825	1734.2825
4	Plate	8.8125	30.5625	269.3320	0.1033	13.7455	1665.0349	1665.1382
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	16.6295	1244.4238	1244.4765
Total		45.42		763.86	1692.92		4838.28	6531.20
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.8170 in	S _{top} =	468.76 in ³	y-bar =	16.8170 in	S _{top} =	468.76 in ³
I _x =	6531.20 in ⁴	S _{bott.} =	388.37 in ³	I _x =	6531.20 in ⁴	S _{bott.} =	388.37 in ³
C _{top} =	13.9330 in	A =	45.4219 in ²	C _{top} =	13.9330 in	A =	45.4219 in ²
C _{bottom} =	16.8170 in	r _x =	11.9912 in	C _{bottom} =	16.8170 in	r _x =	11.9912 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	11.2500	0.1875	2.1094	0.1318	11.9375	1603.1689	1603.3008	
3 (Right)	Plate	11.2500	24.0625	270.7031	0.1318	11.9375	1603.1689	1603.3008	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.3750	7.5938	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.8750	46.9688	6.7500	8.7500	172.2656	179.0156	
Total		45.42		550.74	426.03		4645.75	5071.78	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	418.29 in ³	x-bar =	12.1250 in	S _{right} =	418.29 in ³
I _y =	5071.78 in ⁴	S _{left} =	418.29 in ³	I _y =	5071.78 in ⁴	S _{left} =	418.29 in ³
C _{right} =	12.1250 in	A =	45.4219 in ²	C _{right} =	12.1250 in	A =	45.4219 in ²
C _{left} =	12.1250 in	r _y =	10.5669 in	C _{left} =	12.1250 in	r _y =	10.5669 in



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.4375$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_f = 0.4375$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 30.0000$ in
 $B_3 = t = 0.5000$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member U75-U76

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.2500	30.2813	158.9766	0.0837	14.1636	1053.1857	1053.2694
	Vertical Leg	6.6172	26.2813	173.9080	31.5372	10.1636	683.5436	715.0808
2	Horizontal Leg	5.2500	0.7188	3.7734	0.0837	15.3989	1244.9165	1245.0003
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	11.3989	859.8078	891.3450
3	Plate	30.0000	15.5000	465.0000	2250.0000	0.6177	11.4458	2261.4458
4	Plate	8.8125	30.6875	270.4336	0.1033	14.5698	1870.7152	1870.8184
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	15.8677	1510.6991	1510.8241
Total		68.55		1104.82	2313.47		7234.31	9547.78
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.1177 in	S _{top} =	646.99 in ³	y-bar =	16.1177 in	S _{top} =	646.99 in ³
I _x =	9547.78 in ⁴	S _{bott.} =	592.38 in ³	I _x =	9547.78 in ⁴	S _{bott.} =	592.38 in ³
C _{top} =	14.7573 in	A =	68.5469 in ²	C _{top} =	14.7573 in	A =	68.5469 in ²
C _{bottom} =	16.1177 in	r _x =	11.8021 in	C _{bottom} =	16.1177 in	r _x =	11.8021 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.5000	9.1875	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.7188	2.3781	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	21.0000	55.1250	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7813	78.6825	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.5000	9.1875	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.7188	2.3781	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	21.0000	55.1250	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7813	78.6825	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	15.0000	0.2500	3.7500	0.3125	12.0000	2160.0000	2160.3125	
3 (Right)	Plate	15.0000	24.2500	363.7500	0.3125	12.0000	2160.0000	2160.3125	
4	Plate	8.8125	12.2500	107.9531	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.5000	10.5000	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	21.0000	63.0000	9.0000	8.7500	229.6875	238.6875	
Total		68.55		839.70	455.89		7343.05	7798.95	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2500 in	S _{right} =	636.65 in ³	x-bar =	12.2500 in	S _{right} =	636.65 in ³
I _y =	7798.95 in ⁴	S _{left} =	636.65 in ³	I _y =	7798.95 in ⁴	S _{left} =	636.65 in ³
C _{right} =	12.2500 in	A =	68.5469 in ²	C _{right} =	12.2500 in	A =	68.5469 in ²
C _{left} =	12.2500 in	r _y =	10.6666 in	C _{left} =	12.2500 in	r _y =	10.6666 in



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

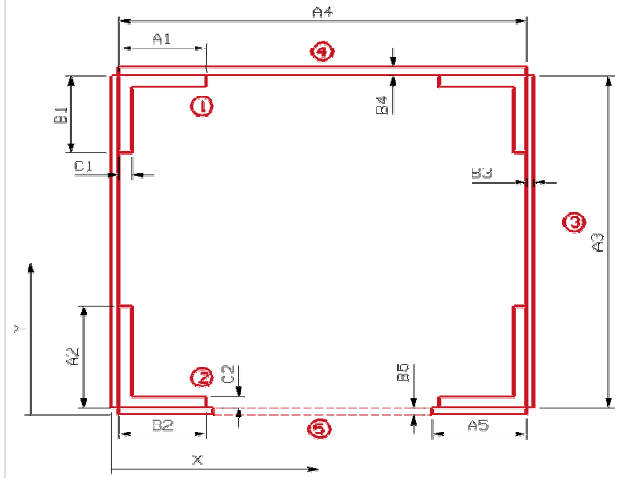
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.4375$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_f = 0.4375$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:
 $A_3 = b = 30.0000$ in
 $B_3 = t = 0.5000$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member U76-U77

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.2500	30.2813	158.9766	0.0837	14.1636	1053.1857	1053.2694
	Vertical Leg	6.6172	26.2813	173.9080	31.5372	10.1636	683.5436	715.0808
2	Horizontal Leg	5.2500	0.7188	3.7734	0.0837	15.3989	1244.9165	1245.0003
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	11.3989	859.8078	891.3450
3	Plate	30.0000	15.5000	465.0000	2250.0000	0.6177	11.4458	2261.4458
4	Plate	8.8125	30.6875	270.4336	0.1033	14.5698	1870.7152	1870.8184
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	15.8677	1510.6991	1510.8241
Total		68.55		1104.82	2313.47		7234.31	9547.78
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.1177 in	S _{top} =	646.99 in ³	y-bar =	16.1177 in	S _{top} =	646.99 in ³
I _x =	9547.78 in ⁴	S _{bott.} =	592.38 in ³	I _x =	9547.78 in ⁴	S _{bott.} =	592.38 in ³
C _{top} =	14.7573 in	A =	68.5469 in ²	C _{top} =	14.7573 in	A =	68.5469 in ²
C _{bottom} =	16.1177 in	r _x =	11.8021 in	C _{bottom} =	16.1177 in	r _x =	11.8021 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.5000	9.1875	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.7188	2.3781	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	21.0000	55.1250	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7813	78.6825	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.5000	9.1875	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.7188	2.3781	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	21.0000	55.1250	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.7813	78.6825	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	15.0000	0.2500	3.7500	0.3125	12.0000	2160.0000	2160.3125	
3 (Right)	Plate	15.0000	24.2500	363.7500	0.3125	12.0000	2160.0000	2160.3125	
4	Plate	8.8125	12.2500	107.9531	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.5000	10.5000	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	21.0000	63.0000	9.0000	8.7500	229.6875	238.6875	
Total		68.55		839.70	455.89		7343.05	7798.95	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2500 in	S _{right} =	636.65 in ³	x-bar =	12.2500 in	S _{right} =	636.65 in ³
I _y =	7798.95 in ⁴	S _{left} =	636.65 in ³	I _y =	7798.95 in ⁴	S _{left} =	636.65 in ³
C _{right} =	12.2500 in	A =	68.5469 in ²	C _{right} =	12.2500 in	A =	68.5469 in ²
C _{left} =	12.2500 in	r _y =	10.6666 in	C _{left} =	12.2500 in	r _y =	10.6666 in



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.7500$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.7500$ in

Top Cover Plate:

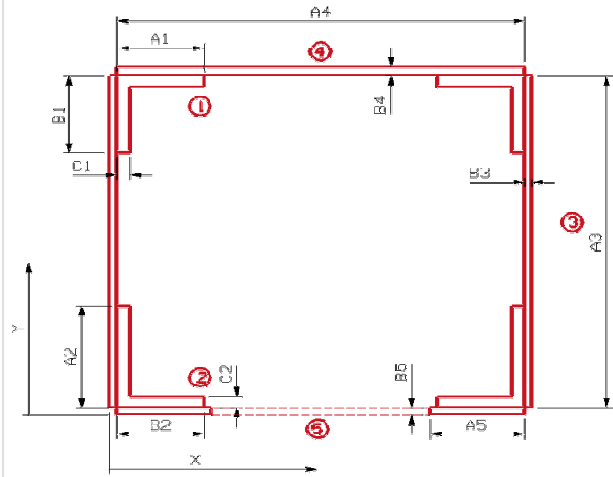
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.6250$ in

Web Plate 1:

$A_3 = b = 30.0000$ in
 $B_3 = t = 0.6250$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.7500$ in



Member U77-U78

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	9.0000	30.3750	273.3750	0.4219	13.7678	1705.9617	1706.3836
	Vertical Leg	10.8750	26.3750	286.8281	47.6348	9.7678	1037.5750	1085.2098
2	Horizontal Leg	9.0000	1.1250	10.1250	0.4219	15.4822	2157.2969	2157.7188
	Vertical Leg	10.8750	5.1250	55.7344	47.6348	11.4822	1433.7792	1481.4139
3	Plate	37.5000	15.7500	590.6250	2812.5000	0.8572	27.5571	2840.0571
4	Plate	14.6875	31.0625	456.2305	0.4781	14.4553	3069.0212	3069.4993
5	Perforated Plate	9.0000	0.3750	3.3750	0.4219	16.2322	2371.3696	2371.7915
Total		100.94		1676.29	2909.51		11802.56	14712.07
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.6072 in	S _{top} =	996.23 in ³	y-bar =	16.6072 in	S _{top} =	996.23 in ³
I _x =	14712.07 in ⁴	S _{bottom} =	885.88 in ³	I _x =	14712.07 in ⁴	S _{bottom} =	885.88 in ³
C _{top} =	14.7678 in	A =	100.9375 in ²	C _{top} =	14.7678 in	A =	100.9375 in ²
C _{bottom} =	16.6072 in	r _x =	12.0729 in	C _{bottom} =	16.6072 in	r _x =	12.0729 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.5000	3.6250	16.3125	13.5000	8.7500	344.5313	358.0313	
	Vertical Leg	5.4375	1.0000	5.4375	0.2549	11.3750	703.5615	703.8164	
1 (Right)	Horizontal Leg	4.5000	21.1250	95.0625	13.5000	8.7500	344.5313	358.0313	
	Vertical Leg	5.4375	23.7500	129.1406	0.2549	11.3750	703.5615	703.8164	
2 (Left)	Horizontal Leg	4.5000	3.6250	16.3125	13.5000	8.7500	344.5313	358.0313	
	Vertical Leg	5.4375	1.0000	5.4375	0.2549	11.3750	703.5615	703.8164	
2 (Right)	Horizontal Leg	4.5000	21.1250	95.0625	13.5000	8.7500	344.5313	358.0313	
	Vertical Leg	5.4375	23.7500	129.1406	0.2549	11.3750	703.5615	703.8164	
3 (Left)	Plate	18.7500	0.3125	5.8594	0.6104	12.0625	2728.1982	2728.8086	
3 (Right)	Plate	18.7500	24.4375	458.2031	0.6104	12.0625	2728.1982	2728.8086	
4	Plate	14.6875	12.3750	181.7578	675.9310	0.0000	0.0000	675.9310	
5 (Left)	Perforated Plate	4.5000	3.6250	16.3125	13.5000	8.7500	344.5313	358.0313	
5 (Right)	Perforated Plate	4.5000	21.1250	95.0625	13.5000	8.7500	344.5313	358.0313	
Total		100.94		1249.10	759.17		10337.83	11097.00	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3750 in	S _{right} =	896.73 in ³	x-bar =	12.3750 in	S _{right} =	896.73 in ³
I _y =	11097.00 in ⁴	S _{left} =	896.73 in ³	I _y =	11097.00 in ⁴	S _{left} =	896.73 in ³
C _{right} =	12.3750 in	A =	100.9375 in ²	C _{right} =	12.3750 in	A =	100.9375 in ²
C _{left} =	12.3750 in	r _y =	10.4852 in	C _{left} =	12.3750 in	r _y =	10.4852 in



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_l = 0.7500$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_l = 0.7500$ in

Top Cover Plate: PL

$A_6 = b = 23.5000$ in
 $B_6 = t = 0.6250$ in

Side Plate 1: PL

$A_3 = b = 14.0000$ in
 $B_3 = t = 0.7500$ in

Web Plate 1: PL

$A_4 = b = 30.0000$ in
 $B_4 = t = 0.3125$ in

Side Plate 2: PL (No 2nd PL)

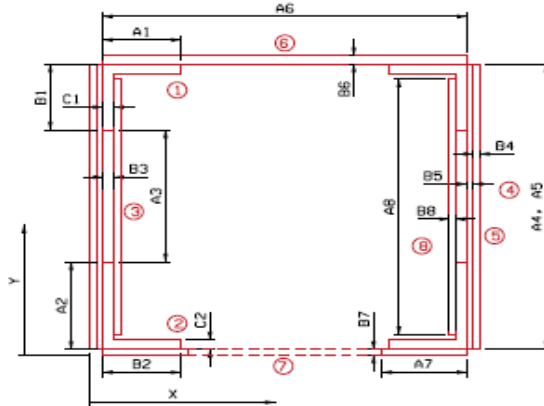
$A_8 = b = 0.0000$ in
 $B_8 = t = 0.0000$ in

Web Plate 2: PL

$A_5 = b = 30.0000$ in
 $B_5 = t = 0.6250$ in

Perforated Bottom Cover Plate: PL

$A_7 = b = 6.0000$ in
 $B_7 = t = 0.7500$ in



Member L78-L79

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	9.0000	30.3750	273.3750	0.4219	14.0100	1766.5128	1766.9347
	Vertical Leg	10.8750	26.3750	286.8281	47.6348	10.0100	1089.6691	1137.3038
2	Horizontal Leg	9.0000	1.1250	10.1250	0.4219	15.2400	2090.3272	2090.7491
	Vertical Leg	10.8750	5.1250	55.7344	47.6348	11.2400	1373.9293	1421.5640
3	Plate	21.0000	15.7500	330.7500	343.0000	0.6150	7.9436	350.9436
4	Plate	18.7500	15.7500	295.3125	1406.2500	0.6150	7.0925	1413.3425
5	Plate	37.5000	15.7500	590.6250	2812.5000	0.6150	14.1849	2826.6849
6	Plate	14.6875	31.0625	456.2305	0.4781	14.6975	3172.7285	3173.2066
7	Perforated Plate	9.0000	0.3750	3.3750	0.4219	15.9900	2301.1302	2301.5520
8	Plate	0.0000	15.7500	0.0000	0.0000	0.6150	0.0000	0.0000
Total		140.69		2302.36	4658.76		11823.52	16482.28
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.3650 in	$S_{top} = 1098.09 \text{ in}^3$			y-bar = 16.3650 in	$S_{top} = 1098.09 \text{ in}^3$		
$I_x = 16482.28 \text{ in}^4$	$S_{bottom} = 1007.16 \text{ in}^3$			$I_x = 16482.28 \text{ in}^4$	$S_{bottom} = 1007.16 \text{ in}^3$		
$C_{top} = 15.0100 \text{ in}$	$A = 140.6875 \text{ in}^2$			$C_{top} = 15.0100 \text{ in}$	$A = 140.6875 \text{ in}^2$		
$C_{bottom} = 16.3650 \text{ in}$	$r_x = 10.8238 \text{ in}$			$C_{bottom} = 16.3650 \text{ in}$	$r_x = 10.8238 \text{ in}$		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I_o	d	Ad^2	$I_{y, gross}$	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.5000	3.9375	17.7188	13.5000	8.7500	344.5313	358.0313	
	Vertical Leg	5.4375	1.3125	7.1367	0.2549	11.3750	703.5615	703.8164	
1 (Right)	Horizontal Leg	4.5000	21.4375	96.4688	13.5000	8.7500	344.5313	358.0313	
	Vertical Leg	5.4375	24.0625	130.8398	0.2549	11.3750	703.5615	703.8164	
2 (Left)	Horizontal Leg	4.5000	3.9375	17.7188	13.5000	8.7500	344.5313	358.0313	
	Vertical Leg	5.4375	1.3125	7.1367	0.2549	11.3750	703.5615	703.8164	
2 (Right)	Horizontal Leg	4.5000	21.4375	96.4688	13.5000	8.7500	344.5313	358.0313	
	Vertical Leg	5.4375	24.0625	130.8398	0.2549	11.3750	703.5615	703.8164	
3 (Left)	Plate	10.5000	1.3125	13.7813	0.4922	11.3750	1358.6016	1359.0938	
3 (Right)	Plate	10.5000	24.0625	252.6563	0.4922	11.3750	1358.6016	1359.0938	
4 (Left)	Plate	9.3750	0.1563	1.4648	0.0763	12.5313	1472.1771	1472.2534	
4 (Right)	Plate	9.3750	25.2188	236.4258	0.0763	12.5313	1472.1771	1472.2534	
5 (Left)	Plate	18.7500	0.6250	11.7188	0.6104	12.0625	2728.1982	2728.8086	
5 (Right)	Plate	18.7500	24.7500	464.0625	0.6104	12.0625	2728.1982	2728.8086	
6	Plate	14.6875	12.6875	186.3477	675.9310	0.0000	0.0000	675.9310	
7 (Left)	Perforated Plate	4.5000	3.9375	17.7188	13.5000	8.7500	344.5313	358.0313	
7 (Right)	Perforated Plate	4.5000	21.4375	96.4688	13.5000	8.7500	344.5313	358.0313	
8 (Left)	Plate	0.0000	1.6875	0.0000	0.0000	11.0000	0.0000	0.0000	
8 (Right)	Plate	0.0000	23.6875	0.0000	0.0000	11.0000	0.0000	0.0000	
Total		140.69		1784.97	760.31		15999.39	15697.85	
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 12.6875 in	$S_{right} = 1237.27 \text{ in}^3$			x-bar = 12.6875 in	$S_{right} = 1237.27 \text{ in}^3$		
$I_y = 15697.85 \text{ in}^4$	$S_{left} = 1237.27 \text{ in}^3$			$I_y = 15697.85 \text{ in}^4$	$S_{left} = 1237.27 \text{ in}^3$		
$C_{right} = 12.6875 \text{ in}$	$A = 140.6875 \text{ in}^2$			$C_{right} = 12.6875 \text{ in}$	$A = 140.6875 \text{ in}^2$		
$C_{left} = 12.6875 \text{ in}$	$r_y = 10.5631 \text{ in}$			$C_{left} = 12.6875 \text{ in}$	$r_y = 10.5631 \text{ in}$		



Made By KMW
Checked By ADK

Date 2/1/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

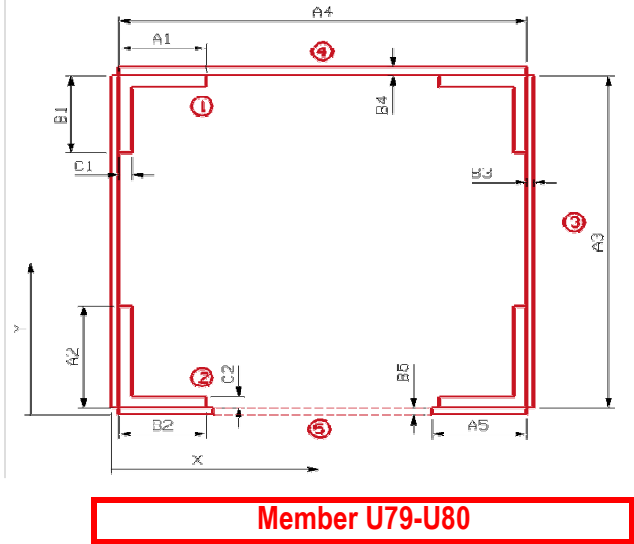
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.7500$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.7500$ in

Top Cover Plate:
 $A_4 = b = 22.0000$ in
 $B_4 = t = 0.6250$ in

Web Plate 1:
 $A_3 = b = 30.0000$ in
 $B_3 = t = 1.7500$ in

Perforated Cover Plate
 $A_5 = b = 5.2500$ in
 $B_5 = t = 0.7500$ in



X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	9.0000	30.3750	273.3750	0.4219	14.0872	1786.0546	1786.4765	
	Vertical Leg	10.8750	26.3750	286.8281	47.6348	10.0872	1106.5589	1154.1936	
2	Horizontal Leg	9.0000	1.1250	10.1250	0.4219	15.1628	2069.1819	2069.6037	
	Vertical Leg	10.8750	5.1250	55.7344	47.6348	11.1628	1355.1019	1402.7366	
3	Plate	105.0000	15.7500	1653.7500	7875.0000	0.5378	30.3638	7905.3638	
4	Plate	13.7500	31.0625	427.1094	0.4476	14.7747	3001.5306	3001.9782	
5	Perforated Plate	7.8750	0.3750	2.9531	0.3691	15.9128	1994.0738	1994.4430	
Total		166.38		2709.88	7971.93		11342.87	19314.80	
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	
1	0.1250	30.0000	-3.7500	15.7500	-59.0625	-281.2500	0.4843	-0.8796	-282.1296
2	0.0625	12.0000	-0.7500	24.7500	-18.5625	-9.0000	8.5157	-54.3875	-63.3875
3	0.0625	6.0000	-0.3750	27.7500	-10.4063	-1.1250	11.5157	-49.7290	-50.8540
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-4.88	-88.03	-291.38		-105.00	-396.37	



Made By KMW
Checked By ADK

Date 2/1/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.2878 in	S _{top} =	1280.21 in ³	y-bar =	16.2343 in	S _{top} =	1249.51 in ³
I _x =	19314.80 in ⁴	S _{bott.} =	1185.85 in ³	I _x =	18918.42 in ⁴	S _{bott.} =	1165.33 in ³
C _{top} =	15.0872 in	A =	166.3750 in ²	C _{top} =	15.1407 in	A =	161.5000 in ²
C _{bottom} =	16.2878 in	r _x =	10.7746 in	C _{bottom} =	16.2343 in	r _x =	10.8232 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.5000	4.7500	21.3750	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	2.1250	11.5547	0.2549	10.6250	613.8428	614.0977	
1 (Right)	Horizontal Leg	4.5000	20.7500	93.3750	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	23.3750	127.1016	0.2549	10.6250	613.8428	614.0977	
2 (Left)	Horizontal Leg	4.5000	4.7500	21.3750	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	2.1250	11.5547	0.2549	10.6250	613.8428	614.0977	
2 (Right)	Horizontal Leg	4.5000	20.7500	93.3750	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	23.3750	127.1016	0.2549	10.6250	613.8428	614.0977	
3 (Left)	Plate	52.5000	0.8750	45.9375	13.3984	11.8750	7403.3203	7416.7188	
3 (Right)	Plate	52.5000	24.6250	1292.8125	13.3984	11.8750	7403.3203	7416.7188	
4	Plate	13.7500	12.7500	175.3125	554.5833	0.0000	0.0000	554.5833	
5 (Left)	Perforated Plate	3.9375	4.3750	17.2266	9.0439	8.3750	276.1787	285.2227	
5 (Right)	Perforated Plate	3.9375	21.1250	83.1797	9.0439	8.3750	276.1787	285.2227	
Total		166.38		2121.28	654.49		18966.37	19620.86	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	30.0000	0.1250	-3.7500	0.0625	-0.2344	-0.0049	13.0697	-640.5624	-640.5672
2	12.0000	0.0625	-0.7500	0.1563	-0.1172	-0.0002	12.9759	-126.2811	-126.2814
3	6.0000	0.0625	-0.3750	0.2188	-0.0820	-0.0001	12.9134	-62.5338	-62.5339
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-4.88		-0.43	-0.01		-829.38	-829.38

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.7500 in	S _{right} =	1538.89 in ³	x-bar =	13.1322 in	S _{right} =	1519.38 in ³
I _y =	19620.86 in ⁴	S _{left} =	1538.89 in ³	I _y =	18791.47 in ⁴	S _{left} =	1430.95 in ³
C _{right} =	12.7500 in	A =	166.3750 in ²	C _{right} =	12.3678 in	A =	161.5000 in ²
C _{left} =	12.7500 in	r _y =	10.8596 in	C _{left} =	13.1322 in	r _y =	10.7868 in



Made By SFH
Checked By DMP

Date 1/12/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_l = 0.7500$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_l = 0.7500$ in

Top Cover Plate: PL

$A_6 = b = 22.0000$ in
 $B_6 = t = 0.6250$ in

Side Plate 1: PL

$A_3 = b = 14.0000$ in
 $B_3 = t = 0.8125$ in

Web Plate 1: PL

$A_4 = b = 30.0000$ in
 $B_4 = t = 0.8750$ in

Side Plate 2: PL (No 2nd PL)

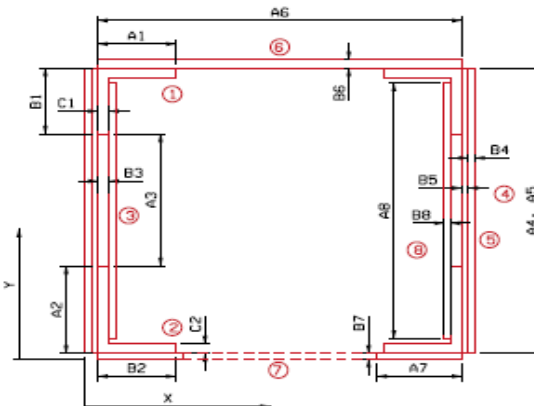
$A_8 = b = 0.0000$ in
 $B_8 = t = 0.0000$ in

Web Plate 2: PL

$A_5 = b = 30.0000$ in
 $B_5 = t = 0.8750$ in

Perforated Bottom Cover Plate: PL

$A_7 = b = 5.2500$ in
 $B_7 = t = 0.7500$ in



Member L80-L81

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg		9.0000	30.3750	273.3750	0.4219	14.1519	1802.4949	1802.9168
	Vertical Leg		10.8750	26.3750	286.8281	47.6348	10.1519	1120.7965	1168.4313
2	Horizontal Leg		9.0000	1.1250	10.1250	0.4219	15.0981	2051.5646	2051.9865
	Vertical Leg		10.8750	5.1250	55.7344	47.6348	11.0981	1339.4421	1387.0768
3	Plate		22.7500	15.7500	358.3125	371.5833	0.4731	5.0913	376.6746
4	Plate		52.5000	15.7500	826.8750	3937.5000	0.4731	11.7491	3949.2491
5	Plate		52.5000	15.7500	826.8750	3937.5000	0.4731	11.7491	3949.2491
6	Plate		13.7500	31.0625	427.1094	0.4476	14.8394	3027.8707	3028.3183
7	Perforated Plate		7.8750	0.3750	2.9531	0.3691	15.8481	1977.8946	1978.2637
8	Plate		0.0000	15.7500	0.0000	0.0000	0.4731	0.0000	0.0000
Total			189.13		3068.19	8343.51		11348.65	19692.17
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/12/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.2231 in	S _{top} = 1299.65 in ³			y-bar = 16.2231 in	S _{top} = 1299.65 in ³		
I _x = 19692.17 in ⁴	S _{bottom} = 1213.84 in ³			I _x = 19692.17 in ⁴	S _{bottom} = 1213.84 in ³		
C _{top} = 15.1519 in	A = 189.1250 in ²			C _{top} = 15.1519 in	A = 189.1250 in ²		
C _{bottom} = 16.2231 in	r _x = 10.2040 in			C _{bottom} = 16.2231 in	r _x = 10.2040 in		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y, gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.5000	4.7500	21.3750	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	2.1250	11.5547	0.2549	10.6250	613.8428	614.0977	
1 (Right)	Horizontal Leg	4.5000	20.7500	93.3750	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	23.3750	127.1016	0.2549	10.6250	613.8428	614.0977	
2 (Left)	Horizontal Leg	4.5000	4.7500	21.3750	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	2.1250	11.5547	0.2549	10.6250	613.8428	614.0977	
2 (Right)	Horizontal Leg	4.5000	20.7500	93.3750	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	23.3750	127.1016	0.2549	10.6250	613.8428	614.0977	
3 (Left)	Plate	11.3750	2.1563	24.5273	0.6258	10.5938	1276.5883	1277.2140	
3 (Right)	Plate	11.3750	23.3438	265.5352	0.6258	10.5938	1276.5883	1277.2140	
4 (Left)	Plate	26.2500	0.4375	11.4844	1.6748	12.3125	3979.4385	3981.1133	
4 (Right)	Plate	26.2500	25.0625	657.8906	1.6748	12.3125	3979.4385	3981.1133	
5 (Left)	Plate	26.2500	1.3125	34.4531	1.6748	11.4375	3433.9307	3435.6055	
5 (Right)	Plate	26.2500	24.1875	634.9219	1.6748	11.4375	3433.9307	3435.6055	
6	Plate	13.7500	12.7500	175.3125	554.5833	0.0000	0.0000	554.5833	
7 (Left)	Perforated Plate	3.9375	4.3750	17.2266	9.0439	8.3750	276.1787	285.2227	
7 (Right)	Perforated Plate	3.9375	21.1250	83.1797	9.0439	8.3750	276.1787	285.2227	
8 (Left)	Plate	0.0000	2.5625	0.0000	0.0000	10.1875	0.0000	0.0000	
8 (Right)	Plate	0.0000	22.9375	0.0000	0.0000	10.1875	0.0000	0.0000	
Total		189.13		2411.34	635.64		21539.64	22175.28	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 12.7500 in	S _{right} = 1739.24 in ³			x-bar = 12.7500 in	S _{right} = 1739.24 in ³		
I _y = 22175.28 in ⁴	S _{left} = 1739.24 in ³			I _y = 22175.28 in ⁴	S _{left} = 1739.24 in ³		
C _{right} = 12.7500 in	A = 189.1250 in ²			C _{right} = 12.7500 in	A = 189.1250 in ²		
C _{left} = 12.7500 in	r _y = 10.8283 in			C _{left} = 12.7500 in	r _y = 10.8283 in		



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_l = 0.7500$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_l = 0.7500$ in

Top Cover Plate: PL

$A_6 = b = 22.0000$ in
 $B_6 = t = 0.6250$ in

Side Plate 1: PL

$A_3 = b = 14.0000$ in
 $B_3 = t = 0.6875$ in

Web Plate 1: PL

$A_4 = b = 30.0000$ in
 $B_4 = t = 0.8125$ in

Side Plate 2: PL (No 2nd PL)

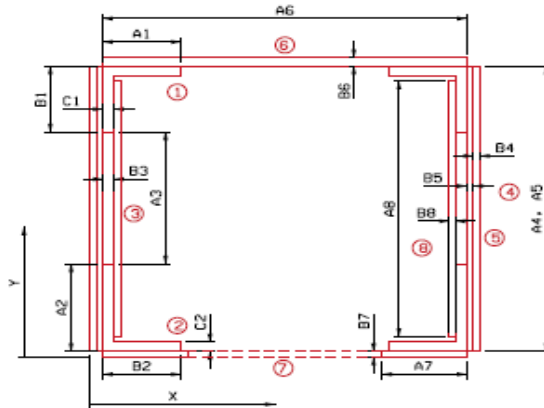
$A_8 = b = 0.0000$ in
 $B_8 = t = 0.0000$ in

Web Plate 2: PL

$A_5 = b = 30.0000$ in
 $B_5 = t = 0.8750$ in

Perforated Bottom Cover Plate: PL

$A_7 = b = 5.2500$ in
 $B_7 = t = 0.7500$ in



Member L81-L82

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg		9.0000	30.3750	273.3750	0.4219	14.1331	1797.6944	1798.1163
	Vertical Leg		10.8750	26.3750	286.8281	47.6348	10.1331	1116.6365	1164.2713
2	Horizontal Leg		9.0000	1.1250	10.1250	0.4219	15.1169	2056.6926	2057.1145
	Vertical Leg		10.8750	5.1250	55.7344	47.6348	11.1169	1343.9978	1391.6326
3	Plate		19.2500	15.7500	303.1875	314.4167	0.4919	4.6583	319.0750
4	Plate		48.7500	15.7500	767.8125	3656.2500	0.4919	11.7970	3668.0470
5	Plate		52.5000	15.7500	826.8750	3937.5000	0.4919	12.7045	3950.2045
6	Plate		13.7500	31.0625	427.1094	0.4476	14.8206	3020.1801	3020.6277
7	Perforated Plate		7.8750	0.3750	2.9531	0.3691	15.8669	1982.6044	1982.9735
8	Plate		0.0000	15.7500	0.0000	0.0000	0.4919	0.0000	0.0000
Total			181.88		2954.00	8005.10		11346.97	19352.06
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.2419 in	$S_{top} = 1278.79 \text{ in}^3$			y-bar = 16.2419 in	$S_{top} = 1278.79 \text{ in}^3$		
$I_x = 19352.06 \text{ in}^4$	$S_{bottom} = 1191.49 \text{ in}^3$			$I_x = 19352.06 \text{ in}^4$	$S_{bottom} = 1191.49 \text{ in}^3$		
$C_{top} = 15.1331 \text{ in}$	$A = 181.8750 \text{ in}^2$			$C_{top} = 15.1331 \text{ in}$	$A = 181.8750 \text{ in}^2$		
$C_{bottom} = 16.2419 \text{ in}$	$r_x = 10.3152 \text{ in}$			$C_{bottom} = 16.2419 \text{ in}$	$r_x = 10.3152 \text{ in}$		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I_o	d	Ad^2	$I_{y, gross}$	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.5000	4.6875	21.0938	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	2.0625	11.2148	0.2549	10.6250	613.8428	614.0977	
1 (Right)	Horizontal Leg	4.5000	20.6875	93.0938	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	23.3125	126.7617	0.2549	10.6250	613.8428	614.0977	
2 (Left)	Horizontal Leg	4.5000	4.6875	21.0938	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	2.0625	11.2148	0.2549	10.6250	613.8428	614.0977	
2 (Right)	Horizontal Leg	4.5000	20.6875	93.0938	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	23.3125	126.7617	0.2549	10.6250	613.8428	614.0977	
3 (Left)	Plate	9.6250	2.0313	19.5508	0.3791	10.6563	1092.9733	1093.3524	
3 (Right)	Plate	9.6250	23.3438	224.6836	0.3791	10.6563	1092.9733	1093.3524	
4 (Left)	Plate	24.3750	0.4063	9.9023	1.3409	12.2813	3676.4594	3677.8003	
4 (Right)	Plate	24.3750	24.9688	608.6133	1.3409	12.2813	3676.4594	3677.8003	
5 (Left)	Plate	26.2500	1.2500	32.8125	1.6748	11.4375	3433.9307	3435.6055	
5 (Right)	Plate	26.2500	24.1250	633.2813	1.6748	11.4375	3433.9307	3435.6055	
6	Plate	13.7500	12.6875	174.4531	554.5833	0.0000	0.0000	554.5833	
7 (Left)	Perforated Plate	3.9375	4.3125	16.9805	9.0439	8.3750	276.1787	285.2227	
7 (Right)	Perforated Plate	3.9375	21.0625	82.9336	9.0439	8.3750	276.1787	285.2227	
8 (Left)	Plate	0.0000	2.3750	0.0000	0.0000	10.3125	0.0000	0.0000	
8 (Right)	Plate	0.0000	23.0000	0.0000	0.0000	10.3125	0.0000	0.0000	
Total		181.88		2307.54	634.48		20566.46	21200.94	
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 12.6875 in	$S_{right} = 1671.01 \text{ in}^3$			x-bar = 12.6875 in	$S_{right} = 1671.01 \text{ in}^3$		
$I_y = 21200.94 \text{ in}^4$	$S_{left} = 1671.01 \text{ in}^3$			$I_y = 21200.94 \text{ in}^4$	$S_{left} = 1671.01 \text{ in}^3$		
$C_{right} = 12.6875 \text{ in}$	$A = 181.8750 \text{ in}^2$			$C_{right} = 12.6875 \text{ in}$	$A = 181.8750 \text{ in}^2$		
$C_{left} = 12.6875 \text{ in}$	$r_y = 10.7967 \text{ in}$			$C_{left} = 12.6875 \text{ in}$	$r_y = 10.7967 \text{ in}$		



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_l = 0.7500$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_l = 0.7500$ in

Top Cover Plate: PL

$A_6 = b = 22.0000$ in
 $B_6 = t = 0.6250$ in

Side Plate 1: PL

$A_3 = b = 14.0000$ in
 $B_3 = t = 0.6875$ in

Web Plate 1: PL

$A_4 = b = 30.0000$ in
 $B_4 = t = 0.8125$ in

Side Plate 2: PL (No 2nd PL)

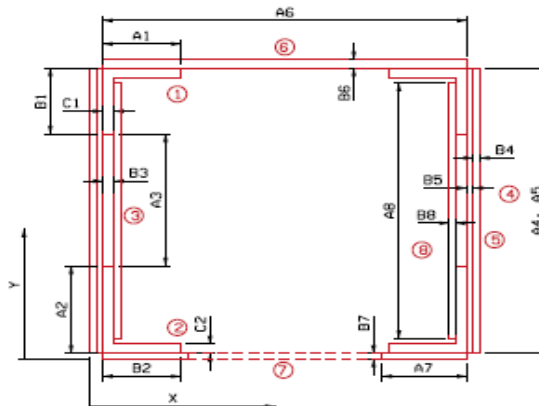
$A_8 = b = 0.0000$ in
 $B_8 = t = 0.0000$ in

Web Plate 2: PL

$A_5 = b = 30.0000$ in
 $B_5 = t = 0.8750$ in

Perforated Bottom Cover Plate: PL

$A_7 = b = 5.2500$ in
 $B_7 = t = 0.7500$ in



Member L82-L83

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg		9.0000	30.3750	273.3750	0.4219	14.1331	1797.6944	1798.1163
	Vertical Leg		10.8750	26.3750	286.8281	47.6348	10.1331	1116.6365	1164.2713
2	Horizontal Leg		9.0000	1.1250	10.1250	0.4219	15.1169	2056.6926	2057.1145
	Vertical Leg		10.8750	5.1250	55.7344	47.6348	11.1169	1343.9978	1391.6326
3	Plate		19.2500	15.7500	303.1875	314.4167	0.4919	4.6583	319.0750
4	Plate		48.7500	15.7500	767.8125	3656.2500	0.4919	11.7970	3668.0470
5	Plate		52.5000	15.7500	826.8750	3937.5000	0.4919	12.7045	3950.2045
6	Plate		13.7500	31.0625	427.1094	0.4476	14.8206	3020.1801	3020.6277
7	Perforated Plate		7.8750	0.3750	2.9531	0.3691	15.8669	1982.6044	1982.9735
8	Plate		0.0000	15.7500	0.0000	0.0000	0.4919	0.0000	0.0000
Total			181.88		2954.00	8005.10		11346.97	19352.06
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.2419 in	S _{top} = 1278.79 in ³			y-bar = 16.2419 in	S _{top} = 1278.79 in ³		
I _x = 19352.06 in ⁴	S _{bottom} = 1191.49 in ³			I _x = 19352.06 in ⁴	S _{bottom} = 1191.49 in ³		
C _{top} = 15.1331 in	A = 181.8750 in ²			C _{top} = 15.1331 in	A = 181.8750 in ²		
C _{bottom} = 16.2419 in	r _x = 10.3152 in			C _{bottom} = 16.2419 in	r _x = 10.3152 in		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y, gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.5000	4.6875	21.0938	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	2.0625	11.2148	0.2549	10.6250	613.8428	614.0977	
1 (Right)	Horizontal Leg	4.5000	20.6875	93.0938	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	23.3125	126.7617	0.2549	10.6250	613.8428	614.0977	
2 (Left)	Horizontal Leg	4.5000	4.6875	21.0938	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	2.0625	11.2148	0.2549	10.6250	613.8428	614.0977	
2 (Right)	Horizontal Leg	4.5000	20.6875	93.0938	13.5000	8.0000	288.0000	301.5000	
	Vertical Leg	5.4375	23.3125	126.7617	0.2549	10.6250	613.8428	614.0977	
3 (Left)	Plate	9.6250	2.0313	19.5508	0.3791	10.6563	1092.9733	1093.3524	
3 (Right)	Plate	9.6250	23.3438	224.6836	0.3791	10.6563	1092.9733	1093.3524	
4 (Left)	Plate	24.3750	0.4063	9.9023	1.3409	12.2813	3676.4594	3677.8003	
4 (Right)	Plate	24.3750	24.9688	608.6133	1.3409	12.2813	3676.4594	3677.8003	
5 (Left)	Plate	26.2500	1.2500	32.8125	1.6748	11.4375	3433.9307	3435.6055	
5 (Right)	Plate	26.2500	24.1250	633.2813	1.6748	11.4375	3433.9307	3435.6055	
6	Plate	13.7500	12.6875	174.4531	554.5833	0.0000	0.0000	554.5833	
7 (Left)	Perforated Plate	3.9375	4.3125	16.9805	9.0439	8.3750	276.1787	285.2227	
7 (Right)	Perforated Plate	3.9375	21.0625	82.9336	9.0439	8.3750	276.1787	285.2227	
8 (Left)	Plate	0.0000	2.3750	0.0000	0.0000	10.3125	0.0000	0.0000	
8 (Right)	Plate	0.0000	23.0000	0.0000	0.0000	10.3125	0.0000	0.0000	
Total		181.88		2307.54	634.48		20566.46	21200.94	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 12.6875 in	S _{right} = 1671.01 in ³			x-bar = 12.6875 in	S _{right} = 1671.01 in ³		
I _y = 21200.94 in ⁴	S _{left} = 1671.01 in ³			I _y = 21200.94 in ⁴	S _{left} = 1671.01 in ³		
C _{right} = 12.6875 in	A = 181.8750 in ²			C _{right} = 12.6875 in	A = 181.8750 in ²		
C _{left} = 12.6875 in	r _y = 10.7967 in			C _{left} = 12.6875 in	r _y = 10.7967 in		



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_l = 0.6250$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_l = 0.6250$ in

Top Cover Plate: PL

$A_6 = b = 22.0000$ in
 $B_6 = t = 0.5625$ in

Side Plate 1: PL

$A_3 = b = 14.0000$ in
 $B_3 = t = 0.6250$ in

Web Plate 1: PL

$A_4 = b = 30.0000$ in
 $B_4 = t = 0.7500$ in

Side Plate 2: PL (No 2nd PL)

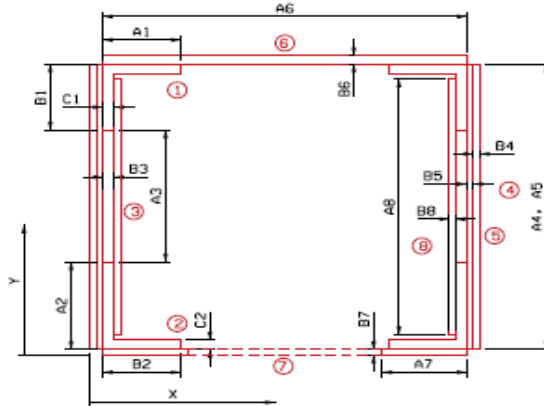
$A_8 = b = 0.0000$ in
 $B_8 = t = 0.0000$ in

Web Plate 2: PL

$A_5 = b = 30.0000$ in
 $B_5 = t = 0.8750$ in

Perforated Bottom Cover Plate: PL

$A_7 = b = 5.2500$ in
 $B_7 = t = 0.6875$ in



Member L83-L84

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	7.5000	30.3750	227.8125	0.2441	14.2213	1516.8319	1517.0761
	Vertical Leg	9.2188	26.3750	243.1445	41.7845	10.2213	963.1213	1004.9057
2	Horizontal Leg	7.5000	1.0000	7.5000	0.2441	15.1537	1722.2686	1722.5128
	Vertical Leg	9.2188	5.0000	46.0938	41.7845	11.1537	1146.8669	1188.6514
3	Plate	17.5000	15.6875	274.5313	285.8333	0.4662	3.8041	289.6375
4	Plate	45.0000	15.6875	705.9375	3375.0000	0.4662	9.7821	3384.7821
5	Plate	52.5000	15.6875	823.5938	3937.5000	0.4662	11.4124	3948.9124
6	Plate	12.3750	30.9688	383.2383	0.3263	14.8150	2716.1212	2716.4475
7	Perforated Plate	7.2188	0.3438	2.4814	0.2843	15.8100	1804.3682	1804.6525
8	Plate	0.0000	15.6875	0.0000	0.0000	0.4662	0.0000	0.0000
Total		168.03		2714.33	7683.00		9894.58	17577.58
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.1537 in	S _{top} = 1164.37 in ³			y-bar = 16.1537 in	S _{top} = 1164.37 in ³		
I _x = 17577.58 in ⁴	S _{bottom} = 1088.14 in ³			I _x = 17577.58 in ⁴	S _{bottom} = 1088.14 in ³		
C _{top} = 15.0963 in	A = 168.0313 in ²			C _{top} = 15.0963 in	A = 168.0313 in ²		
C _{bottom} = 16.1537 in	r _x = 10.2279 in			C _{bottom} = 16.1537 in	r _x = 10.2279 in		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y, gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.7500	4.6250	17.3438	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.9375	8.9307	0.1500	10.6875	526.4951	526.6451	
1 (Right)	Horizontal Leg	3.7500	20.6250	77.3438	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	23.3125	107.4561	0.1500	10.6875	526.4951	526.6451	
2 (Left)	Horizontal Leg	3.7500	4.6250	17.3438	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.9375	8.9307	0.1500	10.6875	526.4951	526.6451	
2 (Right)	Horizontal Leg	3.7500	20.6250	77.3438	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	23.3125	107.4561	0.1500	10.6875	526.4951	526.6451	
3 (Left)	Plate	8.7500	1.9375	16.9531	0.2848	10.6875	999.4482	999.7331	
3 (Right)	Plate	8.7500	23.3125	203.9844	0.2848	10.6875	999.4482	999.7331	
4 (Left)	Plate	22.5000	0.3750	8.4375	1.0547	12.2500	3376.4063	3377.4609	
4 (Right)	Plate	22.5000	24.8750	559.6875	1.0547	12.2500	3376.4063	3377.4609	
5 (Left)	Plate	26.2500	1.1875	31.1719	1.6748	11.4375	3433.9307	3435.6055	
5 (Right)	Plate	26.2500	24.0625	631.6406	1.6748	11.4375	3433.9307	3435.6055	
6	Plate	12.3750	12.6250	156.2344	499.1250	0.0000	0.0000	499.1250	
7 (Left)	Perforated Plate	3.6094	4.2500	15.3398	8.2903	8.3750	253.1638	261.4541	
7 (Right)	Perforated Plate	3.6094	21.0000	75.7969	8.2903	8.3750	253.1638	261.4541	
8 (Left)	Plate	0.0000	2.2500	0.0000	0.0000	10.3750	0.0000	0.0000	
8 (Right)	Plate	0.0000	23.0000	0.0000	0.0000	10.3750	0.0000	0.0000	
Total		168.03		2121.39	567.33		19191.88	19759.21	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 12.6250 in	S _{right} = 1565.09 in ³			x-bar = 12.6250 in	S _{right} = 1565.09 in ³		
I _y = 19759.21 in ⁴	S _{left} = 1565.09 in ³			I _y = 19759.21 in ⁴	S _{left} = 1565.09 in ³		
C _{right} = 12.6250 in	A = 168.0313 in ²			C _{right} = 12.6250 in	A = 168.0313 in ²		
C _{left} = 12.6250 in	r _y = 10.8440 in			C _{left} = 12.6250 in	r _y = 10.8440 in		

South Truss

Member U84-U85



Made By KMW
Checked By ADK

Date 2/1/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.6250$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_f = 0.6250$ in

Top Cover Plate:

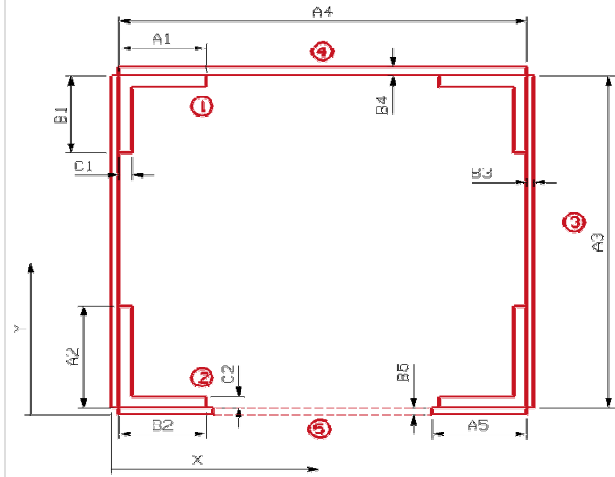
$A_4 = b = 22.0000$ in
 $B_4 = t = 0.5625$ in

Web Plate 1:

$A_3 = b = 30.0000$ in
 $B_3 = t = 1.4375$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.6875$ in



Member U84-U85

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg		7.5000	30.3750	227.8125	0.2441	14.1250	1496.3716	1496.6158
	Vertical Leg		9.2188	26.3750	243.1445	41.7845	10.1250	945.0698	986.8543
2	Horizontal Leg		7.5000	1.0000	7.5000	0.2441	15.2500	1744.2139	1744.4581
	Vertical Leg		9.2188	5.0000	46.0938	41.7845	11.2500	1166.7437	1208.5281
3	Plate		86.2500	15.6875	1353.0469	6468.7500	0.5625	27.2880	6496.0380
4	Plate		12.3750	30.9688	383.2383	0.3263	14.7188	2680.9475	2681.2738
5	Perforated Plate		7.2188	0.3438	2.4814	0.2843	15.9062	1826.4024	1826.6867
Total			139.28		2263.32	6553.42		9887.04	16440.45
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0625	6.0000	-0.3750	3.6875	-1.3828	-1.1250	12.5364	-58.9357	-60.0607
2	3.0000	0.1250	-0.3750	31.1875	-11.6953	-0.0005	14.9636	-83.9658	-83.9663
3	1.0000	0.2500	-0.2500	31.1250	-7.7813	-0.0013	14.9011	-55.5106	-55.5119
4	0.0625	30.0000	-1.8750	15.6875	-29.4141	-140.6250	0.5364	-0.5395	-141.1645
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.88		-50.27	-141.75		-198.95	-340.70



Made By KMW
Checked By ADK

Date 2/1/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.2500 in	S _{top} =	1096.03 in ³	y-bar =	16.2239 in	S _{top} =	1071.45 in ³
I _x =	16440.45 in ⁴	S _{bott.} =	1011.72 in ³	I _x =	16099.75 in ⁴	S _{bott.} =	992.35 in ³
C _{top} =	15.0000 in	A =	139.2813 in ²	C _{top} =	15.0261 in	A =	136.4063 in ²
C _{bottom} =	16.2500 in	r _x =	10.8645 in	C _{bottom} =	16.2239 in	r _x =	10.8641 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.7500	4.4375	16.6406	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.7500	8.0664	0.1500	10.6875	526.4951	526.6451	
1 (Right)	Horizontal Leg	3.7500	20.4375	76.6406	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	23.1250	106.5918	0.1500	10.6875	526.4951	526.6451	
2 (Left)	Horizontal Leg	3.7500	4.4375	16.6406	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.7500	8.0664	0.1500	10.6875	526.4951	526.6451	
2 (Right)	Horizontal Leg	3.7500	20.4375	76.6406	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	23.1250	106.5918	0.1500	10.6875	526.4951	526.6451	
3 (Left)	Plate	43.1250	0.7188	30.9961	7.4261	11.7188	5922.3175	5929.7437	
3 (Right)	Plate	43.1250	24.1563	1041.7383	7.4261	11.7188	5922.3175	5929.7437	
4	Plate	12.3750	12.4375	153.9141	499.1250	0.0000	0.0000	499.1250	
5 (Left)	Perforated Plate	3.6094	4.0625	14.6631	8.2903	8.3750	253.1638	261.4541	
5 (Right)	Perforated Plate	3.6094	20.8125	75.1201	8.2903	8.3750	253.1638	261.4541	
Total		139.28		1732.31	576.16		15416.94	15993.10	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	6.0000	0.0625	-0.3750	0.0313	-0.0117	-0.0001	12.2721	-56.4768	-56.4769
2	0.1250	3.0000	-0.3750	7.9375	-2.9766	-0.2813	4.3659	-7.1478	-7.4290
3	0.2500	1.0000	-0.2500	17.9375	-4.4844	-0.0208	5.6341	-7.9359	-7.9567
4	30.0000	0.0625	-1.8750	24.8438	-46.5820	-0.0006	12.5404	-294.8649	-294.8655
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.88		-54.05	-0.30		-366.43	-366.73

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.4375 in	S _{right} =	1285.88 in ³	x-bar =	12.3034 in	S _{right} =	1242.99 in ³
I _y =	15993.10 in ⁴	S _{left} =	1285.88 in ³	I _y =	15626.37 in ⁴	S _{left} =	1270.09 in ³
C _{right} =	12.4375 in	A =	139.2813 in ²	C _{right} =	12.5716 in	A =	136.4063 in ²
C _{left} =	12.4375 in	r _y =	10.7157 in	C _{left} =	12.3034 in	r _y =	10.7032 in



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6875$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6875$ in

Top Cover Plate:

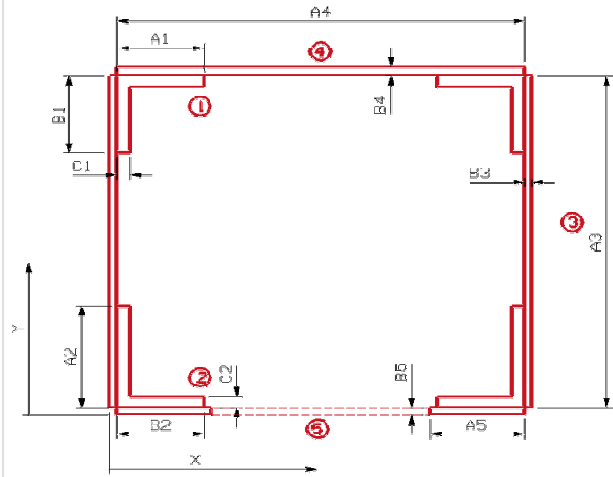
$A_4 = b = 22.0000$ in
 $B_4 = t = 0.6250$ in

Web Plate 1:

$A_3 = b = 30.0000$ in
 $B_3 = t = 1.1875$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.7500$ in



Member U85-U86

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	8.2500	30.4063	250.8516	0.3250	13.9653	1608.9915	1609.3165
	Vertical Leg	10.0547	26.4063	265.5066	44.8042	9.9653	998.5005	1043.3048
2	Horizontal Leg	8.2500	1.0938	9.0234	0.3250	15.3472	1943.1795	1943.5044
	Vertical Leg	10.0547	5.0938	51.2161	44.8042	11.3472	1294.6337	1339.4379
3	Plate	71.2500	15.7500	1122.1875	5343.7500	0.6910	34.0168	5377.7668
4	Plate	13.7500	31.0625	427.1094	0.4476	14.6215	2939.6040	2940.0516
5	Perforated Plate	7.8750	0.3750	2.9531	0.3691	16.0660	2032.6566	2033.0258
Total		129.48		2128.85	5434.83		10851.58	16286.41
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.4410 in	S _{top} =	1090.56 in ³	y-bar =	16.4410 in	S _{top} =	1090.56 in ³
I _x =	16286.41 in ⁴	S _{bottom} =	990.60 in ³	I _x =	16286.41 in ⁴	S _{bottom} =	990.60 in ³
C _{top} =	14.9340 in	A =	129.4844 in ²	C _{top} =	14.9340 in	A =	129.4844 in ²
C _{bottom} =	16.4410 in	r _x =	11.2151 in	C _{bottom} =	16.4410 in	r _x =	11.2151 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	4.1875	17.2734	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.5313	7.6981	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	20.1875	83.2734	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.8438	114.8434	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	4.1875	17.2734	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.5313	7.6981	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	20.1875	83.2734	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.8438	114.8434	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	35.6250	0.5938	21.1523	4.1864	11.5938	4788.5358	4792.7222	
3 (Right)	Plate	35.6250	23.7813	847.2070	4.1864	11.5938	4788.5358	4792.7222	
4	Plate	13.7500	12.1875	167.5781	554.5833	0.0000	0.0000	554.5833	
5 (Left)	Perforated Plate	3.9375	3.8125	15.0117	9.0439	8.3750	276.1787	285.2227	
5 (Right)	Perforated Plate	3.9375	20.5625	80.9648	9.0439	8.3750	276.1787	285.2227	
Total		129.48		1578.09	631.34		13468.96	14100.30	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	1156.95 in ³	x-bar =	12.1875 in	S _{right} =	1156.95 in ³
I _y =	14100.30 in ⁴	S _{left} =	1156.95 in ³	I _y =	14100.30 in ⁴	S _{left} =	1156.95 in ³
C _{right} =	12.1875 in	A =	129.4844 in ²	C _{right} =	12.1875 in	A =	129.4844 in ²
C _{left} =	12.1875 in	r _y =	10.4353 in	C _{left} =	12.1875 in	r _y =	10.4353 in



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6875$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6875$ in

Top Cover Plate:

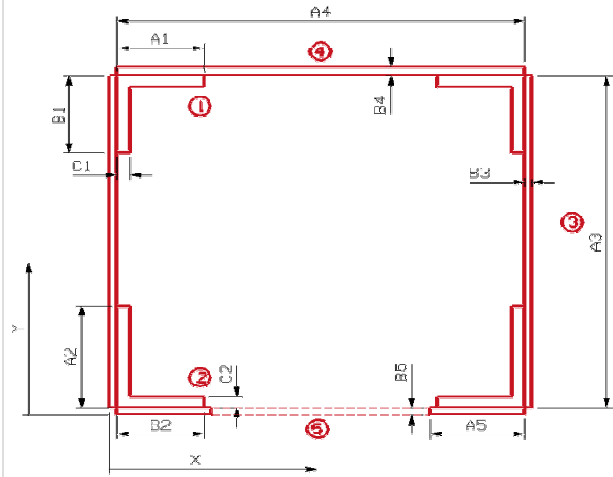
$A_4 = b = 22.0000$ in
 $B_4 = t = 0.6250$ in

Web Plate 1:

$A_3 = b = 30.0000$ in
 $B_3 = t = 1.1875$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.7500$ in



Member U86-U87

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	8.2500	30.4063	250.8516	0.3250	13.9653	1608.9915	1609.3165
	Vertical Leg	10.0547	26.4063	265.5066	44.8042	9.9653	998.5005	1043.3048
2	Horizontal Leg	8.2500	1.0938	9.0234	0.3250	15.3472	1943.1795	1943.5044
	Vertical Leg	10.0547	5.0938	51.2161	44.8042	11.3472	1294.6337	1339.4379
3	Plate	71.2500	15.7500	1122.1875	5343.7500	0.6910	34.0168	5377.7668
4	Plate	13.7500	31.0625	427.1094	0.4476	14.6215	2939.6040	2940.0516
5	Perforated Plate	7.8750	0.3750	2.9531	0.3691	16.0660	2032.6566	2033.0258
Total		129.48		2128.85	5434.83		10851.58	16286.41
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.4410 in	S _{top} =	1090.56 in ³	y-bar =	16.4410 in	S _{top} =	1090.56 in ³
I _x =	16286.41 in ⁴	S _{bot.} =	990.60 in ³	I _x =	16286.41 in ⁴	S _{bot.} =	990.60 in ³
C _{top} =	14.9340 in	A =	129.4844 in ²	C _{top} =	14.9340 in	A =	129.4844 in ²
C _{bottom} =	16.4410 in	r _x =	11.2151 in	C _{bottom} =	16.4410 in	r _x =	11.2151 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	4.1875	17.2734	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.5313	7.6981	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	20.1875	83.2734	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.8438	114.8434	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	4.1875	17.2734	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.5313	7.6981	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	20.1875	83.2734	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.8438	114.8434	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	35.6250	0.5938	21.1523	4.1864	11.5938	4788.5358	4792.7222	
3 (Right)	Plate	35.6250	23.7813	847.2070	4.1864	11.5938	4788.5358	4792.7222	
4	Plate	13.7500	12.1875	167.5781	554.5833	0.0000	0.0000	554.5833	
5 (Left)	Perforated Plate	3.9375	3.8125	15.0117	9.0439	8.3750	276.1787	285.2227	
5 (Right)	Perforated Plate	3.9375	20.5625	80.9648	9.0439	8.3750	276.1787	285.2227	
Total		129.48		1578.09	631.34		13468.96	14100.30	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	1156.95 in ³	x-bar =	12.1875 in	S _{right} =	1156.95 in ³
I _y =	14100.30 in ⁴	S _{left} =	1156.95 in ³	I _y =	14100.30 in ⁴	S _{left} =	1156.95 in ³
C _{right} =	12.1875 in	A =	129.4844 in ²	C _{right} =	12.1875 in	A =	129.4844 in ²
C _{left} =	12.1875 in	r _y =	10.4353 in	C _{left} =	12.1875 in	r _y =	10.4353 in



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

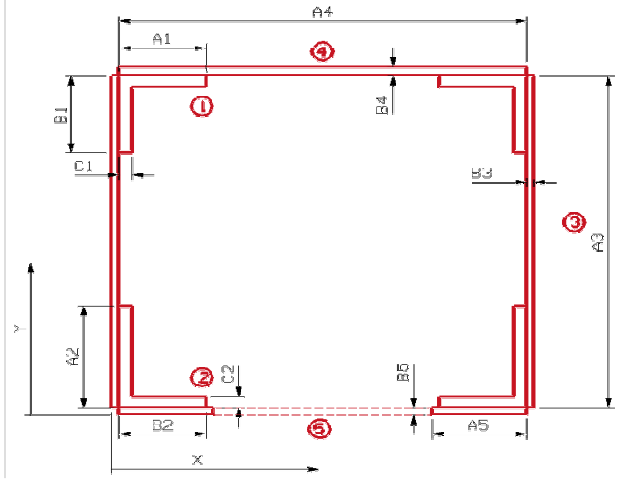
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6875$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6875$ in

Top Cover Plate:
 $A_4 = b = 22.0000$ in
 $B_4 = t = 0.6250$ in

Web Plate 1:
 $A_3 = b = 30.0000$ in
 $B_3 = t = 1.2500$ in

Perforated Cover Plate
 $A_5 = b = 5.2500$ in
 $B_5 = t = 0.7500$ in



Member U87-U88

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x, gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	8.2500	30.4063	250.8516	0.3250	13.9847	1613.4759	1613.8009
	Vertical Leg	10.0547	26.4063	265.5066	44.8042	9.9847	1002.4016	1047.2058
2	Horizontal Leg	8.2500	1.0938	9.0234	0.3250	15.3278	1938.2579	1938.5828
	Vertical Leg	10.0547	5.0938	51.2161	44.8042	11.3278	1290.1998	1335.0040
3	Plate	75.0000	15.7500	1181.2500	5625.0000	0.6715	33.8198	5658.8198
4	Plate	13.7500	31.0625	427.1094	0.4476	14.6410	2947.4290	2947.8766
5	Perforated Plate	7.8750	0.3750	2.9531	0.3691	16.0465	2027.7386	2028.1077
Total		133.23		2187.91	5716.08		10853.32	16569.40
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00	0.00	0.00	0.00



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.4215 in	S _{top} =	1108.06 in ³	y-bar =	16.4215 in	S _{top} =	1108.06 in ³
I _x =	16569.40 in ⁴	S _{bott.} =	1009.01 in ³	I _x =	16569.40 in ⁴	S _{bott.} =	1009.01 in ³
C _{top} =	14.9535 in	A =	133.2344 in ²	C _{top} =	14.9535 in	A =	133.2344 in ²
C _{bottom} =	16.4215 in	r _x =	11.1518 in	C _{bottom} =	16.4215 in	r _x =	11.1518 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	4.2500	17.5313	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.5938	8.0123	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	20.2500	83.5313	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.9063	115.1576	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	4.2500	17.5313	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.5938	8.0123	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	20.2500	83.5313	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.9063	115.1576	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	37.5000	0.6250	23.4375	4.8828	11.6250	5067.7734	5072.6563	
3 (Right)	Plate	37.5000	23.8750	895.3125	4.8828	11.6250	5067.7734	5072.6563	
4	Plate	13.7500	12.2500	168.4375	554.5833	0.0000	0.0000	554.5833	
5 (Left)	Perforated Plate	3.9375	3.8750	15.2578	9.0439	8.3750	276.1787	285.2227	
5 (Right)	Perforated Plate	3.9375	20.6250	81.2109	9.0439	8.3750	276.1787	285.2227	
Total		133.23		1632.12	632.73		14027.44	14660.17	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2500 in	S _{right} =	1196.75 in ³	x-bar =	12.2500 in	S _{right} =	1196.75 in ³
I _y =	14660.17 in ⁴	S _{left} =	1196.75 in ³	I _y =	14660.17 in ⁴	S _{left} =	1196.75 in ³
C _{right} =	12.2500 in	A =	133.2344 in ²	C _{right} =	12.2500 in	A =	133.2344 in ²
C _{left} =	12.2500 in	r _y =	10.4897 in	C _{left} =	12.2500 in	r _y =	10.4897 in



Made By KMW
Checked By ADK

Date 2/1/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6875$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6875$ in

Top Cover Plate:

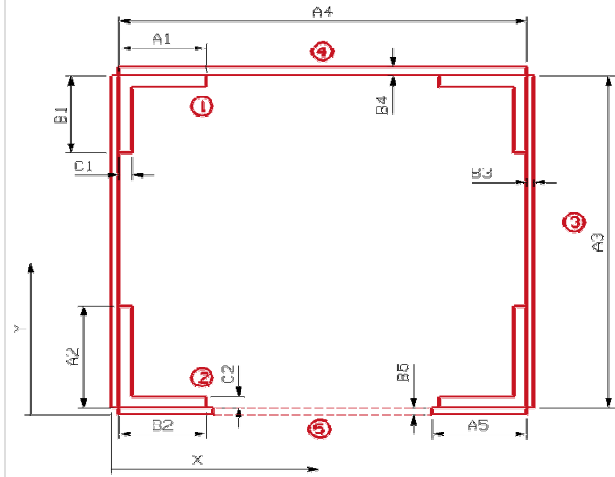
$A_4 = b = 22.0000$ in
 $B_4 = t = 0.6250$ in

Web Plate 1:

$A_3 = b = 30.0000$ in
 $B_3 = t = 1.2500$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.7500$ in



Member U88-U89

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	8.2500	30.4063	250.8516	0.3250	13.9847	1613.4759	1613.8009	
	Vertical Leg	10.0547	26.4063	265.5066	44.8042	9.9847	1002.4016	1047.2058	
2	Horizontal Leg	8.2500	1.0938	9.0234	0.3250	15.3278	1938.2579	1938.5828	
	Vertical Leg	10.0547	5.0938	51.2161	44.8042	11.3278	1290.1998	1335.0040	
3	Plate	75.0000	15.7500	1181.2500	5625.0000	0.6715	33.8198	5658.8198	
4	Plate	13.7500	31.0625	427.1094	0.4476	14.6410	2947.4290	2947.8766	
5	Perforated Plate	7.8750	0.3750	2.9531	0.3691	16.0465	2027.7386	2028.1077	
Total		133.23		2187.91	5716.08		10853.32	16569.40	
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	
1	0.0625	30.0000	-1.8750	15.7500	-29.5313	-140.6250	0.5985	-0.6716	-141.2966
2	0.1875	1.0000	-0.1875	1.2500	-0.2344	-0.0156	15.0985	-42.7432	-42.7588
3	0.1875	1.0000	-0.1875	12.2500	-2.2969	-0.0156	4.0985	-3.1495	-3.1651
4	3.0000	0.2500	-0.7500	31.2500	-23.4375	-0.0039	14.9015	-166.5417	-166.5456
5	8.0000	0.1250	-1.0000	31.3125	-31.3125	-0.0013	14.9640	-223.9222	-223.9235
6	1.0000	0.2500	-0.2500	31.2500	-7.8125	-0.0013	14.9015	-55.5139	-55.5152
7	0.0625	6.0000	-0.3750	3.7500	-1.4063	-1.1250	12.5985	-59.5205	-60.6455
8	5.2500	0.1250	-0.6563	0.0625	-0.0410	-0.0009	16.2860	-174.0590	-174.0599
Total			-5.28	-96.07	-141.79		-726.12	-867.91	



Made By KMW
Checked By ADK

Date 2/1/2012
Date 2/15/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.4215 in	S _{top} =	1108.06 in ³	y-bar =	16.3485 in	S _{top} =	1044.92 in ³
I _x =	16569.40 in ⁴	S _{bott.} =	1009.01 in ³	I _x =	15701.49 in ⁴	S _{bott.} =	960.43 in ³
C _{top} =	14.9535 in	A =	133.2344 in ²	C _{top} =	15.0265 in	A =	127.9531 in ²
C _{bottom} =	16.4215 in	r _x =	11.1518 in	C _{bottom} =	16.3485 in	r _x =	11.0776 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	4.2500	17.5313	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.5938	8.0123	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	20.2500	83.5313	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.9063	115.1576	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	4.2500	17.5313	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.5938	8.0123	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	20.2500	83.5313	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.9063	115.1576	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	37.5000	0.6250	23.4375	4.8828	11.6250	5067.7734	5072.6563	
3 (Right)	Plate	37.5000	23.8750	895.3125	4.8828	11.6250	5067.7734	5072.6563	
4	Plate	13.7500	12.2500	168.4375	554.5833	0.0000	0.0000	554.5833	
5 (Left)	Perforated Plate	3.9375	3.8750	15.2578	9.0439	8.3750	276.1787	285.2227	
5 (Right)	Perforated Plate	3.9375	20.6250	81.2109	9.0439	8.3750	276.1787	285.2227	
Total		133.23		1632.12	632.73		14027.44	14660.17	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	30.0000	0.0625	-1.8750	0.0313	-0.0586	-0.0006	12.3975	-288.1822	-288.1828
2	1.0000	0.1875	-0.1875	0.1563	-0.0293	-0.0005	12.2725	-28.2400	-28.2406
3	1.0000	0.1875	-0.1875	0.1563	-0.0293	-0.0005	12.2725	-28.2400	-28.2406
4	0.2500	3.0000	-0.7500	2.7500	-2.0625	-0.5625	9.6787	-70.2581	-70.8206
5	0.1250	8.0000	-1.0000	11.2500	-11.2500	-5.3333	1.1787	-1.3894	-6.7227
6	0.2500	1.0000	-0.2500	22.7500	-5.6875	-0.0208	10.3213	-26.6322	-26.6531
7	6.0000	0.0625	-0.3750	24.4688	-9.1758	-0.0001	12.0400	-54.3609	-54.3610
8	0.1250	5.2500	-0.6563	20.6250	-13.5352	-1.5073	8.1963	-44.0863	-45.5936
Total			-5.28		-41.83	-7.43		-541.39	-548.81

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2500 in	S _{right} =	1196.75 in ³	x-bar =	12.4287 in	S _{right} =	1169.00 in ³
I _y =	14660.17 in ⁴	S _{left} =	1196.75 in ³	I _y =	14111.35 in ⁴	S _{left} =	1135.38 in ³
C _{right} =	12.2500 in	A =	133.2344 in ²	C _{right} =	12.0713 in	A =	127.9531 in ²
C _{left} =	12.2500 in	r _y =	10.4897 in	C _{left} =	12.4287 in	r _y =	10.5017 in



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6875$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6875$ in

Top Cover Plate:

$A_4 = b = 22.0000$ in
 $B_4 = t = 0.6250$ in

Web Plate 1:

$A_3 = b = 30.0000$ in
 $B_3 = t = 1.2500$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.7500$ in



X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	8.2500	30.4063	250.8516	0.3250	13.9847	1613.4759	1613.8009
	Vertical Leg	10.0547	26.4063	265.5066	44.8042	9.9847	1002.4016	1047.2058
2	Horizontal Leg	8.2500	1.0938	9.0234	0.3250	15.3278	1938.2579	1938.5828
	Vertical Leg	10.0547	5.0938	51.2161	44.8042	11.3278	1290.1998	1335.0040
3	Plate	75.0000	15.7500	1181.2500	5625.0000	0.6715	33.8198	5658.8198
4	Plate	13.7500	31.0625	427.1094	0.4476	14.6410	2947.4290	2947.8766
5	Perforated Plate	7.8750	0.3750	2.9531	0.3691	16.0465	2027.7386	2028.1077
Total		133.23		2187.91	5716.08		10853.32	16569.40
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.4215 in	S _{top} =	1108.06 in ³	y-bar =	16.4215 in	S _{top} =	1108.06 in ³
I _x =	16569.40 in ⁴	S _{bott.} =	1009.01 in ³	I _x =	16569.40 in ⁴	S _{bott.} =	1009.01 in ³
C _{top} =	14.9535 in	A =	133.2344 in ²	C _{top} =	14.9535 in	A =	133.2344 in ²
C _{bottom} =	16.4215 in	r _x =	11.1518 in	C _{bottom} =	16.4215 in	r _x =	11.1518 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	4.2500	17.5313	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.5938	8.0123	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	20.2500	83.5313	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.9063	115.1576	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	4.2500	17.5313	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.5938	8.0123	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	20.2500	83.5313	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.9063	115.1576	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	37.5000	0.6250	23.4375	4.8828	11.6250	5067.7734	5072.6563	
3 (Right)	Plate	37.5000	23.8750	895.3125	4.8828	11.6250	5067.7734	5072.6563	
4	Plate	13.7500	12.2500	168.4375	554.5833	0.0000	0.0000	554.5833	
5 (Left)	Perforated Plate	3.9375	3.8750	15.2578	9.0439	8.3750	276.1787	285.2227	
5 (Right)	Perforated Plate	3.9375	20.6250	81.2109	9.0439	8.3750	276.1787	285.2227	
Total		133.23		1632.12	632.73		14027.44	14660.17	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2500 in	S _{right} =	1196.75 in ³	x-bar =	12.2500 in	S _{right} =	1196.75 in ³
I _y =	14660.17 in ⁴	S _{left} =	1196.75 in ³	I _y =	14660.17 in ⁴	S _{left} =	1196.75 in ³
C _{right} =	12.2500 in	A =	133.2344 in ²	C _{right} =	12.2500 in	A =	133.2344 in ²
C _{left} =	12.2500 in	r _y =	10.4897 in	C _{left} =	12.2500 in	r _y =	10.4897 in



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

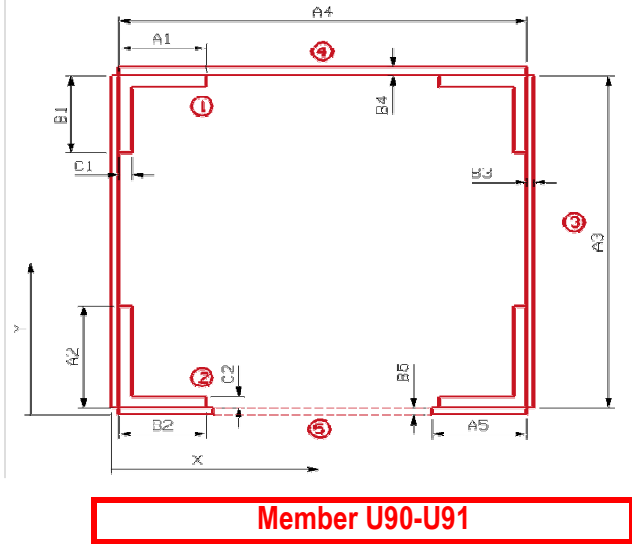
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6875$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6875$ in

Top Cover Plate:
 $A_4 = b = 22.0000$ in
 $B_4 = t = 0.6250$ in

Web Plate 1:
 $A_3 = b = 30.0000$ in
 $B_3 = t = 1.2500$ in

Perforated Cover Plate
 $A_5 = b = 5.2500$ in
 $B_5 = t = 0.7500$ in



X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	8.2500	30.4063	250.8516	0.3250	13.9847	1613.4759	1613.8009
	Vertical Leg	10.0547	26.4063	265.5066	44.8042	9.9847	1002.4016	1047.2058
2	Horizontal Leg	8.2500	1.0938	9.0234	0.3250	15.3278	1938.2579	1938.5828
	Vertical Leg	10.0547	5.0938	51.2161	44.8042	11.3278	1290.1998	1335.0040
3	Plate	75.0000	15.7500	1181.2500	5625.0000	0.6715	33.8198	5658.8198
4	Plate	13.7500	31.0625	427.1094	0.4476	14.6410	2947.4290	2947.8766
5	Perforated Plate	7.8750	0.3750	2.9531	0.3691	16.0465	2027.7386	2028.1077
Total		133.23		2187.91	5716.08		10853.32	16569.40
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.4215 in	S _{top} =	1108.06 in ³	y-bar =	16.4215 in	S _{top} =	1108.06 in ³
I _x =	16569.40 in ⁴	S _{bott.} =	1009.01 in ³	I _x =	16569.40 in ⁴	S _{bott.} =	1009.01 in ³
C _{top} =	14.9535 in	A =	133.2344 in ²	C _{top} =	14.9535 in	A =	133.2344 in ²
C _{bottom} =	16.4215 in	r _x =	11.1518 in	C _{bottom} =	16.4215 in	r _x =	11.1518 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	4.2500	17.5313	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.5938	8.0123	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	20.2500	83.5313	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.9063	115.1576	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	4.2500	17.5313	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.5938	8.0123	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	20.2500	83.5313	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.9063	115.1576	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	37.5000	0.6250	23.4375	4.8828	11.6250	5067.7734	5072.6563	
3 (Right)	Plate	37.5000	23.8750	895.3125	4.8828	11.6250	5067.7734	5072.6563	
4	Plate	13.7500	12.2500	168.4375	554.5833	0.0000	0.0000	554.5833	
5 (Left)	Perforated Plate	3.9375	3.8750	15.2578	9.0439	8.3750	276.1787	285.2227	
5 (Right)	Perforated Plate	3.9375	20.6250	81.2109	9.0439	8.3750	276.1787	285.2227	
Total		133.23		1632.12	632.73		14027.44	14660.17	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2500 in	S _{right} =	1196.75 in ³	x-bar =	12.2500 in	S _{right} =	1196.75 in ³
I _y =	14660.17 in ⁴	S _{left} =	1196.75 in ³	I _y =	14660.17 in ⁴	S _{left} =	1196.75 in ³
C _{right} =	12.2500 in	A =	133.2344 in ²	C _{right} =	12.2500 in	A =	133.2344 in ²
C _{left} =	12.2500 in	r _y =	10.4897 in	C _{left} =	12.2500 in	r _y =	10.4897 in



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6875$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6875$ in

Top Cover Plate:

$A_4 = b = 22.0000$ in
 $B_4 = t = 0.6250$ in

Web Plate 1:

$A_3 = b = 30.0000$ in
 $B_3 = t = 1.2500$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.7500$ in



Member U91-U92

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x, gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	8.2500	30.4063	250.8516	0.3250	13.9847	1613.4759	1613.8009
	Vertical Leg	10.0547	26.4063	265.5066	44.8042	9.9847	1002.4016	1047.2058
2	Horizontal Leg	8.2500	1.0938	9.0234	0.3250	15.3278	1938.2579	1938.5828
	Vertical Leg	10.0547	5.0938	51.2161	44.8042	11.3278	1290.1998	1335.0040
3	Plate	75.0000	15.7500	1181.2500	5625.0000	0.6715	33.8198	5658.8198
4	Plate	13.7500	31.0625	427.1094	0.4476	14.6410	2947.4290	2947.8766
5	Perforated Plate	7.8750	0.3750	2.9531	0.3691	16.0465	2027.7386	2028.1077
Total		133.23		2187.91	5716.08		10853.32	16569.40
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.4215 in	S _{top} =	1108.06 in ³	y-bar =	16.4215 in	S _{top} =	1108.06 in ³
I _x =	16569.40 in ⁴	S _{bott.} =	1009.01 in ³	I _x =	16569.40 in ⁴	S _{bott.} =	1009.01 in ³
C _{top} =	14.9535 in	A =	133.2344 in ²	C _{top} =	14.9535 in	A =	133.2344 in ²
C _{bottom} =	16.4215 in	r _x =	11.1518 in	C _{bottom} =	16.4215 in	r _x =	11.1518 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	4.2500	17.5313	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.5938	8.0123	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	20.2500	83.5313	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.9063	115.1576	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	4.2500	17.5313	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.5938	8.0123	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	20.2500	83.5313	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.9063	115.1576	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	37.5000	0.6250	23.4375	4.8828	11.6250	5067.7734	5072.6563	
3 (Right)	Plate	37.5000	23.8750	895.3125	4.8828	11.6250	5067.7734	5072.6563	
4	Plate	13.7500	12.2500	168.4375	554.5833	0.0000	0.0000	554.5833	
5 (Left)	Perforated Plate	3.9375	3.8750	15.2578	9.0439	8.3750	276.1787	285.2227	
5 (Right)	Perforated Plate	3.9375	20.6250	81.2109	9.0439	8.3750	276.1787	285.2227	
Total		133.23		1632.12	632.73		14027.44	14660.17	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2500 in	S _{right} =	1196.75 in ³	x-bar =	12.2500 in	S _{right} =	1196.75 in ³
I _y =	14660.17 in ⁴	S _{left} =	1196.75 in ³	I _y =	14660.17 in ⁴	S _{left} =	1196.75 in ³
C _{right} =	12.2500 in	A =	133.2344 in ²	C _{right} =	12.2500 in	A =	133.2344 in ²
C _{left} =	12.2500 in	r _y =	10.4897 in	C _{left} =	12.2500 in	r _y =	10.4897 in



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6875$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6875$ in

Top Cover Plate:

$A_4 = b = 22.0000$ in
 $B_4 = t = 0.6250$ in

Web Plate 1:

$A_3 = b = 30.0000$ in
 $B_3 = t = 1.0625$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.7500$ in



Member U92-U93

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	8.2500	30.4063	250.8516	0.3250	13.9228	1599.2173	1599.5422
	Vertical Leg	10.0547	26.4063	265.5066	44.8042	9.9228	990.0054	1034.8096
2	Horizontal Leg	8.2500	1.0938	9.0234	0.3250	15.3897	1953.9522	1954.2772
	Vertical Leg	10.0547	5.0938	51.2161	44.8042	11.3897	1304.3457	1349.1500
3	Plate	63.7500	15.7500	1004.0625	4781.2500	0.7334	34.2937	4815.5437
4	Plate	13.7500	31.0625	427.1094	0.4476	14.5791	2922.5469	2922.9945
5	Perforated Plate	7.8750	0.3750	2.9531	0.3691	16.1084	2043.4206	2043.7897
Total		121.98		2010.72	4872.33		10847.78	15720.11
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.4834 in	S _{top} =	1055.64 in ³	y-bar =	16.4834 in	S _{top} =	1055.64 in ³
I _x =	15720.11 in ⁴	S _{bott.} =	953.69 in ³	I _x =	15720.11 in ⁴	S _{bott.} =	953.69 in ³
C _{top} =	14.8916 in	A =	121.9844 in ²	C _{top} =	14.8916 in	A =	121.9844 in ²
C _{bottom} =	16.4834 in	r _x =	11.3521 in	C _{bottom} =	16.4834 in	r _x =	11.3521 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	4.0625	16.7578	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.4063	7.0697	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	20.0625	82.7578	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.7188	114.2150	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	4.0625	16.7578	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.4063	7.0697	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	20.0625	82.7578	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.7188	114.2150	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	31.8750	0.5313	16.9336	2.9987	11.5313	4238.4100	4241.4087	
3 (Right)	Plate	31.8750	23.5938	752.0508	2.9987	11.5313	4238.4100	4241.4087	
4	Plate	13.7500	12.0625	165.8594	554.5833	0.0000	0.0000	554.5833	
5 (Left)	Perforated Plate	3.9375	3.6875	14.5195	9.0439	8.3750	276.1787	285.2227	
5 (Right)	Perforated Plate	3.9375	20.4375	80.4727	9.0439	8.3750	276.1787	285.2227	
Total		121.98		1471.44	628.96		12368.71	12997.67	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.0625 in	S _{right} =	1077.53 in ³	x-bar =	12.0625 in	S _{right} =	1077.53 in ³
I _y =	12997.67 in ⁴	S _{left} =	1077.53 in ³	I _y =	12997.67 in ⁴	S _{left} =	1077.53 in ³
C _{right} =	12.0625 in	A =	121.9844 in ²	C _{right} =	12.0625 in	A =	121.9844 in ²
C _{left} =	12.0625 in	r _y =	10.3224 in	C _{left} =	12.0625 in	r _y =	10.3224 in



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

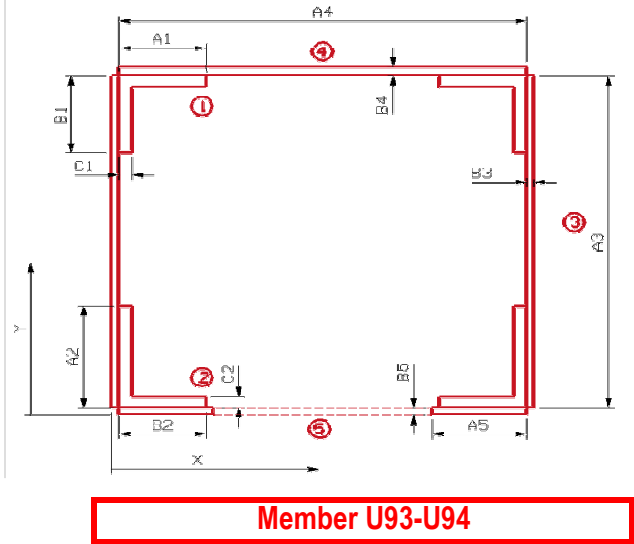
Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.4375$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.4375$ in

Top Cover Plate:
 $A_4 = b = 22.0000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:
 $A_3 = b = 30.0000$ in
 $B_3 = t = 1.0000$ in

Perforated Cover Plate
 $A_5 = b = 5.2500$ in
 $B_5 = t = 0.5000$ in



X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.2500	30.2813	158.9766	0.0837	14.3160	1075.9823	1076.0660
	Vertical Leg	6.6172	26.2813	173.9080	31.5372	10.3160	704.2056	735.7428
2	Horizontal Leg	5.2500	0.7188	3.7734	0.0837	15.2465	1220.3863	1220.4700
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	11.2465	836.9608	868.4980
3	Plate	60.0000	15.5000	930.0000	4500.0000	0.4652	12.9852	4512.9852
4	Plate	8.2500	30.6875	253.1719	0.0967	14.7223	1788.1531	1788.2498
5	Perforated Plate	5.2500	0.2500	1.3125	0.1094	15.7152	1296.5810	1296.6904
Total		97.23		1552.37	4563.45		6935.25	11498.70
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	15.9652 in	S _{top} =	771.22 in ³	y-bar =	15.9652 in	S _{top} =	771.22 in ³
I _x =	11498.70 in ⁴	S _{bott.} =	720.23 in ³	I _x =	11498.70 in ⁴	S _{bott.} =	720.23 in ³
C _{top} =	14.9098 in	A =	97.2344 in ²	C _{top} =	14.9098 in	A =	97.2344 in ²
C _{bottom} =	15.9652 in	r _x =	10.8746 in	C _{bottom} =	15.9652 in	r _x =	10.8746 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	4.0000	10.5000	7.8750	8.0000	168.0000	175.8750	
	Vertical Leg	3.3086	1.2188	4.0323	0.0528	10.7813	384.5756	384.6283	
1 (Right)	Horizontal Leg	2.6250	20.0000	52.5000	7.8750	8.0000	168.0000	175.8750	
	Vertical Leg	3.3086	22.7813	75.3739	0.0528	10.7813	384.5756	384.6283	
2 (Left)	Horizontal Leg	2.6250	4.0000	10.5000	7.8750	8.0000	168.0000	175.8750	
	Vertical Leg	3.3086	1.2188	4.0323	0.0528	10.7813	384.5756	384.6283	
2 (Right)	Horizontal Leg	2.6250	20.0000	52.5000	7.8750	8.0000	168.0000	175.8750	
	Vertical Leg	3.3086	22.7813	75.3739	0.0528	10.7813	384.5756	384.6283	
3 (Left)	Plate	30.0000	0.5000	15.0000	2.5000	11.5000	3967.5000	3970.0000	
3 (Right)	Plate	30.0000	23.5000	705.0000	2.5000	11.5000	3967.5000	3970.0000	
4	Plate	8.2500	12.0000	99.0000	332.7500	0.0000	0.0000	332.7500	
5 (Left)	Perforated Plate	2.6250	3.6250	9.5156	6.0293	8.3750	184.1191	190.1484	
5 (Right)	Perforated Plate	2.6250	20.3750	53.4844	6.0293	8.3750	184.1191	190.1484	
Total		97.23		1166.81	381.52		10513.54	10895.06	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.0000 in	S _{right} =	907.92 in ³	x-bar =	12.0000 in	S _{right} =	907.92 in ³
I _y =	10895.06 in ⁴	S _{left} =	907.92 in ³	I _y =	10895.06 in ⁴	S _{left} =	907.92 in ³
C _{right} =	12.0000 in	A =	97.2344 in ²	C _{right} =	12.0000 in	A =	97.2344 in ²
C _{left} =	12.0000 in	r _y =	10.5853 in	C _{left} =	12.0000 in	r _y =	10.5853 in



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:
 $A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.4375$ in

Bottom Angles:
 $A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_f = 0.4375$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:
 $A_3 = b = 30.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member U94-U95

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.2500	30.2813	158.9766	0.0837	14.0877	1041.9304	1042.0141
	Vertical Leg	6.6172	26.2813	173.9080	31.5372	10.0877	673.3745	704.9117
2	Horizontal Leg	5.2500	0.7188	3.7734	0.0837	15.4748	1257.2166	1257.3004
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	11.4748	871.2939	902.8311
3	Plate	22.5000	15.5000	348.7500	1687.5000	0.6936	10.8232	1698.3232
4	Plate	8.8125	30.6875	270.4336	0.1033	14.4939	1851.2790	1851.3823
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	15.9436	1525.1832	1525.3082
Total		61.05		988.57	1750.97		7231.10	8982.07
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00	0.00	0.00	0.00



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.1936 in	S _{top} =	611.80 in ³	y-bar =	16.1936 in	S _{top} =	611.80 in ³
I _x =	8982.07 in ⁴	S _{bott.} =	554.67 in ³	I _x =	8982.07 in ⁴	S _{bott.} =	554.67 in ³
C _{top} =	14.6814 in	A =	61.0469 in ²	C _{top} =	14.6814 in	A =	61.0469 in ²
C _{bottom} =	16.1936 in	r _x =	12.1299 in	C _{bottom} =	16.1936 in	r _x =	12.1299 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.3750	8.8594	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.5938	1.9645	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	20.8750	54.7969	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.6563	78.2689	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.3750	8.8594	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.5938	1.9645	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	20.8750	54.7969	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.6563	78.2689	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	11.2500	0.1875	2.1094	0.1318	11.9375	1603.1689	1603.3008	
3 (Right)	Plate	11.2500	24.0625	270.7031	0.1318	11.9375	1603.1689	1603.3008	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.3750	10.1250	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.8750	62.6250	9.0000	8.7500	229.6875	238.6875	
Total		61.05		740.19	455.53		6229.39	6684.92	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	551.33 in ³	x-bar =	12.1250 in	S _{right} =	551.33 in ³
I _y =	6684.92 in ⁴	S _{left} =	551.33 in ³	I _y =	6684.92 in ⁴	S _{left} =	551.33 in ³
C _{right} =	12.1250 in	A =	61.0469 in ²	C _{right} =	12.1250 in	A =	61.0469 in ²
C _{left} =	12.1250 in	r _y =	10.4645 in	C _{left} =	12.1250 in	r _y =	10.4645 in



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

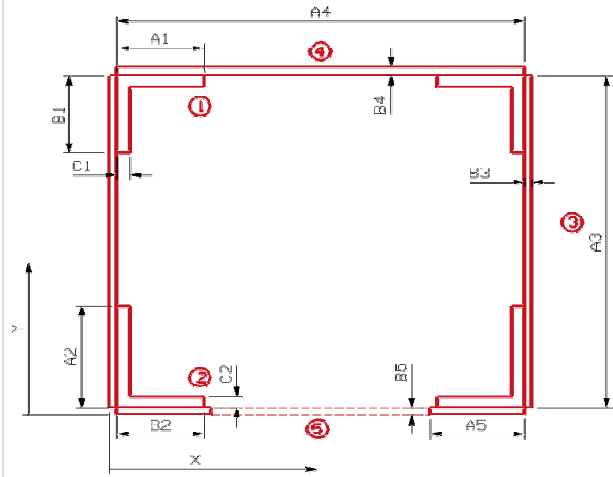
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 30.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member U95-U96

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	30.2188	75.5469	0.0203	13.4018	449.0206	449.0409
	Vertical Leg	2.3047	28.2188	65.0354	2.6115	11.4018	299.6118	302.2233
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	16.2857	663.0601	663.0804
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	14.2857	470.3435	472.9550
3	Plate	22.5000	15.3750	345.9375	1687.5000	1.4420	46.7825	1734.2825
4	Plate	8.8125	30.5625	269.3320	0.1033	13.7455	1665.0349	1665.1382
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	16.6295	1244.4238	1244.4765
Total		45.42		763.86	1692.92		4838.28	6531.20
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.8170 in	S _{top} =	468.76 in ³	y-bar =	16.8170 in	S _{top} =	468.76 in ³
I _x =	6531.20 in ⁴	S _{bott.} =	388.37 in ³	I _x =	6531.20 in ⁴	S _{bott.} =	388.37 in ³
C _{top} =	13.9330 in	A =	45.4219 in ²	C _{top} =	13.9330 in	A =	45.4219 in ²
C _{bottom} =	16.8170 in	r _x =	11.9912 in	C _{bottom} =	16.8170 in	r _x =	11.9912 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.3750	2.9688	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.5313	0.6122	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	21.8750	27.3438	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.7188	27.3322	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	11.2500	0.1875	2.1094	0.1318	11.9375	1603.1689	1603.3008	
3 (Right)	Plate	11.2500	24.0625	270.7031	0.1318	11.9375	1603.1689	1603.3008	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.3750	7.5938	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	20.8750	46.9688	6.7500	8.7500	172.2656	179.0156	
Total		45.42		550.74	426.03		4645.75	5071.78	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	418.29 in ³	x-bar =	12.1250 in	S _{right} =	418.29 in ³
I _y =	5071.78 in ⁴	S _{left} =	418.29 in ³	I _y =	5071.78 in ⁴	S _{left} =	418.29 in ³
C _{right} =	12.1250 in	A =	45.4219 in ²	C _{right} =	12.1250 in	A =	45.4219 in ²
C _{left} =	12.1250 in	r _y =	10.5669 in	C _{left} =	12.1250 in	r _y =	10.5669 in

South Truss

Member U96-U97



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.4375$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_f = 0.4375$ in

Top Cover Plate:

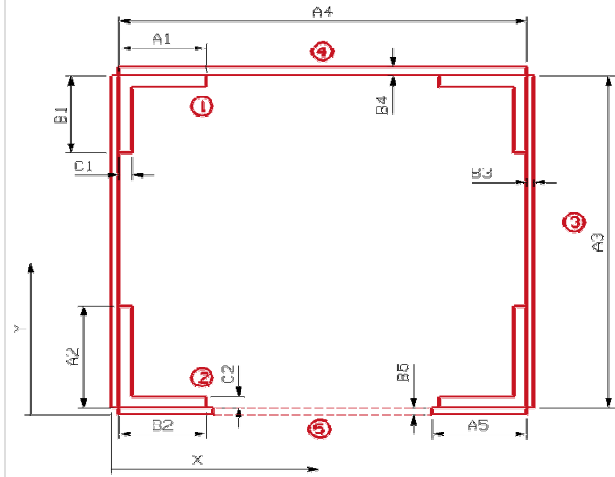
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 30.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member U96-U97

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.2500	30.2813	158.9766	0.0837	14.0877	1041.9304	1042.0141
	Vertical Leg	6.6172	26.2813	173.9080	31.5372	10.0877	673.3745	704.9117
2	Horizontal Leg	5.2500	0.7188	3.7734	0.0837	15.4748	1257.2166	1257.3004
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	11.4748	871.2939	902.8311
3	Plate	22.5000	15.5000	348.7500	1687.5000	0.6936	10.8232	1698.3232
4	Plate	8.8125	30.6875	270.4336	0.1033	14.4939	1851.2790	1851.3823
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	15.9436	1525.1832	1525.3082
Total		61.05		988.57	1750.97		7231.10	8982.07
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.1936 in	S _{top} =	611.80 in ³	y-bar =	16.1936 in	S _{top} =	611.80 in ³
I _x =	8982.07 in ⁴	S _{bott.} =	554.67 in ³	I _x =	8982.07 in ⁴	S _{bott.} =	554.67 in ³
C _{top} =	14.6814 in	A =	61.0469 in ²	C _{top} =	14.6814 in	A =	61.0469 in ²
C _{bottom} =	16.1936 in	r _x =	12.1299 in	C _{bottom} =	16.1936 in	r _x =	12.1299 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.3750	8.8594	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.5938	1.9645	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	20.8750	54.7969	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.6563	78.2689	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.3750	8.8594	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.5938	1.9645	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	20.8750	54.7969	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.6563	78.2689	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	11.2500	0.1875	2.1094	0.1318	11.9375	1603.1689	1603.3008	
3 (Right)	Plate	11.2500	24.0625	270.7031	0.1318	11.9375	1603.1689	1603.3008	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.3750	10.1250	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.8750	62.6250	9.0000	8.7500	229.6875	238.6875	
Total		61.05		740.19	455.53		6229.39	6684.92	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	551.33 in ³	x-bar =	12.1250 in	S _{right} =	551.33 in ³
I _y =	6684.92 in ⁴	S _{left} =	551.33 in ³	I _y =	6684.92 in ⁴	S _{left} =	551.33 in ³
C _{right} =	12.1250 in	A =	61.0469 in ²	C _{right} =	12.1250 in	A =	61.0469 in ²
C _{left} =	12.1250 in	r _y =	10.4645 in	C _{left} =	12.1250 in	r _y =	10.4645 in



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.5000$ in

Top Cover Plate:

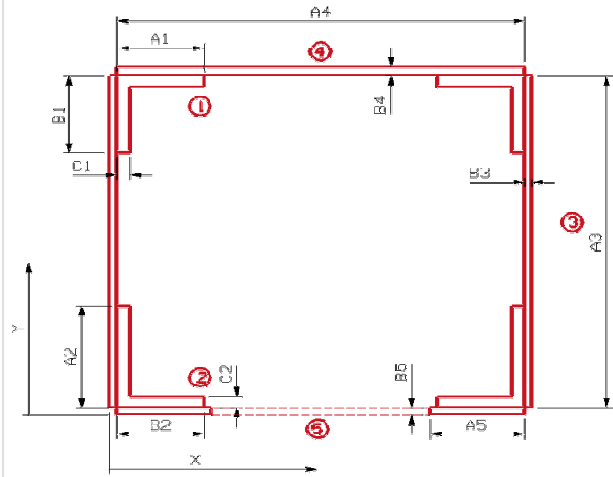
$A_4 = b = 22.0000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 30.0000$ in
 $B_3 = t = 0.8750$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.5000$ in



Member U97-U98

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	6.0000	30.2500	181.5000	0.1250	14.2636	1220.7032	1220.8282
	Vertical Leg	7.5000	26.2500	196.8750	35.1563	10.2636	790.0625	825.2188
2	Horizontal Leg	6.0000	0.7500	4.5000	0.1250	15.2364	1392.8857	1393.0107
	Vertical Leg	7.5000	4.7500	35.6250	35.1563	11.2364	946.9236	982.0799
3	Plate	52.5000	15.5000	813.7500	3937.5000	0.4864	12.4203	3949.9203
4	Plate	8.2500	30.6875	253.1719	0.0967	14.7011	1783.0115	1783.1081
5	Perforated Plate	5.2500	0.2500	1.3125	0.1094	15.7364	1300.0785	1300.1879
Total		93.00		1486.73	4008.27		7446.09	11454.35
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	15.9864 in	S _{top} =	769.34 in ³	y-bar =	15.9864 in	S _{top} =	769.34 in ³
I _x =	11454.35 in ⁴	S _{bottom} =	716.51 in ³	I _x =	11454.35 in ⁴	S _{bottom} =	716.51 in ³
C _{top} =	14.8886 in	A =	93.0000 in ²	C _{top} =	14.8886 in	A =	93.0000 in ²
C _{bottom} =	15.9864 in	r _x =	11.0980 in	C _{bottom} =	15.9864 in	r _x =	11.0980 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.0000	3.8750	11.6250	9.0000	8.0000	192.0000	201.0000	
	Vertical Leg	3.7500	1.1250	4.2188	0.0781	10.7500	433.3594	433.4375	
1 (Right)	Horizontal Leg	3.0000	19.8750	59.6250	9.0000	8.0000	192.0000	201.0000	
	Vertical Leg	3.7500	22.6250	84.8438	0.0781	10.7500	433.3594	433.4375	
2 (Left)	Horizontal Leg	3.0000	3.8750	11.6250	9.0000	8.0000	192.0000	201.0000	
	Vertical Leg	3.7500	1.1250	4.2188	0.0781	10.7500	433.3594	433.4375	
2 (Right)	Horizontal Leg	3.0000	19.8750	59.6250	9.0000	8.0000	192.0000	201.0000	
	Vertical Leg	3.7500	22.6250	84.8438	0.0781	10.7500	433.3594	433.4375	
3 (Left)	Plate	26.2500	0.4375	11.4844	1.6748	11.4375	3433.9307	3435.6055	
3 (Right)	Plate	26.2500	23.3125	611.9531	1.6748	11.4375	3433.9307	3435.6055	
4	Plate	8.2500	11.8750	97.9688	332.7500	0.0000	0.0000	332.7500	
5 (Left)	Perforated Plate	2.6250	3.5000	9.1875	6.0293	8.3750	184.1191	190.1484	
5 (Right)	Perforated Plate	2.6250	20.2500	53.1563	6.0293	8.3750	184.1191	190.1484	
Total		93.00		1104.38	384.47		9737.54	10122.01	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	11.8750 in	S _{right} =	852.38 in ³	x-bar =	11.8750 in	S _{right} =	852.38 in ³
I _y =	10122.01 in ⁴	S _{left} =	852.38 in ³	I _y =	10122.01 in ⁴	S _{left} =	852.38 in ³
C _{right} =	11.8750 in	A =	93.0000 in ²	C _{right} =	11.8750 in	A =	93.0000 in ²
C _{left} =	11.8750 in	r _y =	10.4326 in	C _{left} =	11.8750 in	r _y =	10.4326 in



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.5000$ in

Web Plate 1:

$A_3 = b = 30.0000$ in
 $B_3 = t = 0.8750$ in

Top Cover Plate:

$A_4 = b = 22.0000$ in
 $B_4 = t = 0.5000$ in

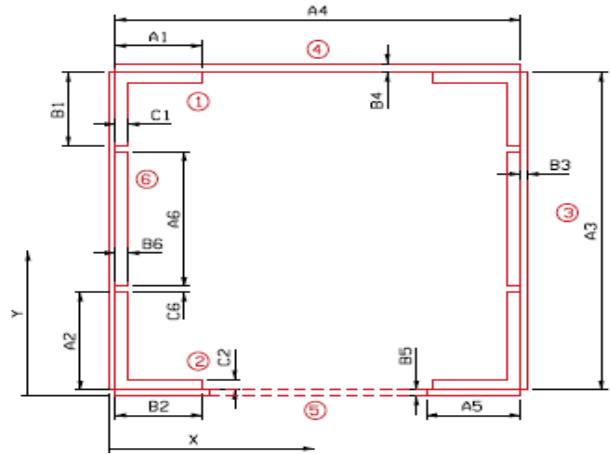
Web Plate 2:

$A_6 = b = 14.0000$ in
 $B_6 = t = 0.5000$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.6250$ in

$C_6 = \text{gap} = 0.0000$ in



Member L98-L99

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	6.0000	30.3750	182.2500	0.1250	14.1444	1200.3808	1200.5058
	Vertical Leg	7.5000	26.3750	197.8125	35.1563	10.1444	771.8133	806.9695
2	Horizontal Leg	6.0000	0.8750	5.2500	0.1250	15.3556	1414.7705	1414.8955
	Vertical Leg	7.5000	4.8750	36.5625	35.1563	11.3556	967.1259	1002.2821
3	Plate	52.5000	15.6250	820.3125	3937.5000	0.6056	19.2557	3956.7557
4	Plate	11.0000	30.8750	339.6250	0.2292	14.6444	2359.0364	2359.2656
5	Perforated Plate	6.5625	0.3125	2.0508	0.2136	15.9181	1662.8493	1663.0629
6	Side Plates	14.0000	15.6250	218.7500	228.6667	0.6056	5.1349	233.8015
Total		111.06		1802.61	4237.17		8400.37	12637.54
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.2306 in	$S_{top} = 848.48 \text{ in}^3$			y-bar = 16.2306 in	$S_{top} = 848.48 \text{ in}^3$		
$I_x = 12637.54 \text{ in}^4$	$S_{bott.} = 778.62 \text{ in}^3$			$I_x = 12637.54 \text{ in}^4$	$S_{bott.} = 778.62 \text{ in}^3$		
$C_{top} = 14.8944 \text{ in}$	$A = 111.0625 \text{ in}^2$			$C_{top} = 14.8944 \text{ in}$	$A = 111.0625 \text{ in}^2$		
$C_{bottom} = 16.2306 \text{ in}$	$r_x = 10.6671 \text{ in}$			$C_{bottom} = 16.2306 \text{ in}$	$r_x = 10.6671 \text{ in}$		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I_o	d	Ad^2	$I_{y,gross}$	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.0000	3.8750	11.6250	9.0000	8.0000	192.0000	201.0000	
	Vertical Leg	3.7500	1.1250	4.2188	0.0781	10.7500	433.3594	433.4375	
1 (Right)	Horizontal Leg	3.0000	19.8750	59.6250	9.0000	8.0000	192.0000	201.0000	
	Vertical Leg	3.7500	22.6250	84.8438	0.0781	10.7500	433.3594	433.4375	
2 (Left)	Horizontal Leg	3.0000	3.8750	11.6250	9.0000	8.0000	192.0000	201.0000	
	Vertical Leg	3.7500	1.1250	4.2188	0.0781	10.7500	433.3594	433.4375	
2 (Right)	Horizontal Leg	3.0000	19.8750	59.6250	9.0000	8.0000	192.0000	201.0000	
	Vertical Leg	3.7500	22.6250	84.8438	0.0781	10.7500	433.3594	433.4375	
3 (Left)	Plate	26.2500	0.4375	11.4844	1.6748	11.4375	3433.9307	3435.6055	
3 (Right)	Plate	26.2500	23.3125	611.9531	1.6748	11.4375	3433.9307	3435.6055	
4	Plate	11.0000	11.8750	130.6250	443.6667	0.0000	0.0000	443.6667	
5 (Left)	Perforated Plate	3.2813	3.5000	11.4844	7.5366	8.3750	230.1489	237.6855	
5 (Right)	Perforated Plate	3.2813	20.2500	66.4453	7.5366	8.3750	230.1489	237.6855	
6 (Left)	Plate	7.0000	1.1250	7.8750	0.1458	10.7500	808.9375	809.0833	
6 (Right)	Plate	7.0000	22.6250	158.3750	0.1458	10.7500	808.9375	809.0833	
Total		111.06		1318.87	498.69		11447.47	11946.17	
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 11.8750 in	$S_{right} = 1005.99 \text{ in}^3$			x-bar = 11.8750 in	$S_{right} = 1005.99 \text{ in}^3$		
$I_y = 11946.17 \text{ in}^4$	$S_{left} = 1005.99 \text{ in}^3$			$I_y = 11946.17 \text{ in}^4$	$S_{left} = 1005.99 \text{ in}^3$		
$C_{right} = 11.8750 \text{ in}$	$A = 111.0625 \text{ in}^2$			$C_{right} = 11.8750 \text{ in}$	$A = 111.0625 \text{ in}^2$		
$C_{left} = 11.8750 \text{ in}$	$r_y = 10.3712 \text{ in}$			$C_{left} = 11.8750 \text{ in}$	$r_y = 10.3712 \text{ in}$		

South Truss

Member U99U100



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6250$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6250$ in

Web Plate 1:

$A_3 = b = 30.0000$ in
 $B_3 = t = 0.8750$ in

Top Cover Plate:

$A_4 = b = 22.0000$ in
 $B_4 = t = 0.5000$ in

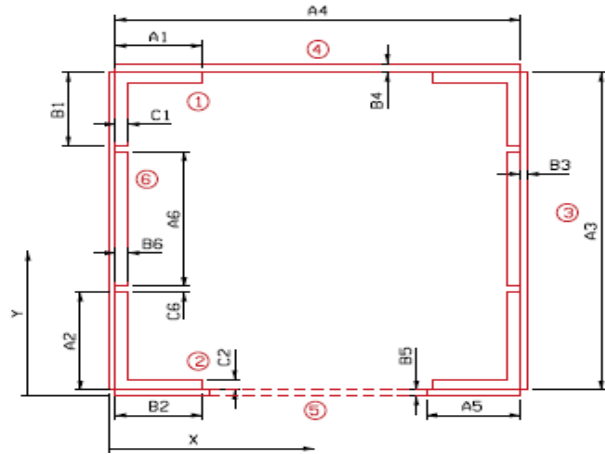
Web Plate 2:

$A_6 = b = 14.0000$ in
 $B_6 = t = 0.6250$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.6250$ in

$C_6 = \text{gap} = 0.0000$ in



Member L99-L100

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	7.5000	30.3125	227.3438	0.2441	14.1316	1497.7697	1498.0139
	Vertical Leg	9.2188	26.3125	242.5684	41.7845	10.1316	946.3018	988.0862
2	Horizontal Leg	7.5000	0.9375	7.0313	0.2441	15.2434	1742.7052	1742.9493
	Vertical Leg	9.2188	4.9375	45.5176	41.7845	11.2434	1165.3757	1207.1602
3	Plate	52.5000	15.6250	820.3125	3937.5000	0.5559	16.2228	3953.7228
4	Plate	11.0000	30.8750	339.6250	0.2292	14.6941	2375.0882	2375.3173
5	Perforated Plate	6.5625	0.3125	2.0508	0.2136	15.8684	1652.4739	1652.6875
6	Side Plates	17.5000	15.6250	273.4375	285.8333	0.5559	5.4076	291.2409
Total		121.00		1957.89	4307.83		9401.34	13709.18
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.1809 in	$S_{top} = 917.36 \text{ in}^3$			y-bar = 16.1809 in	$S_{top} = 917.36 \text{ in}^3$		
$I_x = 13709.18 \text{ in}^4$	$S_{bott.} = 847.25 \text{ in}^3$			$I_x = 13709.18 \text{ in}^4$	$S_{bott.} = 847.25 \text{ in}^3$		
$C_{top} = 14.9441 \text{ in}$	$A = 121.0000 \text{ in}^2$			$C_{top} = 14.9441 \text{ in}$	$A = 121.0000 \text{ in}^2$		
$C_{bottom} = 16.1809 \text{ in}$	$r_x = 10.6442 \text{ in}$			$C_{bottom} = 16.1809 \text{ in}$	$r_x = 10.6442 \text{ in}$		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I_o	d	Ad^2	$I_{y,gross}$	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.7500	3.8750	14.5313	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.1875	5.4736	0.1500	10.6875	526.4951	526.6451	
1 (Right)	Horizontal Leg	3.7500	19.8750	74.5313	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	22.5625	103.9990	0.1500	10.6875	526.4951	526.6451	
2 (Left)	Horizontal Leg	3.7500	3.8750	14.5313	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.1875	5.4736	0.1500	10.6875	526.4951	526.6451	
2 (Right)	Horizontal Leg	3.7500	19.8750	74.5313	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	22.5625	103.9990	0.1500	10.6875	526.4951	526.6451	
3 (Left)	Plate	26.2500	0.4375	11.4844	1.6748	11.4375	3433.9307	3435.6055	
3 (Right)	Plate	26.2500	23.3125	611.9531	1.6748	11.4375	3433.9307	3435.6055	
4	Plate	11.0000	11.8750	130.6250	443.6667	0.0000	0.0000	443.6667	
5 (Left)	Perforated Plate	3.2813	3.5000	11.4844	7.5366	8.3750	230.1489	237.6855	
5 (Right)	Perforated Plate	3.2813	20.2500	66.4453	7.5366	8.3750	230.1489	237.6855	
6 (Left)	Plate	8.7500	1.1875	10.3906	0.2848	10.6875	999.4482	999.7331	
6 (Right)	Plate	8.7500	22.5625	197.4219	0.2848	10.6875	999.4482	999.7331	
Total		121.00		1436.88	508.26		12393.04	12901.30	
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 11.8750 in	$S_{right} = 1086.42 \text{ in}^3$			x-bar = 11.8750 in	$S_{right} = 1086.42 \text{ in}^3$		
$I_y = 12901.30 \text{ in}^4$	$S_{left} = 1086.42 \text{ in}^3$			$I_y = 12901.30 \text{ in}^4$	$S_{left} = 1086.42 \text{ in}^3$		
$C_{right} = 11.8750 \text{ in}$	$A = 121.0000 \text{ in}^2$			$C_{right} = 11.8750 \text{ in}$	$A = 121.0000 \text{ in}^2$		
$C_{left} = 11.8750 \text{ in}$	$r_y = 10.3258 \text{ in}$			$C_{left} = 11.8750 \text{ in}$	$r_y = 10.3258 \text{ in}$		



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6250$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6250$ in

Web Plate 1:

$A_3 = b = 30.0000$ in
 $B_3 = t = 0.8750$ in

Top Cover Plate:

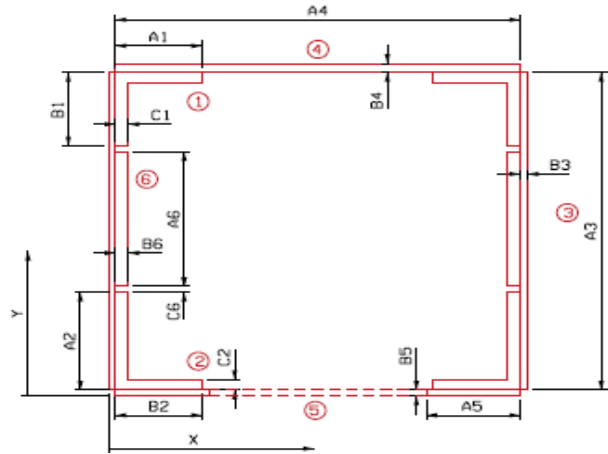
$A_4 = b = 22.0000$ in
 $B_4 = t = 0.5000$ in

Web Plate 2:

$A_6 = b = 14.0000$ in
 $B_6 = t = 0.6250$ in
 $C_6 = \text{gap} = 0.0000$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.6250$ in



Member L100-L101

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	7.5000	30.3125	227.3438	0.2441	14.1316	1497.7697	1498.0139
	Vertical Leg	9.2188	26.3125	242.5684	41.7845	10.1316	946.3018	988.0862
2	Horizontal Leg	7.5000	0.9375	7.0313	0.2441	15.2434	1742.7052	1742.9493
	Vertical Leg	9.2188	4.9375	45.5176	41.7845	11.2434	1165.3757	1207.1602
3	Plate	52.5000	15.6250	820.3125	3937.5000	0.5559	16.2228	3953.7228
4	Plate	11.0000	30.8750	339.6250	0.2292	14.6941	2375.0882	2375.3173
5	Perforated Plate	6.5625	0.3125	2.0508	0.2136	15.8684	1652.4739	1652.6875
6	Side Plates	17.5000	15.6250	273.4375	285.8333	0.5559	5.4076	291.2409
Total		121.00		1957.89	4307.83		9401.34	13709.18
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/19/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.1809 in	$S_{top} = 917.36 \text{ in}^3$			y-bar = 16.1809 in	$S_{top} = 917.36 \text{ in}^3$		
$I_x = 13709.18 \text{ in}^4$	$S_{bott.} = 847.25 \text{ in}^3$			$I_x = 13709.18 \text{ in}^4$	$S_{bott.} = 847.25 \text{ in}^3$		
$C_{top} = 14.9441 \text{ in}$	$A = 121.0000 \text{ in}^2$			$C_{top} = 14.9441 \text{ in}$	$A = 121.0000 \text{ in}^2$		
$C_{bottom} = 16.1809 \text{ in}$	$r_x = 10.6442 \text{ in}$			$C_{bottom} = 16.1809 \text{ in}$	$r_x = 10.6442 \text{ in}$		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I_o	d	Ad^2	$I_{y,gross}$	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.7500	3.8750	14.5313	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.1875	5.4736	0.1500	10.6875	526.4951	526.6451	
1 (Right)	Horizontal Leg	3.7500	19.8750	74.5313	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	22.5625	103.9990	0.1500	10.6875	526.4951	526.6451	
2 (Left)	Horizontal Leg	3.7500	3.8750	14.5313	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	1.1875	5.4736	0.1500	10.6875	526.4951	526.6451	
2 (Right)	Horizontal Leg	3.7500	19.8750	74.5313	11.2500	8.0000	240.0000	251.2500	
	Vertical Leg	4.6094	22.5625	103.9990	0.1500	10.6875	526.4951	526.6451	
3 (Left)	Plate	26.2500	0.4375	11.4844	1.6748	11.4375	3433.9307	3435.6055	
3 (Right)	Plate	26.2500	23.3125	611.9531	1.6748	11.4375	3433.9307	3435.6055	
4	Plate	11.0000	11.8750	130.6250	443.6667	0.0000	0.0000	443.6667	
5 (Left)	Perforated Plate	3.2813	3.5000	11.4844	7.5366	8.3750	230.1489	237.6855	
5 (Right)	Perforated Plate	3.2813	20.2500	66.4453	7.5366	8.3750	230.1489	237.6855	
6 (Left)	Plate	8.7500	1.1875	10.3906	0.2848	10.6875	999.4482	999.7331	
6 (Right)	Plate	8.7500	22.5625	197.4219	0.2848	10.6875	999.4482	999.7331	
Total		121.00		1436.88	508.26		12393.04	12901.30	
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 11.8750 in	$S_{right} = 1086.42 \text{ in}^3$			x-bar = 11.8750 in	$S_{right} = 1086.42 \text{ in}^3$		
$I_y = 12901.30 \text{ in}^4$	$S_{left} = 1086.42 \text{ in}^3$			$I_y = 12901.30 \text{ in}^4$	$S_{left} = 1086.42 \text{ in}^3$		
$C_{right} = 11.8750 \text{ in}$	$A = 121.0000 \text{ in}^2$			$C_{right} = 11.8750 \text{ in}$	$A = 121.0000 \text{ in}^2$		
$C_{left} = 11.8750 \text{ in}$	$r_y = 10.3258 \text{ in}$			$C_{left} = 11.8750 \text{ in}$	$r_y = 10.3258 \text{ in}$		



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.5000$ in

Web Plate 1:

$A_3 = b = 30.0000$ in
 $B_3 = t = 0.8750$ in

Top Cover Plate:

$A_4 = b = 22.0000$ in
 $B_4 = t = 0.5000$ in

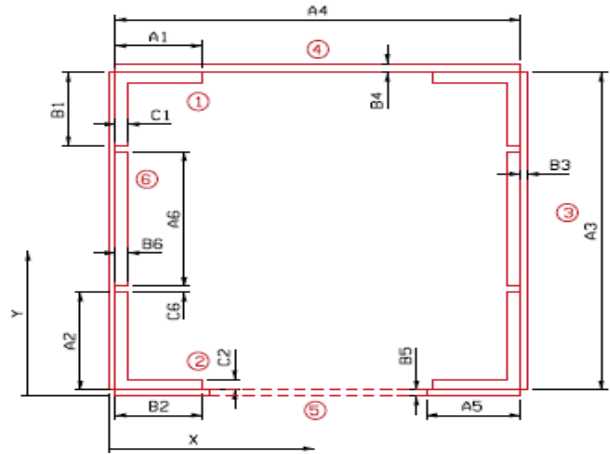
Web Plate 2:

$A_6 = b = 14.0000$ in
 $B_6 = t = 0.6250$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.6250$ in

$C_6 = \text{gap} = 0.0000$ in



Member L101-L102

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	6.0000	30.3750	182.2500	0.1250	14.1629	1203.5233	1203.6483
	Vertical Leg	7.5000	26.3750	197.8125	35.1563	10.1629	774.6313	809.7875
2	Horizontal Leg	6.0000	0.8750	5.2500	0.1250	15.3371	1411.3632	1411.4882
	Vertical Leg	7.5000	4.8750	36.5625	35.1563	11.3371	963.9769	999.1331
3	Plate	52.5000	15.6250	820.3125	3937.5000	0.5871	18.0972	3955.5972
4	Plate	11.0000	30.8750	339.6250	0.2292	14.6629	2365.0012	2365.2303
5	Perforated Plate	6.5625	0.3125	2.0508	0.2136	15.8996	1658.9859	1659.1996
6	Side Plates	17.5000	15.6250	273.4375	285.8333	0.5871	6.0324	291.8657
Total		114.56		1857.30	4294.34		8401.61	12695.95
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.2121 in	$S_{top} = 851.34 \text{ in}^3$			y-bar = 16.2121 in	$S_{top} = 851.34 \text{ in}^3$		
$I_x = 12695.95 \text{ in}^4$	$S_{bott.} = 783.11 \text{ in}^3$			$I_x = 12695.95 \text{ in}^4$	$S_{bott.} = 783.11 \text{ in}^3$		
$C_{top} = 14.9129 \text{ in}$	$A = 114.5625 \text{ in}^2$			$C_{top} = 14.9129 \text{ in}$	$A = 114.5625 \text{ in}^2$		
$C_{bottom} = 16.2121 \text{ in}$	$r_x = 10.5272 \text{ in}$			$C_{bottom} = 16.2121 \text{ in}$	$r_x = 10.5272 \text{ in}$		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I_o	d	Ad^2	$I_{y,gross}$	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.0000	3.8750	11.6250	9.0000	8.0000	192.0000	201.0000	
	Vertical Leg	3.7500	1.1250	4.2188	0.0781	10.7500	433.3594	433.4375	
1 (Right)	Horizontal Leg	3.0000	19.8750	59.6250	9.0000	8.0000	192.0000	201.0000	
	Vertical Leg	3.7500	22.6250	84.8438	0.0781	10.7500	433.3594	433.4375	
2 (Left)	Horizontal Leg	3.0000	3.8750	11.6250	9.0000	8.0000	192.0000	201.0000	
	Vertical Leg	3.7500	1.1250	4.2188	0.0781	10.7500	433.3594	433.4375	
2 (Right)	Horizontal Leg	3.0000	19.8750	59.6250	9.0000	8.0000	192.0000	201.0000	
	Vertical Leg	3.7500	22.6250	84.8438	0.0781	10.7500	433.3594	433.4375	
3 (Left)	Plate	26.2500	0.4375	11.4844	1.6748	11.4375	3433.9307	3435.6055	
3 (Right)	Plate	26.2500	23.3125	611.9531	1.6748	11.4375	3433.9307	3435.6055	
4	Plate	11.0000	11.8750	130.6250	443.6667	0.0000	0.0000	443.6667	
5 (Left)	Perforated Plate	3.2813	3.5000	11.4844	7.5366	8.3750	230.1489	237.6855	
5 (Right)	Perforated Plate	3.2813	20.2500	66.4453	7.5366	8.3750	230.1489	237.6855	
6 (Left)	Plate	8.7500	1.1875	10.3906	0.2848	10.6875	999.4482	999.7331	
6 (Right)	Plate	8.7500	22.5625	197.4219	0.2848	10.6875	999.4482	999.7331	
Total		114.56		1360.43	498.97		11828.49	12327.46	
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 11.8750 in	$S_{right} = 1038.10 \text{ in}^3$			x-bar = 11.8750 in	$S_{right} = 1038.10 \text{ in}^3$		
$I_y = 12327.46 \text{ in}^4$	$S_{left} = 1038.10 \text{ in}^3$			$I_y = 12327.46 \text{ in}^4$	$S_{left} = 1038.10 \text{ in}^3$		
$C_{right} = 11.8750 \text{ in}$	$A = 114.5625 \text{ in}^2$			$C_{right} = 11.8750 \text{ in}$	$A = 114.5625 \text{ in}^2$		
$C_{left} = 11.8750 \text{ in}$	$r_y = 10.3733 \text{ in}$			$C_{left} = 11.8750 \text{ in}$	$r_y = 10.3733 \text{ in}$		



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.5000$ in

Top Cover Plate:

$A_4 = b = 22.0000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 30.0000$ in
 $B_3 = t = 0.8750$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.5000$ in



Member U102-U103

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	6.0000	30.2500	181.5000	0.1250	14.2636	1220.7032	1220.8282
	Vertical Leg	7.5000	26.2500	196.8750	35.1563	10.2636	790.0625	825.2188
2	Horizontal Leg	6.0000	0.7500	4.5000	0.1250	15.2364	1392.8857	1393.0107
	Vertical Leg	7.5000	4.7500	35.6250	35.1563	11.2364	946.9236	982.0799
3	Plate	52.5000	15.5000	813.7500	3937.5000	0.4864	12.4203	3949.9203
4	Plate	8.2500	30.6875	253.1719	0.0967	14.7011	1783.0115	1783.1081
5	Perforated Plate	5.2500	0.2500	1.3125	0.1094	15.7364	1300.0785	1300.1879
Total		93.00		1486.73	4008.27		7446.09	11454.35
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	15.9864 in	S _{top} =	769.34 in ³	y-bar =	15.9864 in	S _{top} =	769.34 in ³
I _x =	11454.35 in ⁴	S _{bott.} =	716.51 in ³	I _x =	11454.35 in ⁴	S _{bott.} =	716.51 in ³
C _{top} =	14.8886 in	A =	93.0000 in ²	C _{top} =	14.8886 in	A =	93.0000 in ²
C _{bottom} =	15.9864 in	r _x =	11.0980 in	C _{bottom} =	15.9864 in	r _x =	11.0980 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	3.0000	3.8750	11.6250	9.0000	8.0000	192.0000	201.0000	
	Vertical Leg	3.7500	1.1250	4.2188	0.0781	10.7500	433.3594	433.4375	
1 (Right)	Horizontal Leg	3.0000	19.8750	59.6250	9.0000	8.0000	192.0000	201.0000	
	Vertical Leg	3.7500	22.6250	84.8438	0.0781	10.7500	433.3594	433.4375	
2 (Left)	Horizontal Leg	3.0000	3.8750	11.6250	9.0000	8.0000	192.0000	201.0000	
	Vertical Leg	3.7500	1.1250	4.2188	0.0781	10.7500	433.3594	433.4375	
2 (Right)	Horizontal Leg	3.0000	19.8750	59.6250	9.0000	8.0000	192.0000	201.0000	
	Vertical Leg	3.7500	22.6250	84.8438	0.0781	10.7500	433.3594	433.4375	
3 (Left)	Plate	26.2500	0.4375	11.4844	1.6748	11.4375	3433.9307	3435.6055	
3 (Right)	Plate	26.2500	23.3125	611.9531	1.6748	11.4375	3433.9307	3435.6055	
4	Plate	8.2500	11.8750	97.9688	332.7500	0.0000	0.0000	332.7500	
5 (Left)	Perforated Plate	2.6250	3.5000	9.1875	6.0293	8.3750	184.1191	190.1484	
5 (Right)	Perforated Plate	2.6250	20.2500	53.1563	6.0293	8.3750	184.1191	190.1484	
Total		93.00		1104.38	384.47		9737.54	10122.01	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	11.8750 in	S _{right} =	852.38 in ³	x-bar =	11.8750 in	S _{right} =	852.38 in ³
I _y =	10122.01 in ⁴	S _{left} =	852.38 in ³	I _y =	10122.01 in ⁴	S _{left} =	852.38 in ³
C _{right} =	11.8750 in	A =	93.0000 in ²	C _{right} =	11.8750 in	A =	93.0000 in ²
C _{left} =	11.8750 in	r _y =	10.4326 in	C _{left} =	11.8750 in	r _y =	10.4326 in

South Truss

Member U103-U104



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.4375$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_f = 0.4375$ in

Top Cover Plate:

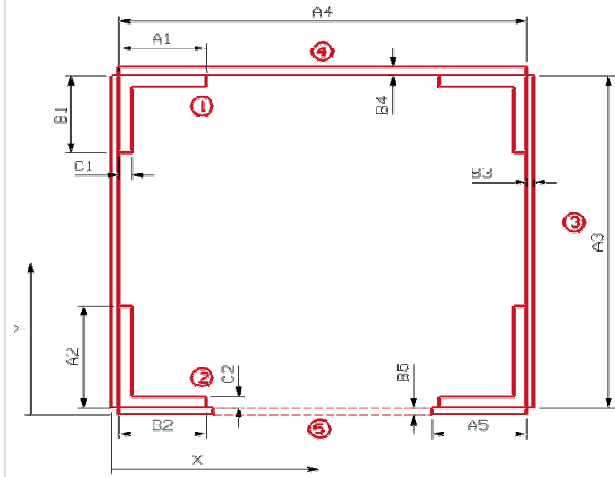
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 30.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member U103-U104

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.2500	30.2813	158.9766	0.0837	14.0877	1041.9304	1042.0141
	Vertical Leg	6.6172	26.2813	173.9080	31.5372	10.0877	673.3745	704.9117
2	Horizontal Leg	5.2500	0.7188	3.7734	0.0837	15.4748	1257.2166	1257.3004
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	11.4748	871.2939	902.8311
3	Plate	22.5000	15.5000	348.7500	1687.5000	0.6936	10.8232	1698.3232
4	Plate	8.8125	30.6875	270.4336	0.1033	14.4939	1851.2790	1851.3823
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	15.9436	1525.1832	1525.3082
Total		61.05		988.57	1750.97		7231.10	8982.07
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00	0.00	0.00	0.00



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.1936 in	S _{top} =	611.80 in ³	y-bar =	16.1936 in	S _{top} =	611.80 in ³
I _x =	8982.07 in ⁴	S _{bott.} =	554.67 in ³	I _x =	8982.07 in ⁴	S _{bott.} =	554.67 in ³
C _{top} =	14.6814 in	A =	61.0469 in ²	C _{top} =	14.6814 in	A =	61.0469 in ²
C _{bottom} =	16.1936 in	r _x =	12.1299 in	C _{bottom} =	16.1936 in	r _x =	12.1299 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.3750	8.8594	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.5938	1.9645	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	20.8750	54.7969	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.6563	78.2689	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.3750	8.8594	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.5938	1.9645	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	20.8750	54.7969	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.6563	78.2689	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	11.2500	0.1875	2.1094	0.1318	11.9375	1603.1689	1603.3008	
3 (Right)	Plate	11.2500	24.0625	270.7031	0.1318	11.9375	1603.1689	1603.3008	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.3750	10.1250	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.8750	62.6250	9.0000	8.7500	229.6875	238.6875	
Total		61.05		740.19	455.53		6229.39	6684.92	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	551.33 in ³	x-bar =	12.1250 in	S _{right} =	551.33 in ³
I _y =	6684.92 in ⁴	S _{left} =	551.33 in ³	I _y =	6684.92 in ⁴	S _{left} =	551.33 in ³
C _{right} =	12.1250 in	A =	61.0469 in ²	C _{right} =	12.1250 in	A =	61.0469 in ²
C _{left} =	12.1250 in	r _y =	10.4645 in	C _{left} =	12.1250 in	r _y =	10.4645 in



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

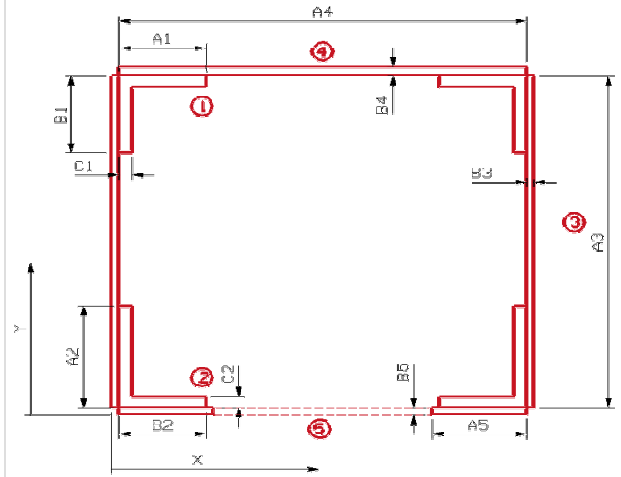
Top Angles:
 $A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:
 $A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:
 $A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:
 $A_3 = b = 30.0000$ in
 $B_3 = t = 0.6250$ in

Perforated Cover Plate
 $A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member U104-U105

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	30.2188	75.5469	0.0203	13.7598	473.3282	473.3485
	Vertical Leg	2.3047	28.2188	65.0354	2.6115	11.7598	318.7203	321.3318
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	15.9277	634.2314	634.2518
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	13.9277	447.0671	449.6786
3	Plate	37.5000	15.3750	576.5625	2812.5000	1.0840	44.0630	2856.5630
4	Plate	8.8125	30.5625	269.3320	0.1033	14.1035	1752.8880	1752.9913
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	16.2715	1191.4248	1191.4775
Total		60.42		994.48	2817.92		4861.72	7679.64
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.4590 in	S _{top} =	537.38 in ³	y-bar =	16.4590 in	S _{top} =	537.38 in ³
I _x =	7679.64 in ⁴	S _{bott.} =	466.59 in ³	I _x =	7679.64 in ⁴	S _{bott.} =	466.59 in ³
C _{top} =	14.2910 in	A =	60.4219 in ²	C _{top} =	14.2910 in	A =	60.4219 in ²
C _{bottom} =	16.4590 in	r _x =	11.2739 in	C _{bottom} =	16.4590 in	r _x =	11.2739 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.6250	3.2813	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.7813	0.9003	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	22.1250	27.6563	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.9688	27.6202	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.6250	3.2813	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.7813	0.9003	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	22.1250	27.6563	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.9688	27.6202	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	18.7500	0.3125	5.8594	0.6104	12.0625	2728.1982	2728.8086	
3 (Right)	Plate	18.7500	24.4375	458.2031	0.6104	12.0625	2728.1982	2728.8086	
4	Plate	8.8125	12.3750	109.0547	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.6250	8.1563	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	21.1250	47.5313	6.7500	8.7500	172.2656	179.0156	
Total		60.42		747.72	426.98		6895.81	7322.79	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3750 in	S _{right} =	591.74 in ³	x-bar =	12.3750 in	S _{right} =	591.74 in ³
I _y =	7322.79 in ⁴	S _{left} =	591.74 in ³	I _y =	7322.79 in ⁴	S _{left} =	591.74 in ³
C _{right} =	12.3750 in	A =	60.4219 in ²	C _{right} =	12.3750 in	A =	60.4219 in ²
C _{left} =	12.3750 in	r _y =	11.0088 in	C _{left} =	12.3750 in	r _y =	11.0088 in



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.4375$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_f = 0.4375$ in

Top Cover Plate:

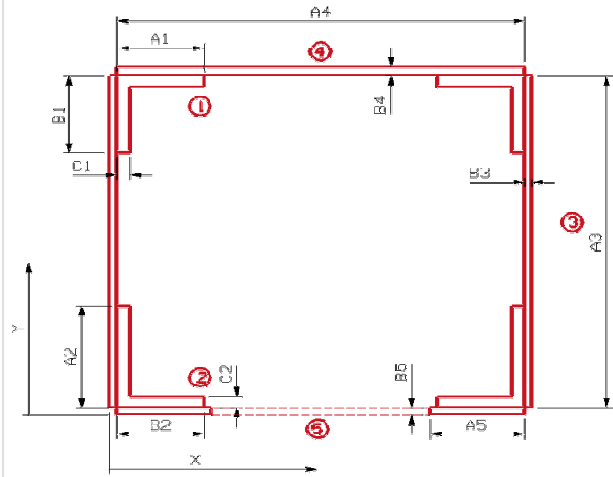
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 30.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member U105-U106

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.2500	30.2813	158.9766	0.0837	14.0877	1041.9304	1042.0141
	Vertical Leg	6.6172	26.2813	173.9080	31.5372	10.0877	673.3745	704.9117
2	Horizontal Leg	5.2500	0.7188	3.7734	0.0837	15.4748	1257.2166	1257.3004
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	11.4748	871.2939	902.8311
3	Plate	22.5000	15.5000	348.7500	1687.5000	0.6936	10.8232	1698.3232
4	Plate	8.8125	30.6875	270.4336	0.1033	14.4939	1851.2790	1851.3823
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	15.9436	1525.1832	1525.3082
Total		61.05		988.57	1750.97		7231.10	8982.07
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.1936 in	S _{top} =	611.80 in ³	y-bar =	16.1936 in	S _{top} =	611.80 in ³
I _x =	8982.07 in ⁴	S _{bott.} =	554.67 in ³	I _x =	8982.07 in ⁴	S _{bott.} =	554.67 in ³
C _{top} =	14.6814 in	A =	61.0469 in ²	C _{top} =	14.6814 in	A =	61.0469 in ²
C _{bottom} =	16.1936 in	r _x =	12.1299 in	C _{bottom} =	16.1936 in	r _x =	12.1299 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.3750	8.8594	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.5938	1.9645	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	20.8750	54.7969	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.6563	78.2689	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.3750	8.8594	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.5938	1.9645	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	20.8750	54.7969	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.6563	78.2689	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	11.2500	0.1875	2.1094	0.1318	11.9375	1603.1689	1603.3008	
3 (Right)	Plate	11.2500	24.0625	270.7031	0.1318	11.9375	1603.1689	1603.3008	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.3750	10.1250	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.8750	62.6250	9.0000	8.7500	229.6875	238.6875	
Total		61.05		740.19	455.53		6229.39	6684.92	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	551.33 in ³	x-bar =	12.1250 in	S _{right} =	551.33 in ³
I _y =	6684.92 in ⁴	S _{left} =	551.33 in ³	I _y =	6684.92 in ⁴	S _{left} =	551.33 in ³
C _{right} =	12.1250 in	A =	61.0469 in ²	C _{right} =	12.1250 in	A =	61.0469 in ²
C _{left} =	12.1250 in	r _y =	10.4645 in	C _{left} =	12.1250 in	r _y =	10.4645 in



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6875$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6875$ in

Top Cover Plate:

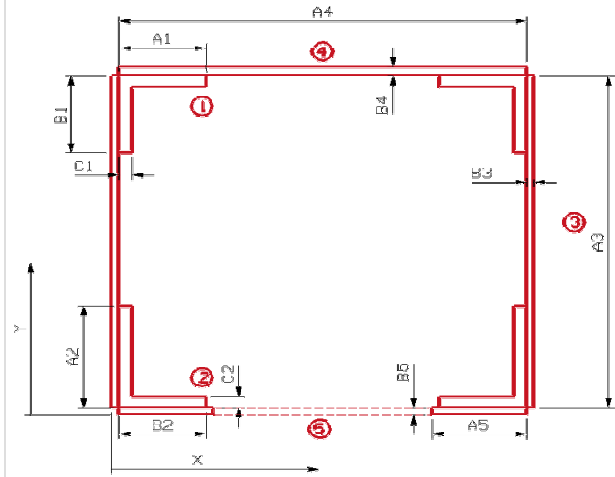
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.6250$ in

Web Plate 1:

$A_3 = b = 30.0000$ in
 $B_3 = t = 0.7500$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.7500$ in



Member U106-U107

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	8.2500	30.4063	250.8516	0.3250	13.8345	1578.9963	1579.3212
	Vertical Leg	10.0547	26.4063	265.5066	44.8042	9.8345	972.4638	1017.2681
2	Horizontal Leg	8.2500	1.0938	9.0234	0.3250	15.4780	1976.4391	1976.7641
	Vertical Leg	10.0547	5.0938	51.2161	44.8042	11.4780	1324.6488	1369.4531
3	Plate	45.0000	15.7500	708.7500	3375.0000	0.8217	30.3870	3405.3870
4	Plate	14.6875	31.0625	456.2305	0.4781	14.4908	3084.1097	3084.5878
5	Perforated Plate	9.0000	0.3750	3.3750	0.4219	16.1967	2361.0114	2361.4333
Total		105.30		1744.95	3466.16		11328.06	14794.21
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.5717 in	$S_{top} = 999.39 \text{ in}^3$			y-bar = 16.5717 in	$S_{top} = 999.39 \text{ in}^3$		
$I_x = 14794.21 \text{ in}^4$	$S_{bott.} = 892.74 \text{ in}^3$			$I_x = 14794.21 \text{ in}^4$	$S_{bott.} = 892.74 \text{ in}^3$		
$C_{top} = 14.8033 \text{ in}$	$A = 105.2969 \text{ in}^2$			$C_{top} = 14.8033 \text{ in}$	$A = 105.2969 \text{ in}^2$		
$C_{bottom} = 16.5717 \text{ in}$	$r_x = 11.8533 \text{ in}$			$C_{bottom} = 16.5717 \text{ in}$	$r_x = 11.8533 \text{ in}$		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I_o	d	Ad^2	$I_{y,gross}$	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	3.7500	15.4688	12.3750	8.7500	315.8203	328.1953	
	Vertical Leg	5.0273	1.0938	5.4987	0.1980	11.4063	654.0702	654.2682	
1 (Right)	Horizontal Leg	4.1250	21.2500	87.6563	12.3750	8.7500	315.8203	328.1953	
	Vertical Leg	5.0273	23.9063	120.1849	0.1980	11.4063	654.0702	654.2682	
2 (Left)	Horizontal Leg	4.1250	3.7500	15.4688	12.3750	8.7500	315.8203	328.1953	
	Vertical Leg	5.0273	1.0938	5.4987	0.1980	11.4063	654.0702	654.2682	
2 (Right)	Horizontal Leg	4.1250	21.2500	87.6563	12.3750	8.7500	315.8203	328.1953	
	Vertical Leg	5.0273	23.9063	120.1849	0.1980	11.4063	654.0702	654.2682	
3 (Left)	Plate	22.5000	0.3750	8.4375	1.0547	12.1250	3307.8516	3308.9063	
3 (Right)	Plate	22.5000	24.6250	554.0625	1.0547	12.1250	3307.8516	3308.9063	
4	Plate	14.6875	12.5000	183.5938	675.9310	0.0000	0.0000	675.9310	
5 (Left)	Perforated Plate	4.5000	3.7500	16.8750	13.5000	8.7500	344.5313	358.0313	
5 (Right)	Perforated Plate	4.5000	21.2500	95.6250	13.5000	8.7500	344.5313	358.0313	
Total		105.30		1316.21	755.33		11184.33	11939.66	
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 12.5000 in	$S_{right} = 955.17 \text{ in}^3$			x-bar = 12.5000 in	$S_{right} = 955.17 \text{ in}^3$		
$I_y = 11939.66 \text{ in}^4$	$S_{left} = 955.17 \text{ in}^3$			$I_y = 11939.66 \text{ in}^4$	$S_{left} = 955.17 \text{ in}^3$		
$C_{right} = 12.5000 \text{ in}$	$A = 105.2969 \text{ in}^2$			$C_{right} = 12.5000 \text{ in}$	$A = 105.2969 \text{ in}^2$		
$C_{left} = 12.5000 \text{ in}$	$r_y = 10.6485 \text{ in}$			$C_{left} = 12.5000 \text{ in}$	$r_y = 10.6485 \text{ in}$		



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6875$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6875$ in

Top Cover Plate:

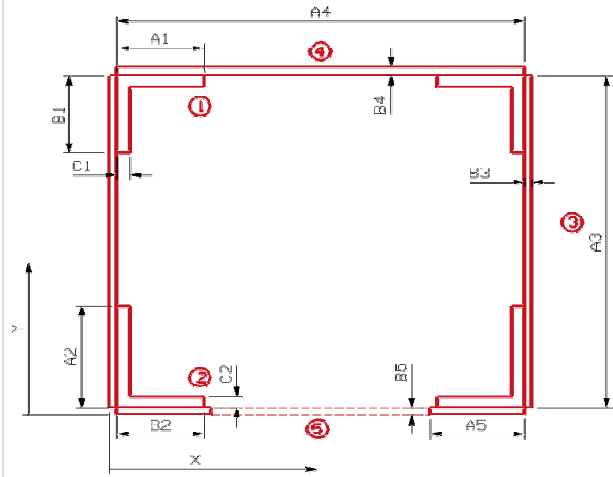
$A_4 = b = 22.0000$ in
 $B_4 = t = 0.6250$ in

Web Plate 1:

$A_3 = b = 30.0000$ in
 $B_3 = t = 1.2500$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.7500$ in



Member U107-U108

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	8.2500	30.4063	250.8516	0.3250	13.9847	1613.4759	1613.8009
	Vertical Leg	10.0547	26.4063	265.5066	44.8042	9.9847	1002.4016	1047.2058
2	Horizontal Leg	8.2500	1.0938	9.0234	0.3250	15.3278	1938.2579	1938.5828
	Vertical Leg	10.0547	5.0938	51.2161	44.8042	11.3278	1290.1998	1335.0040
3	Plate	75.0000	15.7500	1181.2500	5625.0000	0.6715	33.8198	5658.8198
4	Plate	13.7500	31.0625	427.1094	0.4476	14.6410	2947.4290	2947.8766
5	Perforated Plate	7.8750	0.3750	2.9531	0.3691	16.0465	2027.7386	2028.1077
Total		133.23		2187.91	5716.08		10853.32	16569.40
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.4215 in	S _{top} =	1108.06 in ³	y-bar =	16.4215 in	S _{top} =	1108.06 in ³
I _x =	16569.40 in ⁴	S _{bott.} =	1009.01 in ³	I _x =	16569.40 in ⁴	S _{bott.} =	1009.01 in ³
C _{top} =	14.9535 in	A =	133.2344 in ²	C _{top} =	14.9535 in	A =	133.2344 in ²
C _{bottom} =	16.4215 in	r _x =	11.1518 in	C _{bottom} =	16.4215 in	r _x =	11.1518 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	4.2500	17.5313	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.5938	8.0123	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	20.2500	83.5313	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.9063	115.1576	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	4.2500	17.5313	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.5938	8.0123	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	20.2500	83.5313	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.9063	115.1576	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	37.5000	0.6250	23.4375	4.8828	11.6250	5067.7734	5072.6563	
3 (Right)	Plate	37.5000	23.8750	895.3125	4.8828	11.6250	5067.7734	5072.6563	
4	Plate	13.7500	12.2500	168.4375	554.5833	0.0000	0.0000	554.5833	
5 (Left)	Perforated Plate	3.9375	3.8750	15.2578	9.0439	8.3750	276.1787	285.2227	
5 (Right)	Perforated Plate	3.9375	20.6250	81.2109	9.0439	8.3750	276.1787	285.2227	
Total		133.23		1632.12	632.73		14027.44	14660.17	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2500 in	S _{right} =	1196.75 in ³	x-bar =	12.2500 in	S _{right} =	1196.75 in ³
I _y =	14660.17 in ⁴	S _{left} =	1196.75 in ³	I _y =	14660.17 in ⁴	S _{left} =	1196.75 in ³
C _{right} =	12.2500 in	A =	133.2344 in ²	C _{right} =	12.2500 in	A =	133.2344 in ²
C _{left} =	12.2500 in	r _y =	10.4897 in	C _{left} =	12.2500 in	r _y =	10.4897 in



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6875$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6875$ in

Top Cover Plate:

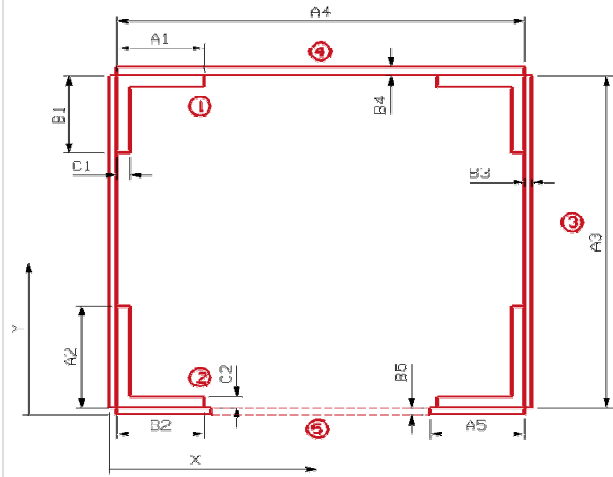
$A_4 = b = 22.0000$ in
 $B_4 = t = 0.6250$ in

Web Plate 1:

$A_3 = b = 30.0000$ in
 $B_3 = t = 1.4375$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.7500$ in



Member U108-U109

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	8.2500	30.4063	250.8516	0.3250	14.0370	1625.5634	1625.8884
	Vertical Leg	10.0547	26.4063	265.5066	44.8042	10.0370	1012.9275	1057.7317
2	Horizontal Leg	8.2500	1.0938	9.0234	0.3250	15.2755	1925.0568	1925.3818
	Vertical Leg	10.0547	5.0938	51.2161	44.8042	11.2755	1278.3168	1323.1210
3	Plate	86.2500	15.7500	1358.4375	6468.7500	0.6192	33.0720	6501.8220
4	Plate	13.7500	31.0625	427.1094	0.4476	14.6933	2968.5184	2968.9660
5	Perforated Plate	7.8750	0.3750	2.9531	0.3691	15.9942	2014.5457	2014.9148
Total		144.48		2365.10	6559.83		10858.00	17417.83
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.3692 in	$S_{top} = 1160.74 \text{ in}^3$			y-bar = 16.3692 in	$S_{top} = 1160.74 \text{ in}^3$		
$I_x = 17417.83 \text{ in}^4$	$S_{bott.} = 1064.06 \text{ in}^3$			$I_x = 17417.83 \text{ in}^4$	$S_{bott.} = 1064.06 \text{ in}^3$		
$C_{top} = 15.0058 \text{ in}$	$A = 144.4844 \text{ in}^2$			$C_{top} = 15.0058 \text{ in}$	$A = 144.4844 \text{ in}^2$		
$C_{bottom} = 16.3692 \text{ in}$	$r_x = 10.9796 \text{ in}$			$C_{bottom} = 16.3692 \text{ in}$	$r_x = 10.9796 \text{ in}$		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I_o	d	Ad^2	$I_{y,gross}$	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	4.4375	18.3047	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.7813	8.9550	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	20.4375	84.3047	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	23.0938	116.1002	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	4.4375	18.3047	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.7813	8.9550	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	20.4375	84.3047	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	23.0938	116.1002	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	43.1250	0.7188	30.9961	7.4261	11.7188	5922.3175	5929.7437	
3 (Right)	Plate	43.1250	24.1563	1041.7383	7.4261	11.7188	5922.3175	5929.7437	
4	Plate	13.7500	12.4375	171.0156	554.5833	0.0000	0.0000	554.5833	
5 (Left)	Perforated Plate	3.9375	4.0625	15.9961	9.0439	8.3750	276.1787	285.2227	
5 (Right)	Perforated Plate	3.9375	20.8125	81.9492	9.0439	8.3750	276.1787	285.2227	
Total		144.48		1797.02	637.82		15736.53	16374.34	
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 12.4375 in	$S_{right} = 1316.53 \text{ in}^3$			x-bar = 12.4375 in	$S_{right} = 1316.53 \text{ in}^3$		
$I_y = 16374.34 \text{ in}^4$	$S_{left} = 1316.53 \text{ in}^3$			$I_y = 16374.34 \text{ in}^4$	$S_{left} = 1316.53 \text{ in}^3$		
$C_{right} = 12.4375 \text{ in}$	$A = 144.4844 \text{ in}^2$			$C_{right} = 12.4375 \text{ in}$	$A = 144.4844 \text{ in}^2$		
$C_{left} = 12.4375 \text{ in}$	$r_y = 10.6456 \text{ in}$			$C_{left} = 12.4375 \text{ in}$	$r_y = 10.6456 \text{ in}$		



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6875$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6875$ in

Top Cover Plate:

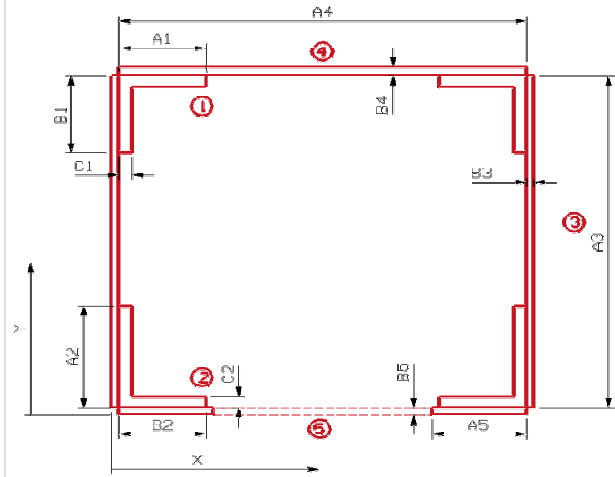
$A_4 = b = 22.0000$ in
 $B_4 = t = 0.6250$ in

Web Plate 1:

$A_3 = b = 30.0000$ in
 $B_3 = t = 1.3750$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.7500$ in



Member U109-U110

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	8.2500	30.4063	250.8516	0.3250	14.0205	1621.7441	1622.0691
	Vertical Leg	10.0547	26.4063	265.5066	44.8042	10.0205	1009.5999	1054.4041
2	Horizontal Leg	8.2500	1.0938	9.0234	0.3250	15.2920	1929.2178	1929.5428
	Vertical Leg	10.0547	5.0938	51.2161	44.8042	11.2920	1282.0608	1326.8650
3	Plate	82.5000	15.7500	1299.3750	6187.5000	0.6357	33.3424	6220.8424
4	Plate	13.7500	31.0625	427.1094	0.4476	14.6768	2961.8551	2962.3027
5	Perforated Plate	7.8750	0.3750	2.9531	0.3691	16.0107	2018.7043	2019.0734
Total		140.73		2306.04	6278.58		10856.52	17135.10
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.3857 in	$S_{top} = 1143.16 \text{ in}^3$			y-bar = 16.3857 in	$S_{top} = 1143.16 \text{ in}^3$		
$I_x = 17135.10 \text{ in}^4$	$S_{bott.} = 1045.73 \text{ in}^3$			$I_x = 17135.10 \text{ in}^4$	$S_{bott.} = 1045.73 \text{ in}^3$		
$C_{top} = 14.9893 \text{ in}$	$A = 140.7344 \text{ in}^2$			$C_{top} = 14.9893 \text{ in}$	$A = 140.7344 \text{ in}^2$		
$C_{bottom} = 16.3857 \text{ in}$	$r_x = 11.0343 \text{ in}$			$C_{bottom} = 16.3857 \text{ in}$	$r_x = 11.0343 \text{ in}$		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I_o	d	Ad^2	$I_{y,gross}$	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	4.3750	18.0469	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.7188	8.6407	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	20.3750	84.0469	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	23.0313	115.7860	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	4.3750	18.0469	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.7188	8.6407	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	20.3750	84.0469	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	23.0313	115.7860	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	41.2500	0.6875	28.3594	6.4990	11.6875	5634.6533	5641.1523	
3 (Right)	Plate	41.2500	24.0625	992.5781	6.4990	11.6875	5634.6533	5641.1523	
4	Plate	13.7500	12.3750	170.1563	554.5833	0.0000	0.0000	554.5833	
5 (Left)	Perforated Plate	3.9375	4.0000	15.7500	9.0439	8.3750	276.1787	285.2227	
5 (Right)	Perforated Plate	3.9375	20.7500	81.7031	9.0439	8.3750	276.1787	285.2227	
Total		140.73		1741.59	635.96		15161.20	15797.16	
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 12.3750 in	$S_{right} = 1276.54 \text{ in}^3$			x-bar = 12.3750 in	$S_{right} = 1276.54 \text{ in}^3$		
$I_y = 15797.16 \text{ in}^4$	$S_{left} = 1276.54 \text{ in}^3$			$I_y = 15797.16 \text{ in}^4$	$S_{left} = 1276.54 \text{ in}^3$		
$C_{right} = 12.3750 \text{ in}$	$A = 140.7344 \text{ in}^2$			$C_{right} = 12.3750 \text{ in}$	$A = 140.7344 \text{ in}^2$		
$C_{left} = 12.3750 \text{ in}$	$r_y = 10.5947 \text{ in}$			$C_{left} = 12.3750 \text{ in}$	$r_y = 10.5947 \text{ in}$		



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6875$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6875$ in

Top Cover Plate:

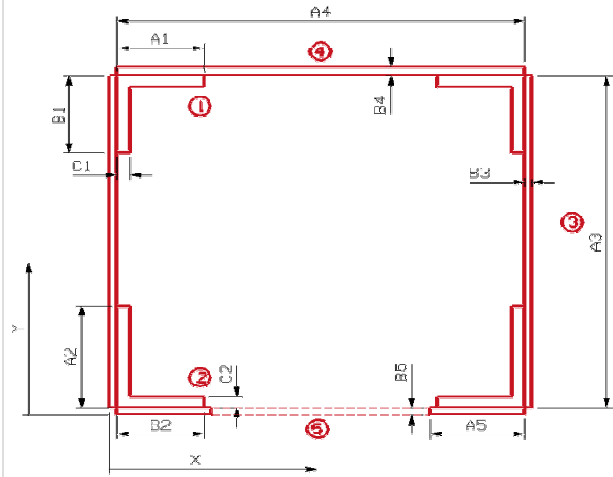
$A_4 = b = 22.0000$ in
 $B_4 = t = 0.6250$ in

Web Plate 1:

$A_3 = b = 30.0000$ in
 $B_3 = t = 1.3750$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.7500$ in



Member U110-U111

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	8.2500	30.4063	250.8516	0.3250	14.0205	1621.7441	1622.0691
	Vertical Leg	10.0547	26.4063	265.5066	44.8042	10.0205	1009.5999	1054.4041
2	Horizontal Leg	8.2500	1.0938	9.0234	0.3250	15.2920	1929.2178	1929.5428
	Vertical Leg	10.0547	5.0938	51.2161	44.8042	11.2920	1282.0608	1326.8650
3	Plate	82.5000	15.7500	1299.3750	6187.5000	0.6357	33.3424	6220.8424
4	Plate	13.7500	31.0625	427.1094	0.4476	14.6768	2961.8551	2962.3027
5	Perforated Plate	7.8750	0.3750	2.9531	0.3691	16.0107	2018.7043	2019.0734
Total		140.73		2306.04	6278.58		10856.52	17135.10
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.3857 in	$S_{top} = 1143.16 \text{ in}^3$			y-bar = 16.3857 in	$S_{top} = 1143.16 \text{ in}^3$		
$I_x = 17135.10 \text{ in}^4$	$S_{bott.} = 1045.73 \text{ in}^3$			$I_x = 17135.10 \text{ in}^4$	$S_{bott.} = 1045.73 \text{ in}^3$		
$C_{top} = 14.9893 \text{ in}$	$A = 140.7344 \text{ in}^2$			$C_{top} = 14.9893 \text{ in}$	$A = 140.7344 \text{ in}^2$		
$C_{bottom} = 16.3857 \text{ in}$	$r_x = 11.0343 \text{ in}$			$C_{bottom} = 16.3857 \text{ in}$	$r_x = 11.0343 \text{ in}$		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I_o	d	Ad^2	$I_{y,gross}$	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	4.3750	18.0469	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.7188	8.6407	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	20.3750	84.0469	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	23.0313	115.7860	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	4.3750	18.0469	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.7188	8.6407	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	20.3750	84.0469	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	23.0313	115.7860	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	41.2500	0.6875	28.3594	6.4990	11.6875	5634.6533	5641.1523	
3 (Right)	Plate	41.2500	24.0625	992.5781	6.4990	11.6875	5634.6533	5641.1523	
4	Plate	13.7500	12.3750	170.1563	554.5833	0.0000	0.0000	554.5833	
5 (Left)	Perforated Plate	3.9375	4.0000	15.7500	9.0439	8.3750	276.1787	285.2227	
5 (Right)	Perforated Plate	3.9375	20.7500	81.7031	9.0439	8.3750	276.1787	285.2227	
Total		140.73		1741.59	635.96		15161.20	15797.16	
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 12.3750 in	$S_{right} = 1276.54 \text{ in}^3$			x-bar = 12.3750 in	$S_{right} = 1276.54 \text{ in}^3$		
$I_y = 15797.16 \text{ in}^4$	$S_{left} = 1276.54 \text{ in}^3$			$I_y = 15797.16 \text{ in}^4$	$S_{left} = 1276.54 \text{ in}^3$		
$C_{right} = 12.3750 \text{ in}$	$A = 140.7344 \text{ in}^2$			$C_{right} = 12.3750 \text{ in}$	$A = 140.7344 \text{ in}^2$		
$C_{left} = 12.3750 \text{ in}$	$r_y = 10.5947 \text{ in}$			$C_{left} = 12.3750 \text{ in}$	$r_y = 10.5947 \text{ in}$		



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6875$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6875$ in

Top Cover Plate:

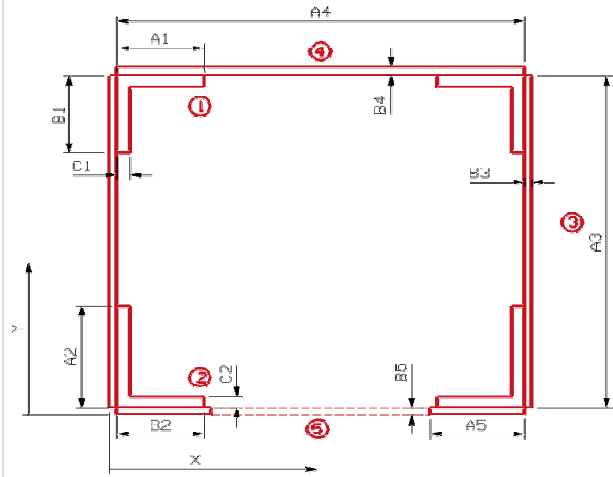
$A_4 = b = 22.0000$ in
 $B_4 = t = 0.6250$ in

Web Plate 1:

$A_3 = b = 30.0000$ in
 $B_3 = t = 1.3750$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.7500$ in



Member U111-U112

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	8.2500	30.4063	250.8516	0.3250	14.0205	1621.7441	1622.0691
	Vertical Leg	10.0547	26.4063	265.5066	44.8042	10.0205	1009.5999	1054.4041
2	Horizontal Leg	8.2500	1.0938	9.0234	0.3250	15.2920	1929.2178	1929.5428
	Vertical Leg	10.0547	5.0938	51.2161	44.8042	11.2920	1282.0608	1326.8650
3	Plate	82.5000	15.7500	1299.3750	6187.5000	0.6357	33.3424	6220.8424
4	Plate	13.7500	31.0625	427.1094	0.4476	14.6768	2961.8551	2962.3027
5	Perforated Plate	7.8750	0.3750	2.9531	0.3691	16.0107	2018.7043	2019.0734
Total		140.73		2306.04	6278.58		10856.52	17135.10
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00	0.00	0.00	0.00



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.3857 in	$S_{top} = 1143.16 \text{ in}^3$			y-bar = 16.3857 in	$S_{top} = 1143.16 \text{ in}^3$		
$I_x = 17135.10 \text{ in}^4$	$S_{bott.} = 1045.73 \text{ in}^3$			$I_x = 17135.10 \text{ in}^4$	$S_{bott.} = 1045.73 \text{ in}^3$		
$C_{top} = 14.9893 \text{ in}$	$A = 140.7344 \text{ in}^2$			$C_{top} = 14.9893 \text{ in}$	$A = 140.7344 \text{ in}^2$		
$C_{bottom} = 16.3857 \text{ in}$	$r_x = 11.0343 \text{ in}$			$C_{bottom} = 16.3857 \text{ in}$	$r_x = 11.0343 \text{ in}$		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I_o	d	Ad^2	$I_{y,gross}$	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	4.3750	18.0469	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.7188	8.6407	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	20.3750	84.0469	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	23.0313	115.7860	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	4.3750	18.0469	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.7188	8.6407	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	20.3750	84.0469	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	23.0313	115.7860	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	41.2500	0.6875	28.3594	6.4990	11.6875	5634.6533	5641.1523	
3 (Right)	Plate	41.2500	24.0625	992.5781	6.4990	11.6875	5634.6533	5641.1523	
4	Plate	13.7500	12.3750	170.1563	554.5833	0.0000	0.0000	554.5833	
5 (Left)	Perforated Plate	3.9375	4.0000	15.7500	9.0439	8.3750	276.1787	285.2227	
5 (Right)	Perforated Plate	3.9375	20.7500	81.7031	9.0439	8.3750	276.1787	285.2227	
Total		140.73		1741.59	635.96		15161.20	15797.16	
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 12.3750 in	$S_{right} = 1276.54 \text{ in}^3$			x-bar = 12.3750 in	$S_{right} = 1276.54 \text{ in}^3$		
$I_y = 15797.16 \text{ in}^4$	$S_{left} = 1276.54 \text{ in}^3$			$I_y = 15797.16 \text{ in}^4$	$S_{left} = 1276.54 \text{ in}^3$		
$C_{right} = 12.3750 \text{ in}$	$A = 140.7344 \text{ in}^2$			$C_{right} = 12.3750 \text{ in}$	$A = 140.7344 \text{ in}^2$		
$C_{left} = 12.3750 \text{ in}$	$r_y = 10.5947 \text{ in}$			$C_{left} = 12.3750 \text{ in}$	$r_y = 10.5947 \text{ in}$		



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6875$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6875$ in

Top Cover Plate:

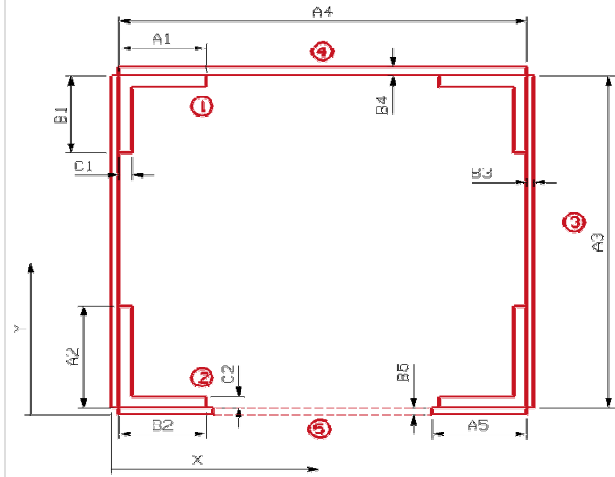
$A_4 = b = 22.0000$ in
 $B_4 = t = 0.6250$ in

Web Plate 1:

$A_3 = b = 30.0000$ in
 $B_3 = t = 1.3750$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.7500$ in



Member U112-U113

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg		8.2500	30.4063	250.8516	0.3250	14.0205	1621.7441	1622.0691
	Vertical Leg		10.0547	26.4063	265.5066	44.8042	10.0205	1009.5999	1054.4041
2	Horizontal Leg		8.2500	1.0938	9.0234	0.3250	15.2920	1929.2178	1929.5428
	Vertical Leg		10.0547	5.0938	51.2161	44.8042	11.2920	1282.0608	1326.8650
3	Plate		82.5000	15.7500	1299.3750	6187.5000	0.6357	33.3424	6220.8424
4	Plate		13.7500	31.0625	427.1094	0.4476	14.6768	2961.8551	2962.3027
5	Perforated Plate		7.8750	0.3750	2.9531	0.3691	16.0107	2018.7043	2019.0734
Total			140.73		2306.04	6278.58		10856.52	17135.10
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.3857 in	S _{top} =	1143.16 in ³	y-bar =	16.3857 in	S _{top} =	1143.16 in ³
I _x =	17135.10 in ⁴	S _{bottom} =	1045.73 in ³	I _x =	17135.10 in ⁴	S _{bottom} =	1045.73 in ³
C _{top} =	14.9893 in	A =	140.7344 in ²	C _{top} =	14.9893 in	A =	140.7344 in ²
C _{bottom} =	16.3857 in	r _x =	11.0343 in	C _{bottom} =	16.3857 in	r _x =	11.0343 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	4.3750	18.0469	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.7188	8.6407	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	20.3750	84.0469	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	23.0313	115.7860	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	4.3750	18.0469	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.7188	8.6407	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	20.3750	84.0469	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	23.0313	115.7860	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	41.2500	0.6875	28.3594	6.4990	11.6875	5634.6533	5641.1523	
3 (Right)	Plate	41.2500	24.0625	992.5781	6.4990	11.6875	5634.6533	5641.1523	
4	Plate	13.7500	12.3750	170.1563	554.5833	0.0000	0.0000	554.5833	
5 (Left)	Perforated Plate	3.9375	4.0000	15.7500	9.0439	8.3750	276.1787	285.2227	
5 (Right)	Perforated Plate	3.9375	20.7500	81.7031	9.0439	8.3750	276.1787	285.2227	
Total		140.73		1741.59	635.96		15161.20	15797.16	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3750 in	S _{right} =	1276.54 in ³	x-bar =	12.3750 in	S _{right} =	1276.54 in ³
I _y =	15797.16 in ⁴	S _{left} =	1276.54 in ³	I _y =	15797.16 in ⁴	S _{left} =	1276.54 in ³
C _{right} =	12.3750 in	A =	140.7344 in ²	C _{right} =	12.3750 in	A =	140.7344 in ²
C _{left} =	12.3750 in	r _y =	10.5947 in	C _{left} =	12.3750 in	r _y =	10.5947 in

South Truss

Member U113-U114



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.7500$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.7500$ in

Web Plate 1:

$A_3 = b = 30.0000$ in
 $B_3 = t = 0.7500$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.6250$ in

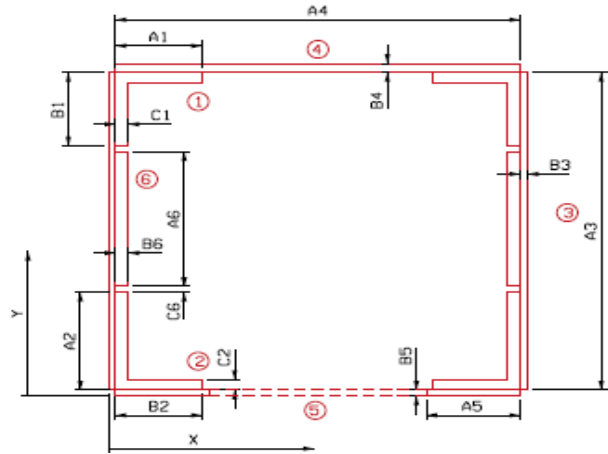
Web Plate 2:

$A_6 = b = 14.0000$ in
 $B_6 = t = 0.5000$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.7500$ in

$C_6 = \text{gap} = 0.0000$ in



Member U113-U114

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg		9.0000	30.3750	273.3750	0.4219	13.9183	1743.4701	1743.8920
	Vertical Leg		10.8750	26.3750	286.8281	47.6348	9.9183	1069.8015	1117.4363
2	Horizontal Leg		9.0000	1.1250	10.1250	0.4219	15.3317	2115.5509	2115.9728
	Vertical Leg		10.8750	5.1250	55.7344	47.6348	11.3317	1396.4323	1444.0670
3	Plate		45.0000	15.7500	708.7500	3375.0000	0.7067	22.4745	3397.4745
4	Plate		14.6875	31.0625	456.2305	0.4781	14.6058	3133.2728	3133.7509
5	Perforated Plate		9.0000	0.3750	3.3750	0.4219	16.0817	2327.5915	2328.0134
6	Side Plates		14.0000	15.7500	220.5000	228.6667	0.7067	6.9921	235.6587
Total			122.44		2014.92	3700.68		11815.59	15516.27
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.4567 in	$S_{top} = 1040.08 \text{ in}^3$			y-bar = 16.4567 in	$S_{top} = 1040.08 \text{ in}^3$		
$I_x = 15516.27 \text{ in}^4$	$S_{bott.} = 942.85 \text{ in}^3$			$I_x = 15516.27 \text{ in}^4$	$S_{bott.} = 942.85 \text{ in}^3$		
$C_{top} = 14.9183 \text{ in}$	$A = 122.4375 \text{ in}^2$			$C_{top} = 14.9183 \text{ in}$	$A = 122.4375 \text{ in}^2$		
$C_{bottom} = 16.4567 \text{ in}$	$r_x = 11.2574 \text{ in}$			$C_{bottom} = 16.4567 \text{ in}$	$r_x = 11.2574 \text{ in}$		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I_o	d	Ad^2	$I_{y,gross}$	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.5000	3.7500	16.8750	13.5000	8.7500	344.5313	358.0313	
	Vertical Leg	5.4375	1.1250	6.1172	0.2549	11.3750	703.5615	703.8164	
1 (Right)	Horizontal Leg	4.5000	21.2500	95.6250	13.5000	8.7500	344.5313	358.0313	
	Vertical Leg	5.4375	23.8750	129.8203	0.2549	11.3750	703.5615	703.8164	
2 (Left)	Horizontal Leg	4.5000	3.7500	16.8750	13.5000	8.7500	344.5313	358.0313	
	Vertical Leg	5.4375	1.1250	6.1172	0.2549	11.3750	703.5615	703.8164	
2 (Right)	Horizontal Leg	4.5000	21.2500	95.6250	13.5000	8.7500	344.5313	358.0313	
	Vertical Leg	5.4375	23.8750	129.8203	0.2549	11.3750	703.5615	703.8164	
3 (Left)	Plate	22.5000	0.3750	8.4375	1.0547	12.1250	3307.8516	3308.9063	
3 (Right)	Plate	22.5000	24.6250	554.0625	1.0547	12.1250	3307.8516	3308.9063	
4	Plate	14.6875	12.5000	183.5938	675.9310	0.0000	0.0000	675.9310	
5 (Left)	Perforated Plate	4.5000	3.7500	16.8750	13.5000	8.7500	344.5313	358.0313	
5 (Right)	Perforated Plate	4.5000	21.2500	95.6250	13.5000	8.7500	344.5313	358.0313	
6 (Left)	Plate	7.0000	1.0000	7.0000	0.1458	11.5000	925.7500	925.8958	
6 (Right)	Plate	7.0000	24.0000	168.0000	0.1458	11.5000	925.7500	925.8958	
Total		122.44		1530.47	760.35		13348.64	14108.99	
Section Losses			A	x	Ax	I_o	d	Ad^2	$I_{y,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 12.5000 in	$S_{right} = 1128.72 \text{ in}^3$			x-bar = 12.5000 in	$S_{right} = 1128.72 \text{ in}^3$		
$I_y = 14108.99 \text{ in}^4$	$S_{left} = 1128.72 \text{ in}^3$			$I_y = 14108.99 \text{ in}^4$	$S_{left} = 1128.72 \text{ in}^3$		
$C_{right} = 12.5000 \text{ in}$	$A = 122.4375 \text{ in}^2$			$C_{right} = 12.5000 \text{ in}$	$A = 122.4375 \text{ in}^2$		
$C_{left} = 12.5000 \text{ in}$	$r_y = 10.7347 \text{ in}$			$C_{left} = 12.5000 \text{ in}$	$r_y = 10.7347 \text{ in}$		



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.7500$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.7500$ in

Top Cover Plate:

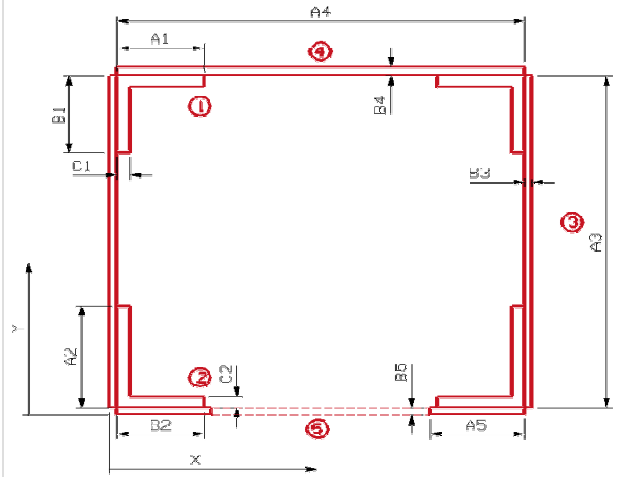
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.6250$ in

Web Plate 1:

$A_3 = b = 30.0000$ in
 $B_3 = t = 0.7500$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.7500$ in



Member U114-U115

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	9.0000	30.3750	273.3750	0.4219	13.8271	1720.6866	1721.1085
	Vertical Leg	10.8750	26.3750	286.8281	47.6348	9.8271	1050.2094	1097.8441
2	Horizontal Leg	9.0000	1.1250	10.1250	0.4219	15.4229	2140.8056	2141.2274
	Vertical Leg	10.8750	5.1250	55.7344	47.6348	11.4229	1419.0104	1466.6451
3	Plate	45.0000	15.7500	708.7500	3375.0000	0.7979	28.6524	3403.6524
4	Plate	14.6875	31.0625	456.2305	0.4781	14.5146	3094.2488	3094.7269
5	Perforated Plate	9.0000	0.3750	3.3750	0.4219	16.1729	2354.0778	2354.4997
Total		108.44		1794.42	3472.01		11807.69	15279.70
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.5479 in	S _{top} =	1030.53 in ³	y-bar =	16.5479 in	S _{top} =	1030.53 in ³
I _x =	15279.70 in ⁴	S _{bott.} =	923.36 in ³	I _x =	15279.70 in ⁴	S _{bott.} =	923.36 in ³
C _{top} =	14.8271 in	A =	108.4375 in ²	C _{top} =	14.8271 in	A =	108.4375 in ²
C _{bottom} =	16.5479 in	r _x =	11.8705 in	C _{bottom} =	16.5479 in	r _x =	11.8705 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.5000	3.7500	16.8750	13.5000	8.7500	344.5313	358.0313	
	Vertical Leg	5.4375	1.1250	6.1172	0.2549	11.3750	703.5615	703.8164	
1 (Right)	Horizontal Leg	4.5000	21.2500	95.6250	13.5000	8.7500	344.5313	358.0313	
	Vertical Leg	5.4375	23.8750	129.8203	0.2549	11.3750	703.5615	703.8164	
2 (Left)	Horizontal Leg	4.5000	3.7500	16.8750	13.5000	8.7500	344.5313	358.0313	
	Vertical Leg	5.4375	1.1250	6.1172	0.2549	11.3750	703.5615	703.8164	
2 (Right)	Horizontal Leg	4.5000	21.2500	95.6250	13.5000	8.7500	344.5313	358.0313	
	Vertical Leg	5.4375	23.8750	129.8203	0.2549	11.3750	703.5615	703.8164	
3 (Left)	Plate	22.5000	0.3750	8.4375	1.0547	12.1250	3307.8516	3308.9063	
3 (Right)	Plate	22.5000	24.6250	554.0625	1.0547	12.1250	3307.8516	3308.9063	
4	Plate	14.6875	12.5000	183.5938	675.9310	0.0000	0.0000	675.9310	
5 (Left)	Perforated Plate	4.5000	3.7500	16.8750	13.5000	8.7500	344.5313	358.0313	
5 (Right)	Perforated Plate	4.5000	21.2500	95.6250	13.5000	8.7500	344.5313	358.0313	
Total		108.44		1355.47	760.06		11497.14	12257.20	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.5000 in	S _{right} =	980.58 in ³	x-bar =	12.5000 in	S _{right} =	980.58 in ³
I _y =	12257.20 in ⁴	S _{left} =	980.58 in ³	I _y =	12257.20 in ⁴	S _{left} =	980.58 in ³
C _{right} =	12.5000 in	A =	108.4375 in ²	C _{right} =	12.5000 in	A =	108.4375 in ²
C _{left} =	12.5000 in	r _y =	10.6318 in	C _{left} =	12.5000 in	r _y =	10.6318 in



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6875$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6875$ in

Web Plate 1:

$A_3 = b = 30.0000$ in
 $B_3 = t = 0.6875$ in

Top Cover Plate:

$A_4 = b = 23.5000$ in
 $B_4 = t = 0.5625$ in

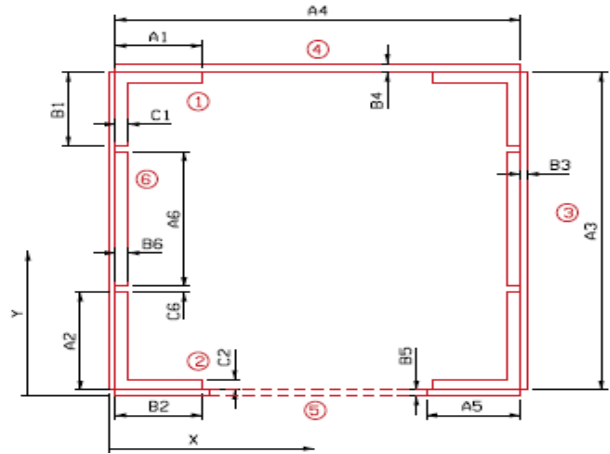
Web Plate 2:

$A_6 = b = 14.0000$ in
 $B_6 = t = 0.6875$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.6875$ in

$C_6 = \text{gap} = 0.0000$ in



Member U115-U116

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg		8.2500	30.3438	250.3359	0.3250	14.0203	1621.6862	1622.0112
	Vertical Leg		10.0547	26.3438	264.8782	44.8042	10.0203	1009.5494	1054.3537
2	Horizontal Leg		8.2500	1.0313	8.5078	0.3250	15.2922	1929.2810	1929.6059
	Vertical Leg		10.0547	5.0313	50.5876	44.8042	11.2922	1282.1176	1326.9218
3	Plate		41.2500	15.6875	647.1094	3093.7500	0.6360	16.6843	3110.4343
4	Plate		13.2188	30.9688	409.3682	0.3485	14.6453	2835.2102	2835.5588
5	Perforated Plate		8.2500	0.3438	2.8359	0.3250	15.9797	2106.6516	2106.9765
6	Side Plates		19.2500	15.6875	301.9844	314.4167	0.6360	7.7860	322.2027
Total			118.58		1935.61	3499.10		10808.97	14308.06
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.3235 in	S _{top} =	958.57 in ³	y-bar =	16.3235 in	S _{top} =	958.57 in ³
I _x =	14308.06 in ⁴	S _{bott.} =	876.53 in ³	I _x =	14308.06 in ⁴	S _{bott.} =	876.53 in ³
C _{top} =	14.9265 in	A =	118.5781 in ²	C _{top} =	14.9265 in	A =	118.5781 in ²
C _{bottom} =	16.3235 in	r _x =	10.9847 in	C _{bottom} =	16.3235 in	r _x =	10.9847 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	3.6875	15.2109	12.3750	8.7500	315.8203	328.1953	
	Vertical Leg	5.0273	1.0313	5.1844	0.1980	11.4063	654.0702	654.2682	
1 (Right)	Horizontal Leg	4.1250	21.1875	87.3984	12.3750	8.7500	315.8203	328.1953	
	Vertical Leg	5.0273	23.8438	119.8707	0.1980	11.4063	654.0702	654.2682	
2 (Left)	Horizontal Leg	4.1250	3.6875	15.2109	12.3750	8.7500	315.8203	328.1953	
	Vertical Leg	5.0273	1.0313	5.1844	0.1980	11.4063	654.0702	654.2682	
2 (Right)	Horizontal Leg	4.1250	21.1875	87.3984	12.3750	8.7500	315.8203	328.1953	
	Vertical Leg	5.0273	23.8438	119.8707	0.1980	11.4063	654.0702	654.2682	
3 (Left)	Plate	20.6250	0.3438	7.0898	0.8124	12.0938	3016.5875	3017.3999	
3 (Right)	Plate	20.6250	24.5313	505.9570	0.8124	12.0938	3016.5875	3017.3999	
4	Plate	13.2188	12.4375	164.4082	608.3379	0.0000	0.0000	608.3379	
5 (Left)	Perforated Plate	4.1250	3.6875	15.2109	12.3750	8.7500	315.8203	328.1953	
5 (Right)	Perforated Plate	4.1250	21.1875	87.3984	12.3750	8.7500	315.8203	328.1953	
6 (Left)	Plate	9.6250	1.0313	9.9258	0.3791	11.4063	1252.2369	1252.6160	
6 (Right)	Plate	9.6250	23.8438	229.4961	0.3791	11.4063	1252.2369	1252.6160	
Total		118.58		1474.82	685.76		13048.85	13734.61	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.4375 in	S _{right} =	1104.29 in ³	x-bar =	12.4375 in	S _{right} =	1104.29 in ³
I _y =	13734.61 in ⁴	S _{left} =	1104.29 in ³	I _y =	13734.61 in ⁴	S _{left} =	1104.29 in ³
C _{right} =	12.4375 in	A =	118.5781 in ²	C _{right} =	12.4375 in	A =	118.5781 in ²
C _{left} =	12.4375 in	r _y =	10.7623 in	C _{left} =	12.4375 in	r _y =	10.7623 in



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_l = 0.6875$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_l = 0.6875$ in

Top Cover Plate: PL

$A_6 = b = 23.5000$ in
 $B_6 = t = 0.5625$ in

Side Plate 1: PL

$A_3 = b = 14.0000$ in
 $B_3 = t = 0.6875$ in

Web Plate 1: PL

$A_4 = b = 30.0000$ in
 $B_4 = t = 0.6875$ in

Side Plate 2: PL

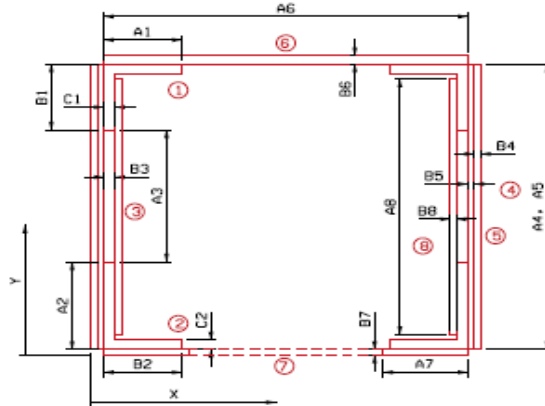
$A_8 = b = 27.5000$ in
 $B_8 = t = 0.3750$ in

Web Plate 2: PL

$A_5 = b = 0.0000$ in
 $B_5 = t = 0.0000$ in

Perforated Bottom Cover Plate: PL

$A_7 = b = 6.0000$ in
 $B_7 = t = 0.6875$ in



Member U116-U117

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	8.2500	30.3438	250.3359	0.3250	14.1145	1643.5580	1643.8830
	Vertical Leg	10.0547	26.3438	264.8782	44.8042	10.1145	1028.6261	1073.4303
2	Horizontal Leg	8.2500	1.0313	8.5078	0.3250	15.1980	1905.5781	1905.9030
	Vertical Leg	10.0547	5.0313	50.5876	44.8042	11.1980	1260.8093	1305.6135
3	Plate	19.2500	15.6875	301.9844	314.4167	0.5417	5.6497	320.0664
4	Plate	41.2500	15.6875	647.1094	3093.7500	0.5417	12.1065	3105.8565
5	Plate	0.0000	0.6875	0.0000	0.0000	15.5417	0.0000	0.0000
6	Plate	13.2188	30.9688	409.3682	0.3485	14.7395	2871.8118	2872.1604
7	Perforated Plate	8.2500	0.3438	2.8359	0.3250	15.8855	2081.8798	2082.2047
8	Plate	20.6250	15.6875	323.5547	1299.8047	0.5417	6.0533	1305.8579
Total		139.20		2259.16	4798.90		10816.07	15614.98
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.2292 in	S _{top} = 1039.56 in ³			y-bar = 16.2292 in	S _{top} = 1039.56 in ³		
I _x = 15614.98 in ⁴	S _{bottom} = 962.15 in ³			I _x = 15614.98 in ⁴	S _{bottom} = 962.15 in ³		
C _{top} = 15.0208 in	A = 139.2031 in ²			C _{top} = 15.0208 in	A = 139.2031 in ²		
C _{bottom} = 16.2292 in	r _x = 10.5912 in			C _{bottom} = 16.2292 in	r _x = 10.5912 in		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	3.6875	15.2109	12.3750	8.7500	315.8203	328.1953	
	Vertical Leg	5.0273	1.0313	5.1844	0.1980	11.4063	654.0702	654.2682	
1 (Right)	Horizontal Leg	4.1250	21.1875	87.3984	12.3750	8.7500	315.8203	328.1953	
	Vertical Leg	5.0273	23.8438	119.8707	0.1980	11.4063	654.0702	654.2682	
2 (Left)	Horizontal Leg	4.1250	3.6875	15.2109	12.3750	8.7500	315.8203	328.1953	
	Vertical Leg	5.0273	1.0313	5.1844	0.1980	11.4063	654.0702	654.2682	
2 (Right)	Horizontal Leg	4.1250	21.1875	87.3984	12.3750	8.7500	315.8203	328.1953	
	Vertical Leg	5.0273	23.8438	119.8707	0.1980	11.4063	654.0702	654.2682	
3 (Left)	Plate	9.6250	1.0313	9.9258	0.3791	11.4063	1252.2369	1252.6160	
3 (Right)	Plate	9.6250	23.8438	229.4961	0.3791	11.4063	1252.2369	1252.6160	
4 (Left)	Plate	20.6250	0.3438	7.0898	0.8124	12.0938	3016.5875	3017.3999	
4 (Right)	Plate	20.6250	24.5313	505.9570	0.8124	12.0938	3016.5875	3017.3999	
5 (Left)	Plate	0.0000	0.6875	0.0000	0.0000	11.7500	0.0000	0.0000	
5 (Right)	Plate	0.0000	24.1875	0.0000	0.0000	11.7500	0.0000	0.0000	
6	Plate	13.2188	12.4375	164.4082	608.3379	0.0000	0.0000	608.3379	
7 (Left)	Perforated Plate	4.1250	3.6875	15.2109	12.3750	8.7500	315.8203	328.1953	
7 (Right)	Perforated Plate	4.1250	21.1875	87.3984	12.3750	8.7500	315.8203	328.1953	
8 (Left)	Plate	10.3125	1.5625	16.1133	0.1208	10.8750	1219.6143	1219.7351	
8 (Right)	Plate	10.3125	23.3125	240.4102	0.1208	10.8750	1219.6143	1219.7351	
Total		139.20		1731.34	673.43		15488.08	16174.08	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 12.4375 in	S _{right} = 1300.43 in ³			x-bar = 12.4375 in	S _{right} = 1300.43 in ³		
I _y = 16174.08 in ⁴	S _{left} = 1300.43 in ³			I _y = 16174.08 in ⁴	S _{left} = 1300.43 in ³		
C _{right} = 12.4375 in	A = 139.2031 in ²			C _{right} = 12.4375 in	A = 139.2031 in ²		
C _{left} = 12.4375 in	r _y = 10.7792 in			C _{left} = 12.4375 in	r _y = 10.7792 in		



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_l = 0.6875$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_l = 0.6875$ in

Top Cover Plate: PL

$A_6 = b = 22.0000$ in
 $B_6 = t = 0.6250$ in

Side Plate 1: PL

$A_3 = b = 14.0000$ in
 $B_3 = t = 0.3750$ in

Web Plate 1: PL

$A_4 = b = 30.0000$ in
 $B_4 = t = 0.6875$ in

Side Plate 2: PL (No 2nd PL)

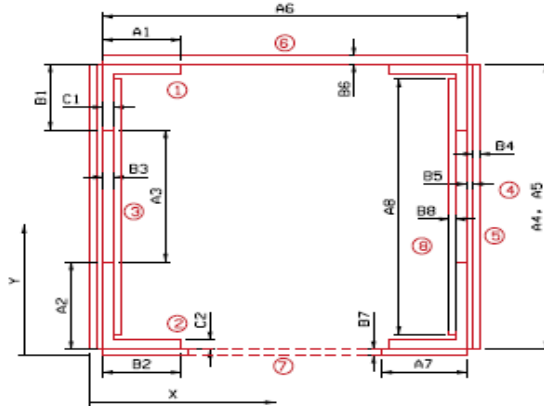
$A_8 = b = 0.0000$ in
 $B_8 = t = 0.0000$ in

Web Plate 2: PL

$A_5 = b = 30.0000$ in
 $B_5 = t = 0.6875$ in

Perforated Bottom Cover Plate: PL

$A_7 = b = 5.2500$ in
 $B_7 = t = 0.7500$ in



Member U117-U118

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg		8.2500	30.4063	250.8516	0.3250	14.0647	1631.9709	1632.2959
	Vertical Leg		10.0547	26.4063	265.5066	44.8042	10.0647	1018.5135	1063.3177
2	Horizontal Leg		8.2500	1.0938	9.0234	0.3250	15.2478	1918.0972	1918.4221
	Vertical Leg		10.0547	5.0938	51.2161	44.8042	11.2478	1272.0578	1316.8620
3	Plate		10.5000	15.7500	165.3750	171.5000	0.5916	3.6748	175.1748
4	Plate		41.2500	15.7500	649.6875	3093.7500	0.5916	14.4366	3108.1866
5	Plate		41.2500	15.7500	649.6875	3093.7500	0.5916	14.4366	3108.1866
6	Plate		13.7500	31.0625	427.1094	0.4476	14.7209	2979.6964	2980.1440
7	Perforated Plate		7.8750	0.3750	2.9531	0.3691	15.9666	2007.5895	2007.9586
8	Plate		0.0000	15.7500	0.0000	0.0000	0.5916	0.0000	0.0000
Total			151.23		2471.41	6450.08		10860.47	17310.55
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.3416 in	S _{top} = 1151.47 in ³			y-bar = 16.3416 in	S _{top} = 1151.47 in ³		
I _x = 17310.55 in ⁴	S _{bottom} = 1059.29 in ³			I _x = 17310.55 in ⁴	S _{bottom} = 1059.29 in ³		
C _{top} = 15.0334 in	A = 151.2344 in ²			C _{top} = 15.0334 in	A = 151.2344 in ²		
C _{bottom} = 16.3416 in	r _x = 10.6987 in			C _{bottom} = 16.3416 in	r _x = 10.6987 in		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y, gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	4.3750	18.0469	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.7188	8.6407	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	20.3750	84.0469	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	23.0313	115.7860	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	4.3750	18.0469	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.7188	8.6407	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	20.3750	84.0469	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	23.0313	115.7860	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	5.2500	1.5625	8.2031	0.0615	10.8125	613.7783	613.8398	
3 (Right)	Plate	5.2500	23.1875	121.7344	0.0615	10.8125	613.7783	613.8398	
4 (Left)	Plate	20.6250	0.3438	7.0898	0.8124	12.0313	2985.4889	2986.3013	
4 (Right)	Plate	20.6250	24.4063	503.3789	0.8124	12.0313	2985.4889	2986.3013	
5 (Left)	Plate	20.6250	1.0313	21.2695	0.8124	11.3438	2654.0387	2654.8511	
5 (Right)	Plate	20.6250	23.7188	489.1992	0.8124	11.3438	2654.0387	2654.8511	
6	Plate	13.7500	12.3750	170.1563	554.5833	0.0000	0.0000	554.5833	
7 (Left)	Perforated Plate	3.9375	4.0000	15.7500	9.0439	8.3750	276.1787	285.2227	
7 (Right)	Perforated Plate	3.9375	20.7500	81.7031	9.0439	8.3750	276.1787	285.2227	
8 (Left)	Plate	0.0000	1.7500	0.0000	0.0000	10.6250	0.0000	0.0000	
8 (Right)	Plate	0.0000	23.0000	0.0000	0.0000	10.6250	0.0000	0.0000	
Total		151.23		1871.53	613.76		16398.50	17024.84	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 12.3750 in	S _{right} = 1375.74 in ³			x-bar = 12.3750 in	S _{right} = 1375.74 in ³		
I _y = 17024.84 in ⁴	S _{left} = 1375.74 in ³			I _y = 17024.84 in ⁴	S _{left} = 1375.74 in ³		
C _{right} = 12.3750 in	A = 151.2344 in ²			C _{right} = 12.3750 in	A = 151.2344 in ²		
C _{left} = 12.3750 in	r _y = 10.6100 in			C _{left} = 12.3750 in	r _y = 10.6100 in		



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_l = 0.6875$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_l = 0.6875$ in

Top Cover Plate: PL

$A_6 = b = 22.0000$ in
 $B_6 = t = 0.6250$ in

Side Plate 1: PL

$A_3 = b = 14.0000$ in
 $B_3 = t = 0.3750$ in

Web Plate 1: PL

$A_4 = b = 30.0000$ in
 $B_4 = t = 0.6875$ in

Side Plate 2: PL (No 2nd PL)

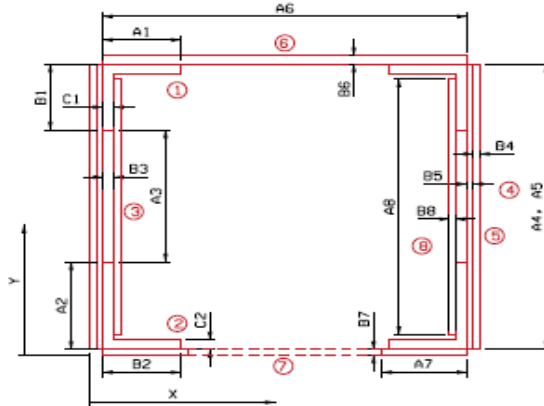
$A_8 = b = 0.0000$ in
 $B_8 = t = 0.0000$ in

Web Plate 2: PL

$A_5 = b = 30.0000$ in
 $B_5 = t = 0.6875$ in

Perforated Bottom Cover Plate: PL

$A_7 = b = 5.2500$ in
 $B_7 = t = 0.7500$ in



Member U118-U119

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	8.2500	30.4063	250.8516	0.3250	14.0647	1631.9709	1632.2959
	Vertical Leg	10.0547	26.4063	265.5066	44.8042	10.0647	1018.5135	1063.3177
2	Horizontal Leg	8.2500	1.0938	9.0234	0.3250	15.2478	1918.0972	1918.4221
	Vertical Leg	10.0547	5.0938	51.2161	44.8042	11.2478	1272.0578	1316.8620
3	Plate	10.5000	15.7500	165.3750	171.5000	0.5916	3.6748	175.1748
4	Plate	41.2500	15.7500	649.6875	3093.7500	0.5916	14.4366	3108.1866
5	Plate	41.2500	15.7500	649.6875	3093.7500	0.5916	14.4366	3108.1866
6	Plate	13.7500	31.0625	427.1094	0.4476	14.7209	2979.6964	2980.1440
7	Perforated Plate	7.8750	0.3750	2.9531	0.3691	15.9666	2007.5895	2007.9586
8	Plate	0.0000	15.7500	0.0000	0.0000	0.5916	0.0000	0.0000
Total		151.23		2471.41	6450.08		10860.47	17310.55
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.3416 in	S _{top} = 1151.47 in ³			y-bar = 16.3416 in	S _{top} = 1151.47 in ³		
I _x = 17310.55 in ⁴	S _{bottom} = 1059.29 in ³			I _x = 17310.55 in ⁴	S _{bottom} = 1059.29 in ³		
C _{top} = 15.0334 in	A = 151.2344 in ²			C _{top} = 15.0334 in	A = 151.2344 in ²		
C _{bottom} = 16.3416 in	r _x = 10.6987 in			C _{bottom} = 16.3416 in	r _x = 10.6987 in		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y, gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	4.3750	18.0469	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.7188	8.6407	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	20.3750	84.0469	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	23.0313	115.7860	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	4.3750	18.0469	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.7188	8.6407	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	20.3750	84.0469	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	23.0313	115.7860	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	5.2500	1.5625	8.2031	0.0615	10.8125	613.7783	613.8398	
3 (Right)	Plate	5.2500	23.1875	121.7344	0.0615	10.8125	613.7783	613.8398	
4 (Left)	Plate	20.6250	0.3438	7.0898	0.8124	12.0313	2985.4889	2986.3013	
4 (Right)	Plate	20.6250	24.4063	503.3789	0.8124	12.0313	2985.4889	2986.3013	
5 (Left)	Plate	20.6250	1.0313	21.2695	0.8124	11.3438	2654.0387	2654.8511	
5 (Right)	Plate	20.6250	23.7188	489.1992	0.8124	11.3438	2654.0387	2654.8511	
6	Plate	13.7500	12.3750	170.1563	554.5833	0.0000	0.0000	554.5833	
7 (Left)	Perforated Plate	3.9375	4.0000	15.7500	9.0439	8.3750	276.1787	285.2227	
7 (Right)	Perforated Plate	3.9375	20.7500	81.7031	9.0439	8.3750	276.1787	285.2227	
8 (Left)	Plate	0.0000	1.7500	0.0000	0.0000	10.6250	0.0000	0.0000	
8 (Right)	Plate	0.0000	23.0000	0.0000	0.0000	10.6250	0.0000	0.0000	
Total		151.23		1871.53	613.76		16398.50	17024.84	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 12.3750 in	S _{right} = 1375.74 in ³			x-bar = 12.3750 in	S _{right} = 1375.74 in ³		
I _y = 17024.84 in ⁴	S _{left} = 1375.74 in ³			I _y = 17024.84 in ⁴	S _{left} = 1375.74 in ³		
C _{right} = 12.3750 in	A = 151.2344 in ²			C _{right} = 12.3750 in	A = 151.2344 in ²		
C _{left} = 12.3750 in	r _y = 10.6100 in			C _{left} = 12.3750 in	r _y = 10.6100 in		

South Truss

Member U119-U120



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6875$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6875$ in

Web Plate 1:

$A_3 = b = 30.0000$ in
 $B_3 = t = 1.3750$ in

Top Cover Plate:

$A_4 = b = 22.0000$ in
 $B_4 = t = 0.6250$ in

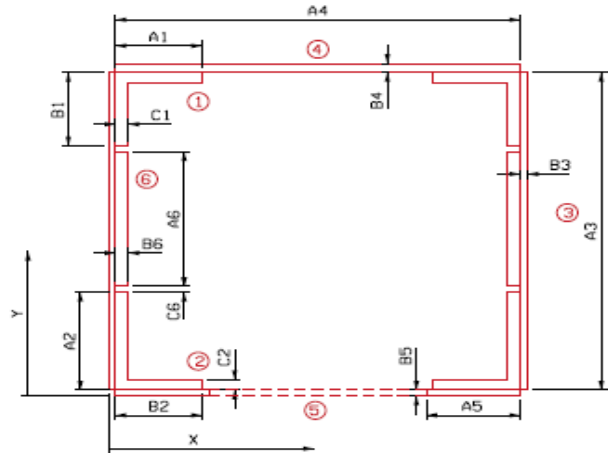
Web Plate 2:

$A_6 = b = 14.0000$ in
 $B_6 = t = 0.6875$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.7500$ in

$C_6 = \text{gap} = 0.0000$ in



Member U119-U120

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg		8.2500	30.4063	250.8516	0.3250	14.0970	1639.4883	1639.8132
	Vertical Leg		10.0547	26.4063	265.5066	44.8042	10.0970	1025.0726	1069.8769
2	Horizontal Leg		8.2500	1.0938	9.0234	0.3250	15.2155	1909.9654	1910.2904
	Vertical Leg		10.0547	5.0938	51.2161	44.8042	11.2155	1264.7499	1309.5541
3	Plate		82.5000	15.7500	1299.3750	6187.5000	0.5592	25.8013	6213.3013
4	Plate		13.7500	31.0625	427.1094	0.4476	14.7533	2992.8092	2993.2568
5	Perforated Plate		7.8750	0.3750	2.9531	0.3691	15.9342	1999.4611	1999.8302
6	Side Plates		19.2500	15.7500	303.1875	314.4167	0.5592	6.0203	320.4370
Total			159.98		2609.22	6592.99		10863.37	17456.36
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.3092 in	S _{top} =	1158.68 in ³	y-bar =	16.3092 in	S _{top} =	1158.68 in ³
I _x =	17456.36 in ⁴	S _{bott.} =	1070.34 in ³	I _x =	17456.36 in ⁴	S _{bott.} =	1070.34 in ³
C _{top} =	15.0658 in	A =	159.9844 in ²	C _{top} =	15.0658 in	A =	159.9844 in ²
C _{bottom} =	16.3092 in	r _x =	10.4457 in	C _{bottom} =	16.3092 in	r _x =	10.4457 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	4.3750	18.0469	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.7188	8.6407	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	20.3750	84.0469	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	23.0313	115.7860	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	4.3750	18.0469	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.7188	8.6407	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	20.3750	84.0469	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	23.0313	115.7860	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	41.2500	0.6875	28.3594	6.4990	11.6875	5634.6533	5641.1523	
3 (Right)	Plate	41.2500	24.0625	992.5781	6.4990	11.6875	5634.6533	5641.1523	
4	Plate	13.7500	12.3750	170.1563	554.5833	0.0000	0.0000	554.5833	
5 (Left)	Perforated Plate	3.9375	4.0000	15.7500	9.0439	8.3750	276.1787	285.2227	
5 (Right)	Perforated Plate	3.9375	20.7500	81.7031	9.0439	8.3750	276.1787	285.2227	
6 (Left)	Plate	9.6250	1.7188	16.5430	0.3791	10.6563	1092.9733	1093.3524	
6 (Right)	Plate	9.6250	23.0313	221.6758	0.3791	10.6563	1092.9733	1093.3524	
Total		159.98		1979.81	636.72		17347.14	17983.86	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3750 in	S _{right} =	1453.24 in ³	x-bar =	12.3750 in	S _{right} =	1453.24 in ³
I _y =	17983.86 in ⁴	S _{left} =	1453.24 in ³	I _y =	17983.86 in ⁴	S _{left} =	1453.24 in ³
C _{right} =	12.3750 in	A =	159.9844 in ²	C _{right} =	12.3750 in	A =	159.9844 in ²
C _{left} =	12.3750 in	r _y =	10.6024 in	C _{left} =	12.3750 in	r _y =	10.6024 in



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6875$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6875$ in

Web Plate 1:

$A_3 = b = 30.0000$ in
 $B_3 = t = 1.3750$ in

Top Cover Plate:

$A_4 = b = 22.0000$ in
 $B_4 = t = 0.6250$ in

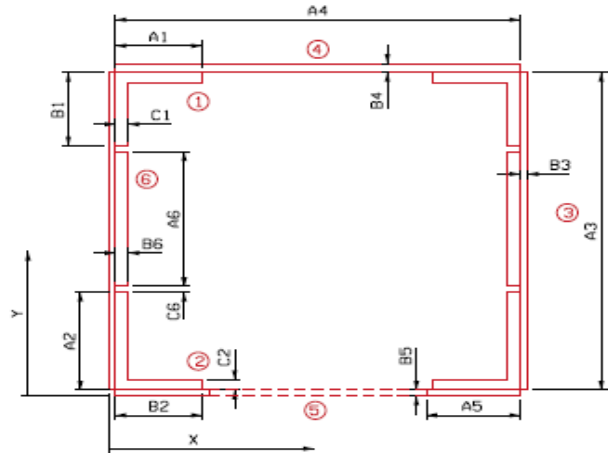
Web Plate 2:

$A_6 = b = 14.0000$ in
 $B_6 = t = 0.6875$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.7500$ in

$C_6 = \text{gap} = 0.0000$ in



Member U120-U121

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg		8.2500	30.4063	250.8516	0.3250	14.0970	1639.4883	1639.8132
	Vertical Leg		10.0547	26.4063	265.5066	44.8042	10.0970	1025.0726	1069.8769
2	Horizontal Leg		8.2500	1.0938	9.0234	0.3250	15.2155	1909.9654	1910.2904
	Vertical Leg		10.0547	5.0938	51.2161	44.8042	11.2155	1264.7499	1309.5541
3	Plate		82.5000	15.7500	1299.3750	6187.5000	0.5592	25.8013	6213.3013
4	Plate		13.7500	31.0625	427.1094	0.4476	14.7533	2992.8092	2993.2568
5	Perforated Plate		7.8750	0.3750	2.9531	0.3691	15.9342	1999.4611	1999.8302
6	Side Plates		19.2500	15.7500	303.1875	314.4167	0.5592	6.0203	320.4370
Total			159.98		2609.22	6592.99		10863.37	17456.36
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.3092 in	S _{top} =	1158.68 in ³	y-bar =	16.3092 in	S _{top} =	1158.68 in ³
I _x =	17456.36 in ⁴	S _{bott.} =	1070.34 in ³	I _x =	17456.36 in ⁴	S _{bott.} =	1070.34 in ³
C _{top} =	15.0658 in	A =	159.9844 in ²	C _{top} =	15.0658 in	A =	159.9844 in ²
C _{bottom} =	16.3092 in	r _x =	10.4457 in	C _{bottom} =	16.3092 in	r _x =	10.4457 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	4.3750	18.0469	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.7188	8.6407	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	20.3750	84.0469	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	23.0313	115.7860	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	4.3750	18.0469	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.7188	8.6407	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	20.3750	84.0469	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	23.0313	115.7860	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	41.2500	0.6875	28.3594	6.4990	11.6875	5634.6533	5641.1523	
3 (Right)	Plate	41.2500	24.0625	992.5781	6.4990	11.6875	5634.6533	5641.1523	
4	Plate	13.7500	12.3750	170.1563	554.5833	0.0000	0.0000	554.5833	
5 (Left)	Perforated Plate	3.9375	4.0000	15.7500	9.0439	8.3750	276.1787	285.2227	
5 (Right)	Perforated Plate	3.9375	20.7500	81.7031	9.0439	8.3750	276.1787	285.2227	
6 (Left)	Plate	9.6250	1.7188	16.5430	0.3791	10.6563	1092.9733	1093.3524	
6 (Right)	Plate	9.6250	23.0313	221.6758	0.3791	10.6563	1092.9733	1093.3524	
Total		159.98		1979.81	636.72		17347.14	17983.86	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3750 in	S _{right} =	1453.24 in ³	x-bar =	12.3750 in	S _{right} =	1453.24 in ³
I _y =	17983.86 in ⁴	S _{left} =	1453.24 in ³	I _y =	17983.86 in ⁴	S _{left} =	1453.24 in ³
C _{right} =	12.3750 in	A =	159.9844 in ²	C _{right} =	12.3750 in	A =	159.9844 in ²
C _{left} =	12.3750 in	r _y =	10.6024 in	C _{left} =	12.3750 in	r _y =	10.6024 in



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6875$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6875$ in

Web Plate 1:

$A_3 = b = 30.0000$ in
 $B_3 = t = 1.3125$ in

Top Cover Plate:

$A_4 = b = 22.0000$ in
 $B_4 = t = 0.6250$ in

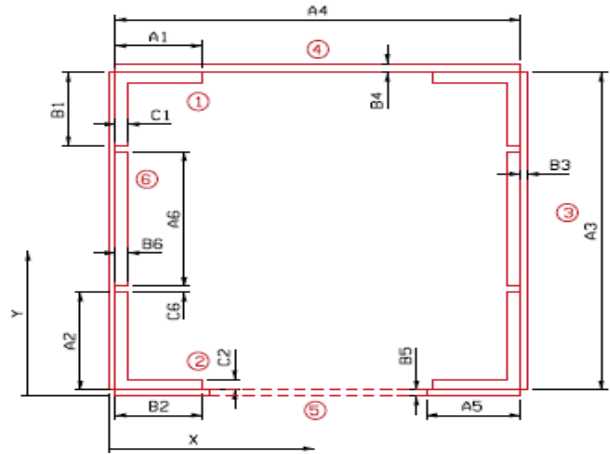
Web Plate 2:

$A_6 = b = 14.0000$ in
 $B_6 = t = 0.3750$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.7500$ in

$C_6 = \text{gap} = 0.0000$ in



Member U121-U122

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	8.2500	30.4063	250.8516	0.3250	14.0496	1628.4821	1628.8070
	Vertical Leg	10.0547	26.4063	265.5066	44.8042	10.0496	1015.4714	1060.2756
2	Horizontal Leg	8.2500	1.0938	9.0234	0.3250	15.2629	1921.8834	1922.2084
	Vertical Leg	10.0547	5.0938	51.2161	44.8042	11.2629	1275.4624	1320.2666
3	Plate	78.7500	15.7500	1240.3125	5906.2500	0.6066	28.9802	5935.2302
4	Plate	13.7500	31.0625	427.1094	0.4476	14.7059	2973.6101	2974.0577
5	Perforated Plate	7.8750	0.3750	2.9531	0.3691	15.9816	2011.3739	2011.7431
6	Side Plates	10.5000	15.7500	165.3750	171.5000	0.6066	3.8640	175.3640
Total		147.48		2412.35	6168.83		10859.13	17027.95
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar = 16.3566 in	S _{top} = 1133.81 in ³			y-bar = 16.3566 in	S _{top} = 1133.81 in ³		
I _x = 17027.95 in ⁴	S _{bott.} = 1041.04 in ³			I _x = 17027.95 in ⁴	S _{bott.} = 1041.04 in ³		
C _{top} = 15.0184 in	A = 147.4844 in ²			C _{top} = 15.0184 in	A = 147.4844 in ²		
C _{bottom} = 16.3566 in	r _x = 10.7450 in			C _{bottom} = 16.3566 in	r _x = 10.7450 in		

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	4.3125	17.7891	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.6563	8.3265	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	20.3125	83.7891	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.9688	115.4718	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	4.3125	17.7891	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.6563	8.3265	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	20.3125	83.7891	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.9688	115.4718	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	39.3750	0.6563	25.8398	5.6525	11.6563	5349.8090	5355.4614	
3 (Right)	Plate	39.3750	23.9688	943.7695	5.6525	11.6563	5349.8090	5355.4614	
4	Plate	13.7500	12.3125	169.2969	554.5833	0.0000	0.0000	554.5833	
5 (Left)	Perforated Plate	3.9375	3.9375	15.5039	9.0439	8.3750	276.1787	285.2227	
5 (Right)	Perforated Plate	3.9375	20.6875	81.4570	9.0439	8.3750	276.1787	285.2227	
6 (Left)	Plate	5.2500	1.5000	7.8750	0.0615	10.8125	613.7783	613.8398	
6 (Right)	Plate	5.2500	23.1250	121.4063	0.0615	10.8125	613.7783	613.8398	
Total		147.48		1815.90	634.39		15819.07	16453.46	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar = 12.3125 in	S _{right} = 1336.32 in ³			x-bar = 12.3125 in	S _{right} = 1336.32 in ³		
I _y = 16453.46 in ⁴	S _{left} = 1336.32 in ³			I _y = 16453.46 in ⁴	S _{left} = 1336.32 in ³		
C _{right} = 12.3125 in	A = 147.4844 in ²			C _{right} = 12.3125 in	A = 147.4844 in ²		
C _{left} = 12.3125 in	r _y = 10.5622 in			C _{left} = 12.3125 in	r _y = 10.5622 in		



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_1 = 0.6875$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_1 = 0.6875$ in

Top Cover Plate:

$A_4 = b = 22.0000$ in
 $B_4 = t = 0.6250$ in

Web Plate 1:

$A_3 = b = 30.0000$ in
 $B_3 = t = 1.0000$ in

Perforated Cover Plate

$A_5 = b = 5.2500$ in
 $B_5 = t = 0.7500$ in



Member U122-U123

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	8.2500	30.4063	250.8516	0.3250	13.8995	1593.8777	1594.2027
	Vertical Leg	10.0547	26.4063	265.5066	44.8042	9.8995	985.3690	1030.1732
2	Horizontal Leg	8.2500	1.0938	9.0234	0.3250	15.4130	1959.8637	1960.1886
	Vertical Leg	10.0547	5.0938	51.2161	44.8042	11.4130	1309.6792	1354.4834
3	Plate	60.0000	15.7500	945.0000	4500.0000	0.7567	34.3563	4534.3563
4	Plate	13.7500	31.0625	427.1094	0.4476	14.5558	2913.2279	2913.6755
5	Perforated Plate	7.8750	0.3750	2.9531	0.3691	16.1317	2049.3267	2049.6958
Total		118.23		1951.66	4591.08		10845.70	15436.78
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/20/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.5067 in	S _{top} =	1038.23 in ³	y-bar =	16.5067 in	S _{top} =	1038.23 in ³
I _x =	15436.78 in ⁴	S _{bott.} =	935.18 in ³	I _x =	15436.78 in ⁴	S _{bott.} =	935.18 in ³
C _{top} =	14.8683 in	A =	118.2344 in ²	C _{top} =	14.8683 in	A =	118.2344 in ²
C _{bottom} =	16.5067 in	r _x =	11.4263 in	C _{bottom} =	16.5067 in	r _x =	11.4263 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	4.1250	4.0000	16.5000	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.3438	6.7555	0.1980	10.6563	570.8834	571.0814	
1 (Right)	Horizontal Leg	4.1250	20.0000	82.5000	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.6563	113.9008	0.1980	10.6563	570.8834	571.0814	
2 (Left)	Horizontal Leg	4.1250	4.0000	16.5000	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	1.3438	6.7555	0.1980	10.6563	570.8834	571.0814	
2 (Right)	Horizontal Leg	4.1250	20.0000	82.5000	12.3750	8.0000	264.0000	276.3750	
	Vertical Leg	5.0273	22.6563	113.9008	0.1980	10.6563	570.8834	571.0814	
3 (Left)	Plate	30.0000	0.5000	15.0000	2.5000	11.5000	3967.5000	3970.0000	
3 (Right)	Plate	30.0000	23.5000	705.0000	2.5000	11.5000	3967.5000	3970.0000	
4	Plate	13.7500	12.0000	165.0000	554.5833	0.0000	0.0000	554.5833	
5 (Left)	Perforated Plate	3.9375	3.6250	14.2734	9.0439	8.3750	276.1787	285.2227	
5 (Right)	Perforated Plate	3.9375	20.3750	80.2266	9.0439	8.3750	276.1787	285.2227	
Total		118.23		1418.81	627.96		11826.89	12454.85	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.0000 in	S _{right} =	1037.90 in ³	x-bar =	12.0000 in	S _{right} =	1037.90 in ³
I _y =	12454.85 in ⁴	S _{left} =	1037.90 in ³	I _y =	12454.85 in ⁴	S _{left} =	1037.90 in ³
C _{right} =	12.0000 in	A =	118.2344 in ²	C _{right} =	12.0000 in	A =	118.2344 in ²
C _{left} =	12.0000 in	r _y =	10.2635 in	C _{left} =	12.0000 in	r _y =	10.2635 in



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.4375$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_f = 0.4375$ in

Top Cover Plate:

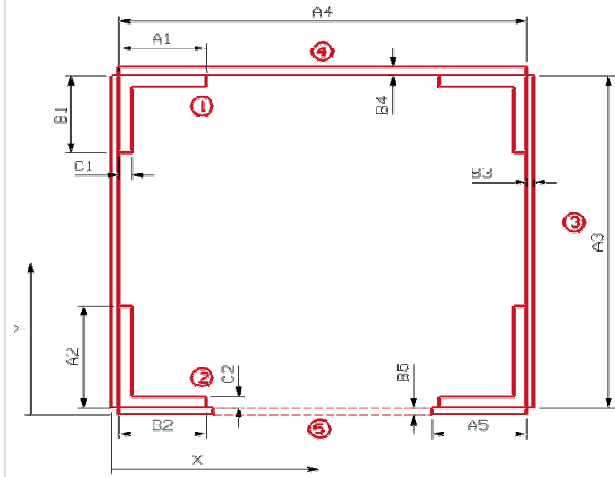
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 30.0000$ in
 $B_3 = t = 0.8125$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member U123-U124

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.2500	30.2813	158.9766	0.0837	14.2962	1073.0080	1073.0918
	Vertical Leg	6.6172	26.2813	173.9080	31.5372	10.2962	701.5050	733.0422
2	Horizontal Leg	5.2500	0.7188	3.7734	0.0837	15.2663	1223.5581	1223.6419
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	11.2663	839.9104	871.4476
3	Plate	48.7500	15.5000	755.6250	3656.2500	0.4850	11.4677	3667.7177
4	Plate	8.8125	30.6875	270.4336	0.1033	14.7025	1904.9383	1905.0416
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	15.7350	1485.5432	1485.6682
Total		87.30		1395.44	3719.72		7239.93	10959.65
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	15.9850 in	S _{top} =	736.04 in ³	y-bar =	15.9850 in	S _{top} =	736.04 in ³
I _x =	10959.65 in ⁴	S _{bott.} =	685.62 in ³	I _x =	10959.65 in ⁴	S _{bott.} =	685.62 in ³
C _{top} =	14.8900 in	A =	87.2969 in ²	C _{top} =	14.8900 in	A =	87.2969 in ²
C _{bottom} =	15.9850 in	r _x =	11.2047 in	C _{bottom} =	15.9850 in	r _x =	11.2047 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.8125	10.0078	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	1.0313	3.4120	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	21.3125	55.9453	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	24.0938	79.7164	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.8125	10.0078	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	1.0313	3.4120	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	21.3125	55.9453	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	24.0938	79.7164	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	24.3750	0.4063	9.9023	1.3409	12.1563	3602.0013	3603.3423	
3 (Right)	Plate	24.3750	24.7188	602.5195	1.3409	12.1563	3602.0013	3603.3423	
4	Plate	8.8125	12.5625	110.7070	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.8125	11.4375	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	21.3125	63.9375	9.0000	8.7500	229.6875	238.6875	
Total		87.30		1096.67	457.95		10227.06	10685.01	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.5625 in	S _{right} =	850.55 in ³	x-bar =	12.5625 in	S _{right} =	850.55 in ³
I _y =	10685.01 in ⁴	S _{left} =	850.55 in ³	I _y =	10685.01 in ⁴	S _{left} =	850.55 in ³
C _{right} =	12.5625 in	A =	87.2969 in ²	C _{right} =	12.5625 in	A =	87.2969 in ²
C _{left} =	12.5625 in	r _y =	11.0634 in	C _{left} =	12.5625 in	r _y =	11.0634 in



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 6.0000$ in
 $B_1 = l_h = 8.0000$ in
 $C_1 = t_f = 0.4375$ in

Bottom Angles:

$A_2 = l_h = 8.0000$ in
 $B_2 = l_w = 6.0000$ in
 $C_2 = t_f = 0.4375$ in

Top Cover Plate:

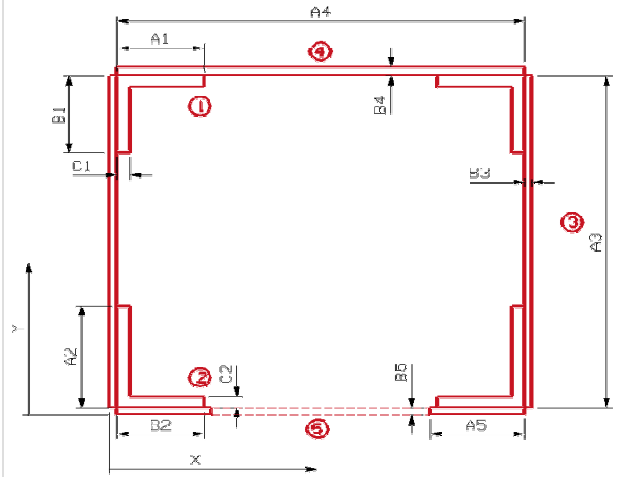
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 30.0000$ in
 $B_3 = t = 0.3750$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.5000$ in



Member U124-U125

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	5.2500	30.2813	158.9766	0.0837	14.0877	1041.9304	1042.0141
	Vertical Leg	6.6172	26.2813	173.9080	31.5372	10.0877	673.3745	704.9117
2	Horizontal Leg	5.2500	0.7188	3.7734	0.0837	15.4748	1257.2166	1257.3004
	Vertical Leg	6.6172	4.7188	31.2249	31.5372	11.4748	871.2939	902.8311
3	Plate	22.5000	15.5000	348.7500	1687.5000	0.6936	10.8232	1698.3232
4	Plate	8.8125	30.6875	270.4336	0.1033	14.4939	1851.2790	1851.3823
5	Perforated Plate	6.0000	0.2500	1.5000	0.1250	15.9436	1525.1832	1525.3082
Total		61.05		988.57	1750.97		7231.10	8982.07
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00	0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.1936 in	S _{top} =	611.80 in ³	y-bar =	16.1936 in	S _{top} =	611.80 in ³
I _x =	8982.07 in ⁴	S _{bott.} =	554.67 in ³	I _x =	8982.07 in ⁴	S _{bott.} =	554.67 in ³
C _{top} =	14.6814 in	A =	61.0469 in ²	C _{top} =	14.6814 in	A =	61.0469 in ²
C _{bottom} =	16.1936 in	r _x =	12.1299 in	C _{bottom} =	16.1936 in	r _x =	12.1299 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.6250	3.3750	8.8594	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.5938	1.9645	0.0528	11.5313	439.9428	439.9956	
1 (Right)	Horizontal Leg	2.6250	20.8750	54.7969	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.6563	78.2689	0.0528	11.5313	439.9428	439.9956	
2 (Left)	Horizontal Leg	2.6250	3.3750	8.8594	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	0.5938	1.9645	0.0528	11.5313	439.9428	439.9956	
2 (Right)	Horizontal Leg	2.6250	20.8750	54.7969	7.8750	8.7500	200.9766	208.8516	
	Vertical Leg	3.3086	23.6563	78.2689	0.0528	11.5313	439.9428	439.9956	
3 (Left)	Plate	11.2500	0.1875	2.1094	0.1318	11.9375	1603.1689	1603.3008	
3 (Right)	Plate	11.2500	24.0625	270.7031	0.1318	11.9375	1603.1689	1603.3008	
4	Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	3.0000	3.3750	10.1250	9.0000	8.7500	229.6875	238.6875	
5 (Right)	Perforated Plate	3.0000	20.8750	62.6250	9.0000	8.7500	229.6875	238.6875	
Total		61.05		740.19	455.53		6229.39	6684.92	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	551.33 in ³	x-bar =	12.1250 in	S _{right} =	551.33 in ³
I _y =	6684.92 in ⁴	S _{left} =	551.33 in ³	I _y =	6684.92 in ⁴	S _{left} =	551.33 in ³
C _{right} =	12.1250 in	A =	61.0469 in ²	C _{right} =	12.1250 in	A =	61.0469 in ²
C _{left} =	12.1250 in	r _y =	10.4645 in	C _{left} =	12.1250 in	r _y =	10.4645 in



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_w = 4.0000$ in
 $B_1 = l_h = 4.0000$ in
 $C_1 = t_1 = 0.3125$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_1 = 0.3125$ in

Top Cover Plate:

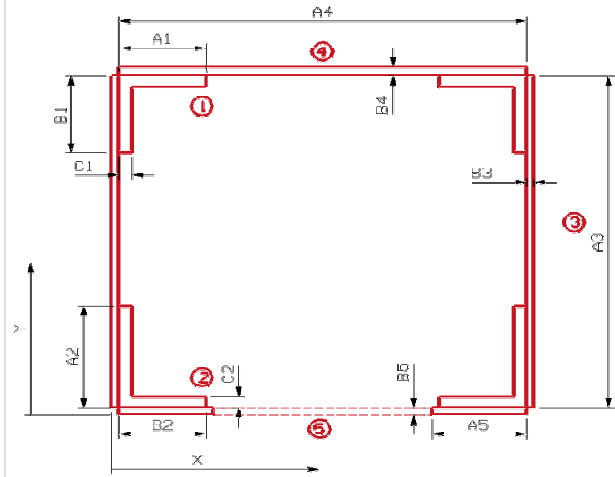
$A_4 = b = 23.5000$ in
 $B_4 = t = 0.3750$ in

Web Plate 1:

$A_3 = b = 30.0000$ in
 $B_3 = t = 0.5000$ in

Perforated Cover Plate

$A_5 = b = 6.0000$ in
 $B_5 = t = 0.3750$ in



Member U125-U126

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.5000	30.2188	75.5469	0.0203	13.6062	462.8183	462.8387
	Vertical Leg	2.3047	28.2188	65.0354	2.6115	11.6062	310.4477	313.0592
2	Horizontal Leg	2.5000	0.5313	1.3281	0.0203	16.0813	646.5245	646.5449
	Vertical Leg	2.3047	2.5313	5.8337	2.6115	14.0813	456.9836	459.5951
3	Plate	30.0000	15.3750	461.2500	2250.0000	1.2376	45.9496	2295.9496
4	Plate	8.8125	30.5625	269.3320	0.1033	13.9499	1714.9100	1715.0133
5	Perforated Plate	4.5000	0.1875	0.8438	0.0527	16.4251	1214.0275	1214.0803
Total		52.92		879.17	2255.42		4851.66	7107.08
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	16.6126 in	S _{top} =	502.71 in ³	y-bar =	16.6126 in	S _{top} =	502.71 in ³
I _x =	7107.08 in ⁴	S _{bott.} =	427.81 in ³	I _x =	7107.08 in ⁴	S _{bott.} =	427.81 in ³
C _{top} =	14.1374 in	A =	52.9219 in ²	C _{top} =	14.1374 in	A =	52.9219 in ²
C _{bottom} =	16.6126 in	r _x =	11.5885 in	C _{bottom} =	16.6126 in	r _x =	11.5885 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.2500	2.5000	3.1250	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.6563	0.7562	0.0094	11.5938	154.8923	154.9017	
1 (Right)	Horizontal Leg	1.2500	22.0000	27.5000	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.8438	27.4762	0.0094	11.5938	154.8923	154.9017	
2 (Left)	Horizontal Leg	1.2500	2.5000	3.1250	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	0.6563	0.7562	0.0094	11.5938	154.8923	154.9017	
2 (Right)	Horizontal Leg	1.2500	22.0000	27.5000	1.6667	9.7500	118.8281	120.4948	
	Vertical Leg	1.1523	23.8438	27.4762	0.0094	11.5938	154.8923	154.9017	
3 (Left)	Plate	15.0000	0.2500	3.7500	0.3125	12.0000	2160.0000	2160.3125	
3 (Right)	Plate	15.0000	24.2500	363.7500	0.3125	12.0000	2160.0000	2160.3125	
4	Plate	8.8125	12.2500	107.9531	405.5586	0.0000	0.0000	405.5586	
5 (Left)	Perforated Plate	2.2500	3.5000	7.8750	6.7500	8.7500	172.2656	179.0156	
5 (Right)	Perforated Plate	2.2500	21.0000	47.2500	6.7500	8.7500	172.2656	179.0156	
Total		52.92		648.29	426.39		5759.41	6185.80	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2500 in	S _{right} =	504.96 in ³	x-bar =	12.2500 in	S _{right} =	504.96 in ³
I _y =	6185.80 in ⁴	S _{left} =	504.96 in ³	I _y =	6185.80 in ⁴	S _{left} =	504.96 in ³
C _{right} =	12.2500 in	A =	52.9219 in ²	C _{right} =	12.2500 in	A =	52.9219 in ²
C _{left} =	12.2500 in	r _y =	10.8114 in	C _{left} =	12.2500 in	r _y =	10.8114 in



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/26/2012

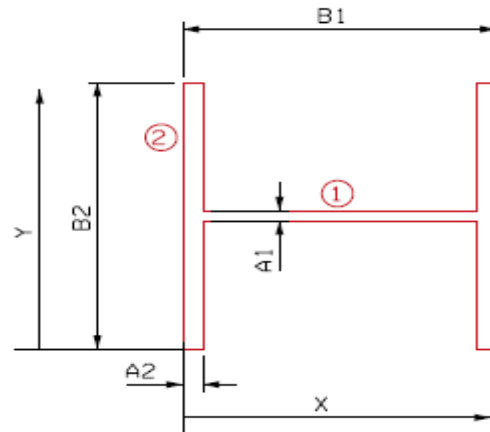
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam WF14x 176

- $A_1 = t_w = 0.8200$ in
- $A_2 = t_f = 1.3130$ in
- $B_1 = d = 15.2500$ in
- $B_2 = b_f = 15.6400$ in



Member U127-L128

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		10.3517	7.8200	80.9501	0.5800	0.0000	0.0000	0.5800
2	Flange Plates		41.0706	7.8200	321.1724	837.1894	0.0000	0.0000	837.1894
Total			51.42		402.12	837.77		0.00	837.77
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	7.8200	in	S _{top} = 107.13 in ³	y-bar =	7.8200	in	S _{top} = 107.13 in ³
I _x =	837.77	in ⁴	S _{bottom} = 107.13 in ³	I _x =	837.77	in ⁴	S _{bottom} = 107.13 in ³
c _{top} =	7.8200	in	A = 51.4223 in ²	c _{top} =	7.8200	in	A = 51.4223 in ²
c _{bottom} =	7.8200	in	r _x = 4.0363 in	c _{bottom} =	7.8200	in	r _x = 4.0363 in



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.3517	7.6250	78.9316	137.4749	0.0000	0.0000	137.4749
2	Left Flange		20.5353	0.6565	13.4814	2.9502	6.9685	997.1950	1000.1452
	Right Flange		20.5353	14.5935	299.6822	2.9502	6.9685	997.1950	1000.1452
Total			51.42		392.10	143.38		1994.39	2137.77
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	7.6250	in	S _{right} = 280.36 in ³	x-bar =	7.6250	in	S _{right} = 280.36 in ³
I _y =	2137.77	in ⁴	S _{left} = 280.36 in ³	I _y =	2137.77	in ⁴	S _{left} = 280.36 in ³
C _{right} =	7.6250	in	A = 51.4223 in ²	C _{right} =	7.6250	in	A = 51.4223 in ²
C _{left} =	7.6250	in	r _y = 6.4477 in	C _{left} =	7.6250	in	r _y = 6.4477 in



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/26/2012

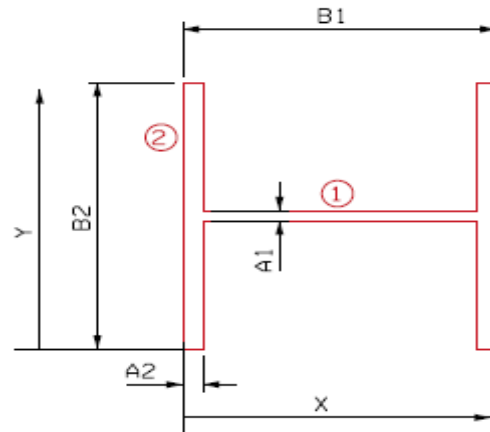
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam WF14x 176

- $A_1 = t_w = 0.8200$ in
- $A_2 = t_f = 1.3130$ in
- $B_1 = d = 15.2500$ in
- $B_2 = b_f = 15.6400$ in



Member U128-L129

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		10.3517	7.8200	80.9501	0.5800	0.0000	0.0000	0.5800
2	Flange Plates		41.0706	7.8200	321.1724	837.1894	0.0000	0.0000	837.1894
Total			51.42		402.12	837.77		0.00	837.77
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	7.8200	in	S _{top} = 107.13 in ³	y-bar =	7.8200	in	S _{top} = 107.13 in ³
I _x =	837.77	in ⁴	S _{bottom} = 107.13 in ³	I _x =	837.77	in ⁴	S _{bottom} = 107.13 in ³
c _{top} =	7.8200	in	A = 51.4223 in ²	c _{top} =	7.8200	in	A = 51.4223 in ²
c _{bottom} =	7.8200	in	r _x = 4.0363 in	c _{bottom} =	7.8200	in	r _x = 4.0363 in



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.3517	7.6250	78.9316	137.4749	0.0000	0.0000	137.4749
2	Left Flange		20.5353	0.6565	13.4814	2.9502	6.9685	997.1950	1000.1452
	Right Flange		20.5353	14.5935	299.6822	2.9502	6.9685	997.1950	1000.1452
Total			51.42		392.10	143.38		1994.39	2137.77
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	7.6250	in	S _{right} =	280.36	in ³	x-bar =	7.6250	in	S _{right} =	280.36	in ³
I _y =	2137.77	in ⁴	S _{left} =	280.36	in ³	I _y =	2137.77	in ⁴	S _{left} =	280.36	in ³
C _{right} =	7.6250	in	A =	51.4223	in ²	C _{right} =	7.6250	in	A =	51.4223	in ²
C _{left} =	7.6250	in	r _y =	6.4477	in	C _{left} =	7.6250	in	r _y =	6.4477	in



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/26/2012

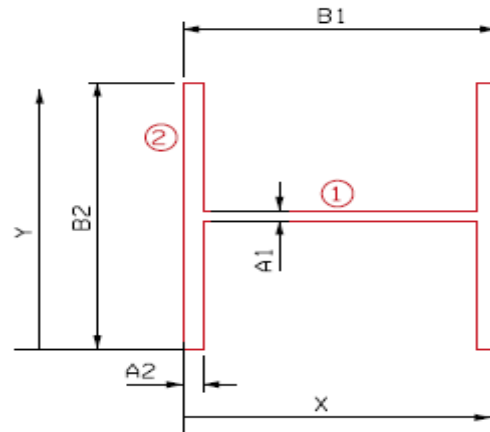
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam WF14x 237

- $A_1 = t_w = 1.0900$ in
- $A_2 = t_f = 1.7480$ in
- $B_1 = d = 16.1200$ in
- $B_2 = b_f = 15.9100$ in



Member U129-L130

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		13.7602	7.9550	109.4621	1.3624	0.0000	0.0000	1.3624
2	Flange Plates		55.6214	7.9550	442.4679	1173.2774	0.0000	0.0000	1173.2774
Total			69.38		551.93	1174.64		0.00	1174.64
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	7.9550	in	$S_{top} = 147.66$	in ³	y-bar =	7.9550	in	$S_{top} = 147.66$	in ³		
$I_x =$	1174.64	in ⁴	$S_{bott.} = 147.66$	in ³	$I_x =$	1174.64	in ⁴	$S_{bott.} = 147.66$	in ³		
$c_{top} =$	7.9550	in	A =	69.3815	in ²	$c_{top} =$	7.9550	in	A =	69.3815	in ²
$c_{bottom} =$	7.9550	in	$r_x =$	4.1146	in	$c_{bottom} =$	7.9550	in	$r_x =$	4.1146	in



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		13.7602	8.0600	110.9069	182.7411	0.0000	0.0000	182.7411
2	Left Flange		27.8107	0.8740	24.3065	7.0813	7.1860	1436.1045	1443.1858
	Right Flange		27.8107	15.2460	424.0016	7.0813	7.1860	1436.1045	1443.1858
Total			69.38		559.22	196.90		2872.21	3069.11
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	8.0600	in	S _{right} =	380.78	in ³	x-bar =	8.0600	in	S _{right} =	380.78	in ³
I _y =	3069.11	in ⁴	S _{left} =	380.78	in ³	I _y =	3069.11	in ⁴	S _{left} =	380.78	in ³
C _{right} =	8.0600	in	A =	69.3815	in ²	C _{right} =	8.0600	in	A =	69.3815	in ²
C _{left} =	8.0600	in	r _y =	6.6510	in	C _{left} =	8.0600	in	r _y =	6.6510	in



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/26/2012

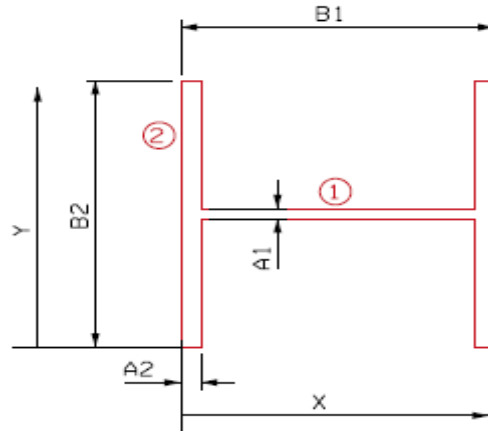
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam WF14x 237

- $A_1 = t_w = 1.0900$ in
- $A_2 = t_f = 1.7480$ in
- $B_1 = d = 16.1200$ in
- $B_2 = b_f = 15.9100$ in



Member U130-L131

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		13.7602	7.9550	109.4621	1.3624	0.0000	0.0000	1.3624
2	Flange Plates		55.6214	7.9550	442.4679	1173.2774	0.0000	0.0000	1173.2774
Total			69.38		551.93	1174.64		0.00	1174.64
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	7.9550	in	$S_{top} = 147.66$	in^3	y-bar =	7.9550	in	$S_{top} = 147.66$	in^3		
$I_x =$	1174.64	in^4	$S_{bott.} = 147.66$	in^3	$I_x =$	1174.64	in^4	$S_{bott.} = 147.66$	in^3		
$c_{top} =$	7.9550	in	A =	69.3815	in^2	$c_{top} =$	7.9550	in	A =	69.3815	in^2
$c_{bottom} =$	7.9550	in	$r_x =$	4.1146	in	$c_{bottom} =$	7.9550	in	$r_x =$	4.1146	in



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		13.7602	8.0600	110.9069	182.7411	0.0000	0.0000	182.7411
2	Left Flange		27.8107	0.8740	24.3065	7.0813	7.1860	1436.1045	1443.1858
	Right Flange		27.8107	15.2460	424.0016	7.0813	7.1860	1436.1045	1443.1858
Total			69.38		559.22	196.90		2872.21	3069.11
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	8.0600	in	S _{right} =	380.78	in ³	x-bar =	8.0600	in	S _{right} =	380.78	in ³
I _y =	3069.11	in ⁴	S _{left} =	380.78	in ³	I _y =	3069.11	in ⁴	S _{left} =	380.78	in ³
C _{right} =	8.0600	in	A =	69.3815	in ²	C _{right} =	8.0600	in	A =	69.3815	in ²
C _{left} =	8.0600	in	r _y =	6.6510	in	C _{left} =	8.0600	in	r _y =	6.6510	in



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/26/2012

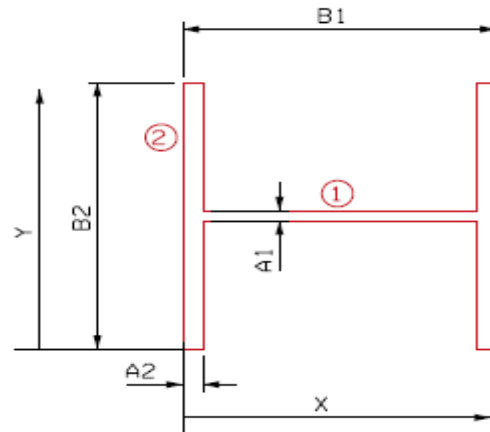
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam WF14x 237

- $A_1 = t_w = 1.0900$ in
- $A_2 = t_f = 1.7480$ in
- $B_1 = d = 16.1200$ in
- $B_2 = b_f = 15.9100$ in



Member U131-L132

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		13.7602	7.9550	109.4621	1.3624	0.0000	0.0000	1.3624
2	Flange Plates		55.6214	7.9550	442.4679	1173.2774	0.0000	0.0000	1173.2774
Total			69.38		551.93	1174.64		0.00	1174.64
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	7.9550	in	$S_{top} = 147.66$	in^3	y-bar =	7.9550	in	$S_{top} = 147.66$	in^3		
$I_x =$	1174.64	in^4	$S_{bott.} = 147.66$	in^3	$I_x =$	1174.64	in^4	$S_{bott.} = 147.66$	in^3		
$c_{top} =$	7.9550	in	A =	69.3815	in^2	$c_{top} =$	7.9550	in	A =	69.3815	in^2
$c_{bottom} =$	7.9550	in	$r_x =$	4.1146	in	$c_{bottom} =$	7.9550	in	$r_x =$	4.1146	in



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		13.7602	8.0600	110.9069	182.7411	0.0000	0.0000	182.7411
2	Left Flange		27.8107	0.8740	24.3065	7.0813	7.1860	1436.1045	1443.1858
	Right Flange		27.8107	15.2460	424.0016	7.0813	7.1860	1436.1045	1443.1858
Total			69.38		559.22	196.90		2872.21	3069.11
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	8.0600	in	S _{right} =	380.78	in ³	x-bar =	8.0600	in	S _{right} =	380.78	in ³
I _y =	3069.11	in ⁴	S _{left} =	380.78	in ³	I _y =	3069.11	in ⁴	S _{left} =	380.78	in ³
C _{right} =	8.0600	in	A =	69.3815	in ²	C _{right} =	8.0600	in	A =	69.3815	in ²
C _{left} =	8.0600	in	r _y =	6.6510	in	C _{left} =	8.0600	in	r _y =	6.6510	in



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam WF14x 237

- $A_1 = t_w = 1.0900$ in
- $A_2 = t_f = 1.7480$ in
- $B_1 = d = 16.1200$ in
- $B_2 = b_f = 15.9100$ in



Member U132-L133

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		13.7602	7.9550	109.4621	1.3624	0.0000	0.0000	1.3624
2	Flange Plates		55.6214	7.9550	442.4679	1173.2774	0.0000	0.0000	1173.2774
Total			69.38		551.93	1174.64		0.00	1174.64
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	7.9550	in	$S_{top} = 147.66$ in ³	y-bar =	7.9550	in	$S_{top} = 147.66$ in ³
$I_x =$	1174.64	in ⁴	$S_{bott.} = 147.66$ in ³	$I_x =$	1174.64	in ⁴	$S_{bott.} = 147.66$ in ³
$c_{top} =$	7.9550	in	$A = 69.3815$ in ²	$c_{top} =$	7.9550	in	$A = 69.3815$ in ²
$c_{bottom} =$	7.9550	in	$r_x = 4.1146$ in	$c_{bottom} =$	7.9550	in	$r_x = 4.1146$ in



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		13.7602	8.0600	110.9069	182.7411	0.0000	0.0000	182.7411
2	Left Flange		27.8107	0.8740	24.3065	7.0813	7.1860	1436.1045	1443.1858
	Right Flange		27.8107	15.2460	424.0016	7.0813	7.1860	1436.1045	1443.1858
Total			69.38		559.22	196.90		2872.21	3069.11
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	8.0600	in	S _{right} =	380.78	in ³	x-bar =	8.0600	in	S _{right} =	380.78	in ³
I _y =	3069.11	in ⁴	S _{left} =	380.78	in ³	I _y =	3069.11	in ⁴	S _{left} =	380.78	in ³
C _{right} =	8.0600	in	A =	69.3815	in ²	C _{right} =	8.0600	in	A =	69.3815	in ²
C _{left} =	8.0600	in	r _y =	6.6510	in	C _{left} =	8.0600	in	r _y =	6.6510	in



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/26/2012

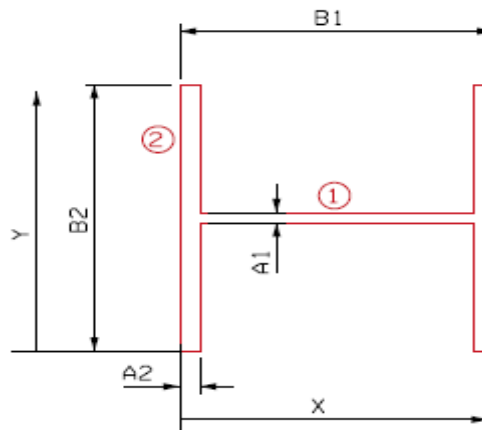
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam WF14x 176

- $A_1 = t_w = 0.8200$ in
- $A_2 = t_f = 1.3130$ in
- $B_1 = d = 15.2500$ in
- $B_2 = b_f = 15.6400$ in



Member U133-L134

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		10.3517	7.8200	80.9501	0.5800	0.0000	0.0000	0.5800
2	Flange Plates		41.0706	7.8200	321.1724	837.1894	0.0000	0.0000	837.1894
Total			51.42		402.12	837.77		0.00	837.77
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	7.8200	in	S _{top} = 107.13 in ³	y-bar =	7.8200	in	S _{top} = 107.13 in ³
I _x =	837.77	in ⁴	S _{bottom} = 107.13 in ³	I _x =	837.77	in ⁴	S _{bottom} = 107.13 in ³
c _{top} =	7.8200	in	A = 51.4223 in ²	c _{top} =	7.8200	in	A = 51.4223 in ²
c _{bottom} =	7.8200	in	r _x = 4.0363 in	c _{bottom} =	7.8200	in	r _x = 4.0363 in



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.3517	7.6250	78.9316	137.4749	0.0000	0.0000	137.4749
2	Left Flange		20.5353	0.6565	13.4814	2.9502	6.9685	997.1950	1000.1452
	Right Flange		20.5353	14.5935	299.6822	2.9502	6.9685	997.1950	1000.1452
Total			51.42		392.10	143.38		1994.39	2137.77
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	7.6250	in	S _{right} =	280.36	in ³	x-bar =	7.6250	in	S _{right} =	280.36	in ³
I _y =	2137.77	in ⁴	S _{left} =	280.36	in ³	I _y =	2137.77	in ⁴	S _{left} =	280.36	in ³
C _{right} =	7.6250	in	A =	51.4223	in ²	C _{right} =	7.6250	in	A =	51.4223	in ²
C _{left} =	7.6250	in	r _y =	6.4477	in	C _{left} =	7.6250	in	r _y =	6.4477	in



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam WF14x 176

- $A_1 = t_w = 0.8200$ in
- $A_2 = t_f = 1.3130$ in
- $B_1 = d = 15.2500$ in
- $B_2 = b_f = 15.6400$ in



Member U134-L135

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		10.3517	7.8200	80.9501	0.5800	0.0000	0.0000	0.5800
2	Flange Plates		41.0706	7.8200	321.1724	837.1894	0.0000	0.0000	837.1894
Total			51.42		402.12	837.77		0.00	837.77
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	7.8200	in	S _{top} = 107.13 in ³	y-bar =	7.8200	in	S _{top} = 107.13 in ³
I _x =	837.77	in ⁴	S _{bottom} = 107.13 in ³	I _x =	837.77	in ⁴	S _{bottom} = 107.13 in ³
c _{top} =	7.8200	in	A = 51.4223 in ²	c _{top} =	7.8200	in	A = 51.4223 in ²
c _{bottom} =	7.8200	in	r _x = 4.0363 in	c _{bottom} =	7.8200	in	r _x = 4.0363 in



Made By SFH
Checked By DMP

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.3517	7.6250	78.9316	137.4749	0.0000	0.0000	137.4749
2	Left Flange		20.5353	0.6565	13.4814	2.9502	6.9685	997.1950	1000.1452
	Right Flange		20.5353	14.5935	299.6822	2.9502	6.9685	997.1950	1000.1452
Total			51.42		392.10	143.38		1994.39	2137.77
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	7.6250	in	S _{right} =	280.36	in ³	x-bar =	7.6250	in	S _{right} =	280.36	in ³
I _y =	2137.77	in ⁴	S _{left} =	280.36	in ³	I _y =	2137.77	in ⁴	S _{left} =	280.36	in ³
C _{right} =	7.6250	in	A =	51.4223	in ²	C _{right} =	7.6250	in	A =	51.4223	in ²
C _{left} =	7.6250	in	r _y =	6.4477	in	C _{left} =	7.6250	in	r _y =	6.4477	in

South Truss

Member U0-L0



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

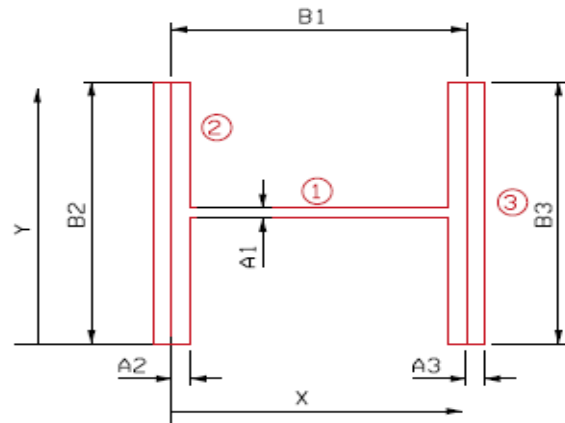
Element Dimensions (without Section Losses):

Rolled Beam CB24x130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.3125$ in
- $B_3 = b = 14.0000$ in



Member U0-L0

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		8.7500	7.0000	61.2500	142.9167	0.0000	0.0000	142.9167
Total			46.53		325.72	551.20		0.00	551.20
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	7.0000	in	$S_{top} = 78.74$	in ³	y-bar =	7.0000	in	$S_{top} = 78.74$	in ³		
$I_x =$	551.20	in ⁴	$S_{bott.} = 78.74$	in ³	$I_x =$	551.20	in ⁴	$S_{bott.} = 78.74$	in ³		
$c_{top} =$	7.0000	in	A =	46.5316	in ²	$c_{top} =$	7.0000	in	A =	46.5316	in ²
$c_{bottom} =$	7.0000	in	$r_x =$	3.4418	in	$c_{bottom} =$	7.0000	in	$r_x =$	3.4418	in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y, gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	12.8056	12.4375	159.2699	538.6056	0.0000	0.0000	538.6056	
2	Left Flange	12.4880	0.7585	9.4721	0.8280	11.6790	1703.3512	1704.1792	
	Right Flange	12.4880	24.1165	301.1669	0.8280	11.6790	1703.3512	1704.1792	
3	Left Plate	4.3750	0.1563	0.6836	0.0356	12.2813	659.8773	659.9129	
	Right Plate	4.3750	24.7188	108.1445	0.0356	12.2813	659.8773	659.9129	
Total		46.53		578.74	540.33		4726.46	5266.79	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.4375	in	S _{right} = 423.46 in ³	x-bar =	12.4375	in	S _{right} = 423.46 in ³
I _y =	5266.79	n ⁴	S _{left} = 423.46 in ³	I _y =	5266.79	n ⁴	S _{left} = 423.46 in ³
C _{right} =	12.4375	in	A = 46.5316 in ²	C _{right} =	12.4375	in	A = 46.5316 in ²
C _{left} =	12.4375	in	r _y = 10.6390 in	C _{left} =	12.4375	in	r _y = 10.6390 in

South Truss

Member U1-L1



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

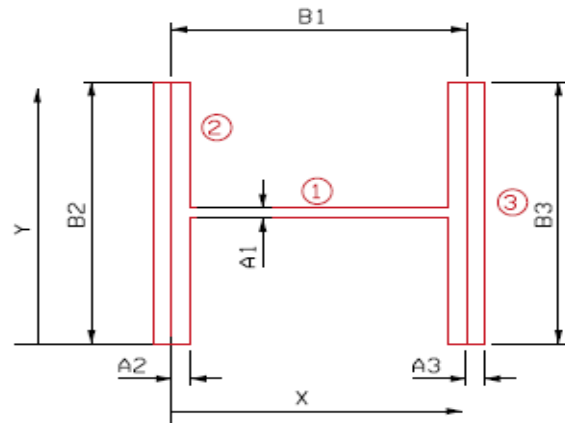
Element Dimensions (without Section Losses):

Rolled Beam CB24x130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.5625$ in
- $B_3 = b = 14.0000$ in



Member U1-L1

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		15.7500	7.0000	110.2500	257.2500	0.0000	0.0000	257.2500
Total			53.53		374.72	665.54		0.00	665.54
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	7.0000	in	S _{top} = 95.08 in ³	y-bar =	7.0000	in	S _{top} = 95.08 in ³
I _x =	665.54	in ⁴	S _{bott.} = 95.08 in ³	I _x =	665.54	in ⁴	S _{bott.} = 95.08 in ³
c _{top} =	7.0000	in	A = 53.5316 in ²	c _{top} =	7.0000	in	A = 53.5316 in ²
c _{bottom} =	7.0000	in	r _x = 3.5260 in	c _{bottom} =	7.0000	in	r _x = 3.5260 in



Made By NRF
 Checked By SFH

Date 1/19/2012
 Date 1/25/2012

Job No. P402110046
 Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.6875	162.4713	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	1.0085	12.5941	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	24.3665	304.2889	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		7.8750	0.2813	2.2148	0.2076	12.4063	1212.0809	1212.2886
	Right Plate		7.8750	25.0938	197.6133	0.2076	12.4063	1212.0809	1212.2886
Total			53.53		679.18	540.68		5830.86	6371.54
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.6875	in	S _{right} = 502.19 in ³	x-bar =	12.6875	in	S _{right} = 502.19 in ³
I _y =	6371.54	n ⁴	S _{left} = 502.19 in ³	I _y =	6371.54	n ⁴	S _{left} = 502.19 in ³
C _{right} =	12.6875	in	A = 53.5316 in ²	C _{right} =	12.6875	in	A = 53.5316 in ²
C _{left} =	12.6875	in	r _y = 10.9098 in	C _{left} =	12.6875	in	r _y = 10.9098 in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

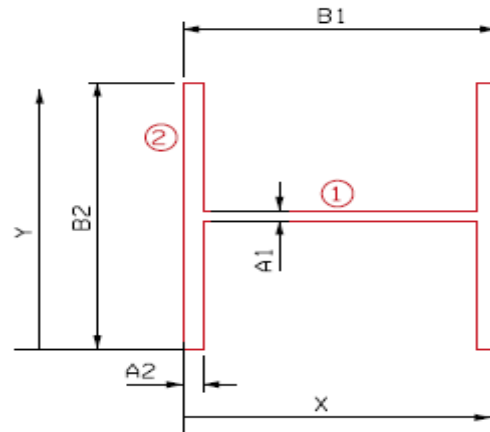
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x140

- $A_1 = t_w = 0.6010$ in
- $A_2 = t_f = 0.9700$ in
- $B_1 = d = 24.4060$ in
- $B_2 = b_f = 14.0310$ in



Member U2-L2

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		13.5021	7.0155	94.7237	0.4064	0.0000	0.0000	0.4064
2	Flange Plates		27.2201	7.0155	190.9629	446.5667	0.0000	0.0000	446.5667
Total			40.72		285.69	446.97		0.00	446.97
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0155	in	$S_{top} =$	63.71	in ³	y-bar =	7.0155	in	$S_{top} =$	63.71	in ³
$I_x =$	446.97	in ⁴	$S_{bott.} =$	63.71	in ³	$I_x =$	446.97	in ⁴	$S_{bott.} =$	63.71	in ³
$C_{top} =$	7.0155	in	A =	40.7222	in ²	$C_{top} =$	7.0155	in	A =	40.7222	in ²
$C_{bottom} =$	7.0155	in	$r_x =$	3.3130	in	$C_{bottom} =$	7.0155	in	$r_x =$	3.3130	in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate	13.5021	12.2030	164.7657	567.8982	0.0000	0.0000	567.8982
2	Left Flange	13.6101	0.4850	6.6009	1.0671	11.7180	1868.8195	1869.8866
	Right Flange	13.6101	23.9210	325.5665	1.0671	11.7180	1868.8195	1869.8866
Total		40.72		496.93	570.03		3737.64	4307.67
Section Losses		A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2030	in	S _{right} = 353.00 in ³	x-bar =	12.2030	in	S _{right} = 353.00 in ³
I _y =	4307.67	in ⁴	S _{left} = 353.00 in ³	I _y =	4307.67	in ⁴	S _{left} = 353.00 in ³
C _{right} =	12.2030	in	A = 40.7222 in ²	C _{right} =	12.2030	in	A = 40.7222 in ²
C _{left} =	12.2030	in	r _y = 10.2850 in	C _{left} =	12.2030	in	r _y = 10.2850 in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

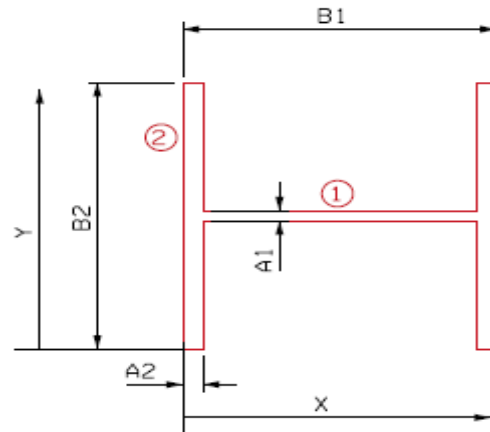
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x100

- $A_1 = t_w = 0.4700$ in
- $A_2 = t_f = 0.7670$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 12.0000$ in



Member U3-L3

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		10.5590	6.0000	63.3541	0.1944	0.0000	0.0000	0.1944
2	Flange Plates		18.4080	6.0000	110.4480	220.8960	0.0000	0.0000	220.8960
Total			28.97		173.80	221.09		0.00	221.09
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0000	in	$S_{top} =$	36.85	in ³	y-bar =	6.0000	in	$S_{top} =$	36.85	in ³
$I_x =$	221.09	in ⁴	$S_{bott.} =$	36.85	in ³	$I_x =$	221.09	in ⁴	$S_{bott.} =$	36.85	in ³
$c_{top} =$	6.0000	in	A =	28.9670	in ²	$c_{top} =$	6.0000	in	A =	28.9670	in ²
$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in	$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	12.0000	126.7082	444.1134	0.0000	0.0000	444.1134
2	Left Flange		9.2040	0.3835	3.5297	0.4512	11.6165	1242.0160	1242.4673
	Right Flange		9.2040	23.6165	217.3663	0.4512	11.6165	1242.0160	1242.4673
Total			28.97		347.60	445.02		2484.03	2929.05
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.0000	in	S _{right} =	244.09	in ³	x-bar =	12.0000	in	S _{right} =	244.09	in ³
I _y =	2929.05	in ⁴	S _{left} =	244.09	in ³	I _y =	2929.05	in ⁴	S _{left} =	244.09	in ³
C _{right} =	12.0000	in	A =	28.9670	in ²	C _{right} =	12.0000	in	A =	28.9670	in ²
C _{left} =	12.0000	in	r _y =	10.0557	in	C _{left} =	12.0000	in	r _y =	10.0557	in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

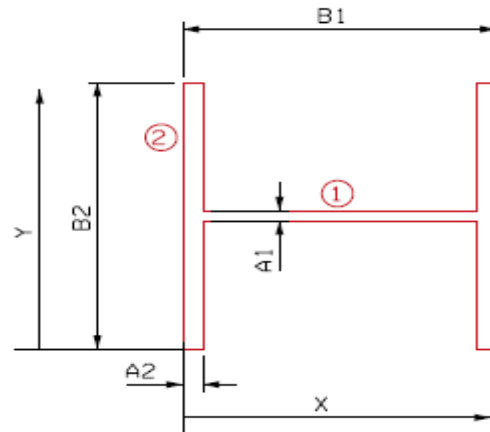
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x74

- $A_1 = t_w = 0.4120$ in
- $A_2 = t_f = 0.6800$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 9.0000$ in



Member U5-L5

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		9.3277	4.5000	41.9746	0.1319	0.0000	0.0000	0.1319
2	Flange Plates		12.2400	4.5000	55.0800	82.6200	0.0000	0.0000	82.6200
Total			21.57		97.05	82.75		0.00	82.75
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	4.5000	in	S _{top} =	18.39	in ³	y-bar =	4.5000	in	S _{top} =	18.39	in ³
I _x =	82.75	in ⁴	S _{bottom} =	18.39	in ³	I _x =	82.75	in ⁴	S _{bottom} =	18.39	in ³
c _{top} =	4.5000	in	A =	21.5677	in ²	c _{top} =	4.5000	in	A =	21.5677	in ²
c _{bottom} =	4.5000	in	r _x =	1.9588	in	c _{bottom} =	4.5000	in	r _x =	1.9588	in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	9.3277	12.0000	111.9322	398.4238	0.0000	0.0000	398.4238	
2	Left Flange	6.1200	0.3400	2.0808	0.2358	11.6600	832.0483	832.2841	
	Right Flange	6.1200	23.6600	144.7992	0.2358	11.6600	832.0483	832.2841	
Total		21.57		258.81	398.90		1664.10	2062.99	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
x-bar =	12.0000	in	S _{right} =	171.92	in ³	x-bar =	12.0000	in	S _{right} =	171.92	in ³
I _y =	2062.99	in ⁴	S _{left} =	171.92	in ³	I _y =	2062.99	in ⁴	S _{left} =	171.92	in ³
C _{right} =	12.0000	in	A =	21.5677	in ²	C _{right} =	12.0000	in	A =	21.5677	in ²
C _{left} =	12.0000	in	r _y =	9.7802	in	C _{left} =	12.0000	in	r _y =	9.7802	in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

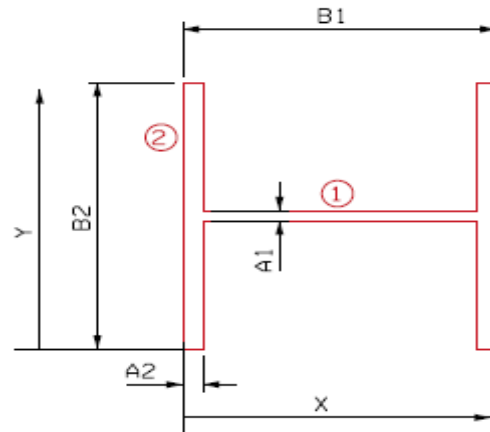
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x100

- $A_1 = t_w = 0.4700$ in
- $A_2 = t_f = 0.7670$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 12.0000$ in



Member U4-L4

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		10.5590	6.0000	63.3541	0.1944	0.0000	0.0000	0.1944
2	Flange Plates		18.4080	6.0000	110.4480	220.8960	0.0000	0.0000	220.8960
Total			28.97		173.80	221.09		0.00	221.09
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0000	in	$S_{top} =$	36.85	in ³	y-bar =	6.0000	in	$S_{top} =$	36.85	in ³
$I_x =$	221.09	in ⁴	$S_{bott.} =$	36.85	in ³	$I_x =$	221.09	in ⁴	$S_{bott.} =$	36.85	in ³
$c_{top} =$	6.0000	in	A =	28.9670	in ²	$c_{top} =$	6.0000	in	A =	28.9670	in ²
$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in	$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	12.0000	126.7082	444.1134	0.0000	0.0000	444.1134
2	Left Flange		9.2040	0.3835	3.5297	0.4512	11.6165	1242.0160	1242.4673
	Right Flange		9.2040	23.6165	217.3663	0.4512	11.6165	1242.0160	1242.4673
Total			28.97		347.60	445.02		2484.03	2929.05
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.0000	in	S _{right} =	244.09	in ³	x-bar =	12.0000	in	S _{right} =	244.09	in ³
I _y =	2929.05	in ⁴	S _{left} =	244.09	in ³	I _y =	2929.05	in ⁴	S _{left} =	244.09	in ³
C _{right} =	12.0000	in	A =	28.9670	in ²	C _{right} =	12.0000	in	A =	28.9670	in ²
C _{left} =	12.0000	in	r _y =	10.0557	in	C _{left} =	12.0000	in	r _y =	10.0557	in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

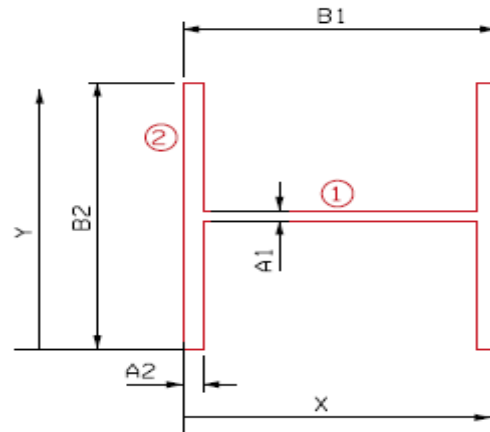
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in



Member U6-L6

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
Total			37.78		264.47	408.29		0.00	408.29
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	7.0000	in	$S_{top} = 58.33$ in ³	y-bar =	7.0000	in	$S_{top} = 58.33$ in ³
$I_x =$	408.29	in ⁴	$S_{bott.} = 58.33$ in ³	$I_x =$	408.29	in ⁴	$S_{bott.} = 58.33$ in ³
$c_{top} =$	7.0000	in	$A = 37.7816$ in ²	$c_{top} =$	7.0000	in	$A = 37.7816$ in ²
$c_{bottom} =$	7.0000	in	$r_x = 3.2873$ in	$c_{bottom} =$	7.0000	in	$r_x = 3.2873$ in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate	12.8056	12.1250	155.2681	538.6056	0.0000	0.0000	538.6056
2	Left Flange	12.4880	0.4460	5.5696	0.8280	11.6790	1703.3512	1704.1792
	Right Flange	12.4880	23.8040	297.2644	0.8280	11.6790	1703.3512	1704.1792
Total		37.78		458.10	540.26		3406.70	3946.96
Section Losses		A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250	in	S _{right} = 325.52 in ³	x-bar =	12.1250	in	S _{right} = 325.52 in ³
I _y =	3946.96	in ⁴	S _{left} = 325.52 in ³	I _y =	3946.96	in ⁴	S _{left} = 325.52 in ³
C _{right} =	12.1250	in	A = 37.7816 in ²	C _{right} =	12.1250	in	A = 37.7816 in ²
C _{left} =	12.1250	in	r _y = 10.2210 in	C _{left} =	12.1250	in	r _y = 10.2210 in

South Truss

Member U7-L7



Made By KMW
Checked By ADK

Date 1/30/2012
Date 2/16/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

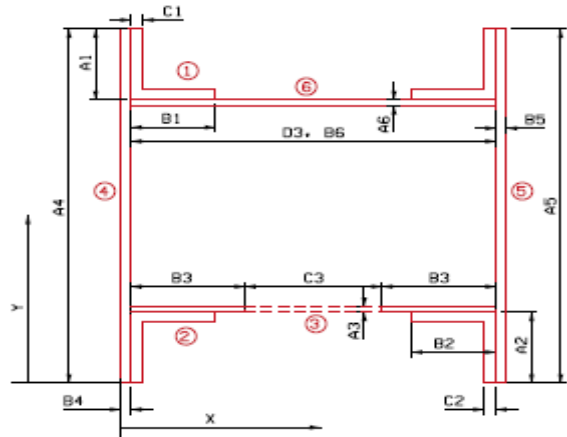
$A_4 = h = 20.0000$ in
 $B_4 = t = 0.6250$ in

Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 0.6250$ in

Cover Plate:

$A_6 = t = 0.3750$ in
 $B_6 = l = 23.5000$ in



Member U7-L7

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	16.1875	44.0098	0.0319	5.8612	93.3992	93.4310
	Vertical Leg	3.0000	18.0000	54.0000	4.0000	7.6737	176.6572	180.6572
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	6.5138	115.3553	115.3872
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	8.3263	207.9816	211.9816
3	Perforated Plate	6.0000	4.2500	25.5000	0.1250	6.0763	221.5282	221.6532
4	Plate	12.5000	10.0000	125.0000	416.6667	0.3263	1.3309	417.9975
5	Plate	12.5000	10.0000	125.0000	416.6667	0.3263	1.3309	417.9975
6	Cover Plate	8.8125	15.8125	139.3477	0.1033	5.4862	265.2425	265.3457
Total		51.25		529.22	841.63		1082.83	1924.45
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.1563	6.0000	-0.9375	3.0000	-2.8125	-2.8125	7.4628	-52.2127
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.94	-2.81	-2.81		-52.21	-55.03



Made By KMW
Checked By ADK

Date 1/30/2012
Date 2/16/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	10.3263 in	S _{top} =	198.94 in ³	y-bar =	10.4628 in	S _{top} =	196.01 in ³
I _x =	1924.45 in ⁴	S _{bott.} =	186.36 in ³	I _x =	1869.43 in ⁴	S _{bott.} =	178.67 in ³
C _{top} =	9.6737 in	A =	51.2500 in ²	C _{top} =	9.5372 in	A =	50.3125 in ²
C _{bottom} =	10.3263 in	r _x =	6.1278 in	C _{bottom} =	10.4628 in	r _x =	6.0956 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	2.8125	3.8232	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.8125	1.2188	0.0176	11.5625	200.5371	200.5547	
1 (Right)	Horizontal Leg	1.3594	21.9375	29.8213	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.9375	35.9063	0.0176	11.5625	200.5371	200.5547	
2 (Left)	Horizontal Leg	1.3594	2.8125	3.8232	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.8125	1.2188	0.0176	11.5625	200.5371	200.5547	
2 (Right)	Horizontal Leg	1.3594	21.9375	29.8213	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.9375	35.9063	0.0176	11.5625	200.5371	200.5547	
3 (Left)	Perforated Plate	3.0000	3.6250	10.8750	9.0000	8.7500	229.6875	238.6875	
3 (Right)	Perforated Plate	3.0000	21.1250	63.3750	9.0000	8.7500	229.6875	238.6875	
4	Plate	12.5000	0.3125	3.9063	0.4069	12.0625	1818.7988	1819.2057	
5	Plate	12.5000	24.4375	305.4688	0.4069	12.0625	1818.7988	1819.2057	
6	Cover Plate	8.8125	12.3750	109.0547	405.5586	0.0000	0.0000	405.5586	
Total		51.25		634.22	430.40		5396.33	5826.73	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	6.0000	0.1563	-0.9375	0.0781	-0.0732	-0.0019	12.5260	-147.0946	-147.0965
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.94		-0.07	0.00		-147.09	-147.10

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3750 in	S _{right} =	470.85 in ³	x-bar =	12.6041 in	S _{right} =	467.62 in ³
I _y =	5826.73 in ⁴	S _{left} =	470.85 in ³	I _y =	5679.63 in ⁴	S _{left} =	450.62 in ³
C _{right} =	12.3750 in	A =	51.2500 in ²	C _{right} =	12.1459 in	A =	50.3125 in ²
C _{left} =	12.3750 in	r _y =	10.6627 in	C _{left} =	12.6041 in	r _y =	10.6248 in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

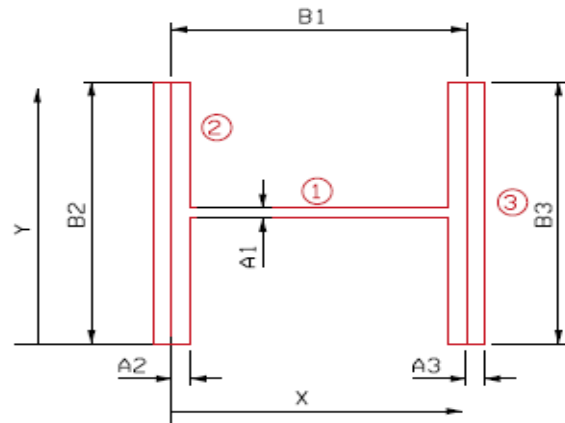
Element Dimensions (without Section Losses):

Rolled Beam CB24x130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.6875$ in
- $B_3 = b = 14.0000$ in



Member U8-L8

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		19.2500	7.0000	134.7500	314.4167	0.0000	0.0000	314.4167
Total			57.03		399.22	722.70		0.00	722.70
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	7.0000	in	$S_{top} = 103.24$	in ³	y-bar =	7.0000	in	$S_{top} = 103.24$	in ³		
$I_x =$	722.70	in ⁴	$S_{bott.} = 103.24$	in ³	$I_x =$	722.70	in ⁴	$S_{bott.} = 103.24$	in ³		
$c_{top} =$	7.0000	in	A =	57.0316	in ²	$c_{top} =$	7.0000	in	A =	57.0316	in ²
$c_{bottom} =$	7.0000	in	$r_x =$	3.5598	in	$c_{bottom} =$	7.0000	in	$r_x =$	3.5598	in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.8125	164.0720	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	1.1335	14.1551	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	24.4915	305.8499	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		9.6250	0.3438	3.3086	0.3791	12.4688	1496.3961	1496.7752
	Right Plate		9.6250	25.2813	243.3320	0.3791	12.4688	1496.3961	1496.7752
Total			57.03		730.72	541.02		6399.49	6940.51
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.8125	in	S _{right} =	541.70	in ³	x-bar =	12.8125	in	S _{right} =	541.70	in ³
I _y =	6940.51	in ⁴	S _{left} =	541.70	in ³	I _y =	6940.51	in ⁴	S _{left} =	541.70	in ³
C _{right} =	12.8125	in	A =	57.0316	in ²	C _{right} =	12.8125	in	A =	57.0316	in ²
C _{left} =	12.8125	in	r _y =	11.0316	in	C _{left} =	12.8125	in	r _y =	11.0316	in

South Truss

Member U9-L9



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

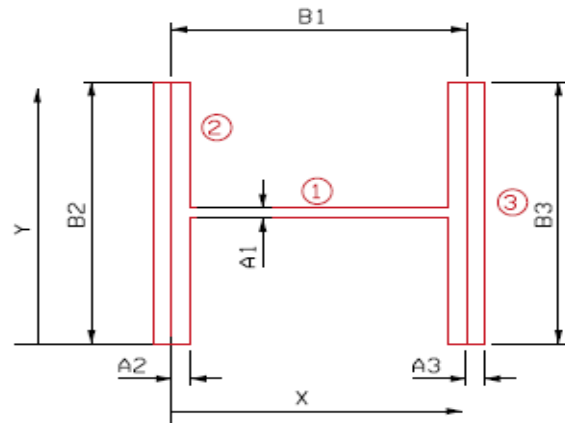
Element Dimensions (without Section Losses):

Rolled Beam CB24x130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.9375$ in
- $B_3 = b = 14.0000$ in



Member U9-L9

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		26.2500	7.0000	183.7500	428.7500	0.0000	0.0000	428.7500
Total			64.03		448.22	837.04		0.00	837.04
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	$S_{top} =$	119.58	in ³	y-bar =	7.0000	in	$S_{top} =$	119.58	in ³
$I_x =$	837.04	in ⁴	$S_{bott.} =$	119.58	in ³	$I_x =$	837.04	in ⁴	$S_{bott.} =$	119.58	in ³
$c_{top} =$	7.0000	in	A =	64.0316	in ²	$c_{top} =$	7.0000	in	A =	64.0316	in ²
$c_{bottom} =$	7.0000	in	$r_x =$	3.6156	in	$c_{bottom} =$	7.0000	in	$r_x =$	3.6156	in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y, gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	12.8056	13.0625	167.2734	538.6056	0.0000	0.0000	538.6056	
2	Left Flange	12.4880	1.3835	17.2771	0.8280	11.6790	1703.3512	1704.1792	
	Right Flange	12.4880	24.7415	308.9719	0.8280	11.6790	1703.3512	1704.1792	
3	Left Plate	13.1250	0.4688	6.1523	0.9613	12.5938	2081.6583	2082.6196	
	Right Plate	13.1250	25.6563	336.7383	0.9613	12.5938	2081.6583	2082.6196	
Total		64.03		836.41	542.18		7570.02	8112.20	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	13.0625	in	S _{right} = 621.03 in ³	x-bar =	13.0625	in	S _{right} = 621.03 in ³
I _y =	8112.20	n ⁴	S _{left} = 621.03 in ³	I _y =	8112.20	n ⁴	S _{left} = 621.03 in ³
C _{right} =	13.0625	in	A = 64.0316 in ²	C _{right} =	13.0625	in	A = 64.0316 in ²
C _{left} =	13.0625	in	r _y = 11.2557 in	C _{left} =	13.0625	in	r _y = 11.2557 in

South Truss

Member U10-L10



Made By NRF
Checked By SFH

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

$A_4 = h = 22.0000$ in
 $B_4 = t = 0.8750$ in

Right Web Plate:

$A_5 = h = 22.0000$ in
 $B_5 = t = 0.8750$ in

Cover Plate:

$A_6 = t = 0.3750$ in
 $B_6 = l = 23.5000$ in



Member U10-L10

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	18.1875	49.4473	0.0319	6.8858	128.9074	128.9393
	Vertical Leg	3.0000	20.0000	60.0000	4.0000	8.6983	226.9812	230.9812
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	7.4892	152.4896	152.5215
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	9.3017	259.5649	263.5649
3	Perforated Plate	6.0000	4.2500	25.5000	0.1250	7.0517	298.3589	298.4839
4	Plate	19.2500	11.0000	211.7500	776.4167	0.3017	1.7522	778.1689
5	Plate	19.2500	11.0000	211.7500	776.4167	0.3017	1.7522	778.1689
6	Cover Plate	8.8125	17.8125	156.9727	0.1033	6.5108	373.5663	373.6696
Total		64.75		731.79	1561.13		1443.37	3004.50
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By NRF
Checked By SFH

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	11.3017 in	S _{top} =	280.84 in ³	y-bar =	11.3017 in	S _{top} =	280.84 in ³
I _x =	3004.50 in ⁴	S _{bott.} =	265.84 in ³	I _x =	3004.50 in ⁴	S _{bott.} =	265.84 in ³
C _{top} =	10.6983 in	A =	64.7500 in ²	C _{top} =	10.6983 in	A =	64.7500 in ²
C _{bottom} =	11.3017 in	r _x =	6.8119 in	C _{bottom} =	11.3017 in	r _x =	6.8119 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	3.0625	4.1631	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	1.0625	1.5938	0.0176	11.5625	200.5371	200.5547	
1 (Right)	Horizontal Leg	1.3594	22.1875	30.1611	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	24.1875	36.2813	0.0176	11.5625	200.5371	200.5547	
2 (Left)	Horizontal Leg	1.3594	3.0625	4.1631	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	1.0625	1.5938	0.0176	11.5625	200.5371	200.5547	
2 (Right)	Horizontal Leg	1.3594	22.1875	30.1611	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	24.1875	36.2813	0.0176	11.5625	200.5371	200.5547	
3 (Left)	Perforated Plate	3.0000	3.8750	11.6250	9.0000	8.7500	229.6875	238.6875	
3 (Right)	Perforated Plate	3.0000	21.3750	64.1250	9.0000	8.7500	229.6875	238.6875	
4	Plate	19.2500	0.4375	8.4219	1.2282	12.1875	2859.3018	2860.5299	
5	Plate	19.2500	24.8125	477.6406	1.2282	12.1875	2859.3018	2860.5299	
6	Cover Plate	8.8125	12.6250	111.2578	405.5586	0.0000	0.0000	405.5586	
Total		64.75		817.47	432.04		7477.34	7909.38	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.6250 in	S _{right} =	626.49 in ³	x-bar =	12.6250 in	S _{right} =	626.49 in ³
I _y =	7909.38 in ⁴	S _{left} =	626.49 in ³	I _y =	7909.38 in ⁴	S _{left} =	626.49 in ³
C _{right} =	12.6250 in	A =	64.7500 in ²	C _{right} =	12.6250 in	A =	64.7500 in ²
C _{left} =	12.6250 in	r _y =	11.0523 in	C _{left} =	12.6250 in	r _y =	11.0523 in



Made By NRF
Checked By SFH

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.6250$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

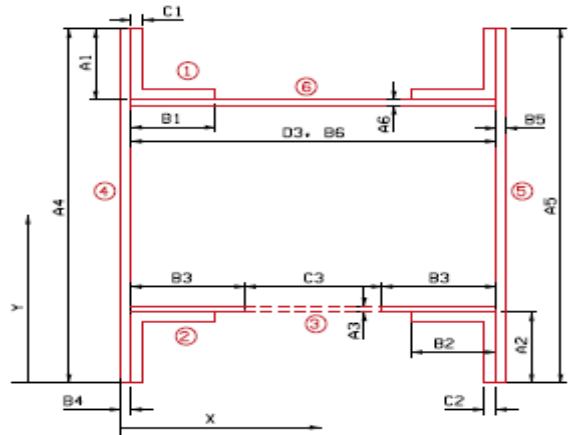
$A_4 = h = 20.0000$ in
 $B_4 = t = 0.5000$ in

Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 0.5000$ in

Cover Plate:

$A_6 = t = 0.5000$ in
 $B_6 = l = 23.5000$ in



Member U11-L11

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	16.1875	44.0098	0.0319	5.6961	88.2123	88.2442
	Vertical Leg	3.0000	18.0000	54.0000	4.0000	7.5086	169.1386	173.1386
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	6.6789	121.2761	121.3079
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	8.4914	216.3100	220.3100
3	Perforated Plate	7.5000	4.3125	32.3438	0.2441	6.1789	286.3381	286.5823
4	Plate	10.0000	10.0000	100.0000	333.3333	0.4914	2.4144	335.7478
5	Plate	10.0000	10.0000	100.0000	333.3333	0.4914	2.4144	335.7478
6	Cover Plate	11.7500	15.7500	185.0625	0.2448	5.2586	324.9251	325.1699
Total		50.69		531.78	675.22		1211.03	1886.25
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00	0.00	0.00	0.00



Made By NRF
Checked By SFH

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	10.4914	in	S _{top} =	198.37	in ³	y-bar =	10.4914	in	S _{top} =	198.37	in ³
I _x =	1886.25	in ⁴	S _{bott.} =	179.79	in ³	I _x =	1886.25	in ⁴	S _{bott.} =	179.79	in ³
C _{top} =	9.5086	in	A =	50.6875	in ²	C _{top} =	9.5086	in	A =	50.6875	in ²
C _{bottom} =	10.4914	in	r _x =	6.1003	in	C _{bottom} =	10.4914	in	r _x =	6.1003	in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	2.6875	3.6533	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.6875	1.0313	0.0176	11.5625	200.5371	200.5547	
1 (Right)	Horizontal Leg	1.3594	21.8125	29.6514	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.8125	35.7188	0.0176	11.5625	200.5371	200.5547	
2 (Left)	Horizontal Leg	1.3594	2.6875	3.6533	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.6875	1.0313	0.0176	11.5625	200.5371	200.5547	
2 (Right)	Horizontal Leg	1.3594	21.8125	29.6514	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.8125	35.7188	0.0176	11.5625	200.5371	200.5547	
3 (Left)	Perforated Plate	3.7500	3.5000	13.1250	11.2500	8.7500	287.1094	298.3594	
3 (Right)	Perforated Plate	3.7500	21.0000	78.7500	11.2500	8.7500	287.1094	298.3594	
4	Plate	10.0000	0.2500	2.5000	0.2083	12.0000	1440.0000	1440.2083	
5	Plate	10.0000	24.2500	242.5000	0.2083	12.0000	1440.0000	1440.2083	
6	Cover Plate	11.7500	12.2500	143.9375	540.7448	0.0000	0.0000	540.7448	
Total		50.69		620.92	569.69		4753.58	5323.27	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
x-bar =	12.2500	in	S _{right} =	434.55	in ³	x-bar =	12.2500	in	S _{right} =	434.55	in ³
I _y =	5323.27	in ⁴	S _{left} =	434.55	in ³	I _y =	5323.27	in ⁴	S _{left} =	434.55	in ³
C _{right} =	12.2500	in	A =	50.6875	in ²	C _{right} =	12.2500	in	A =	50.6875	in ²
C _{left} =	12.2500	in	r _y =	10.2480	in	C _{left} =	12.2500	in	r _y =	10.2480	in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

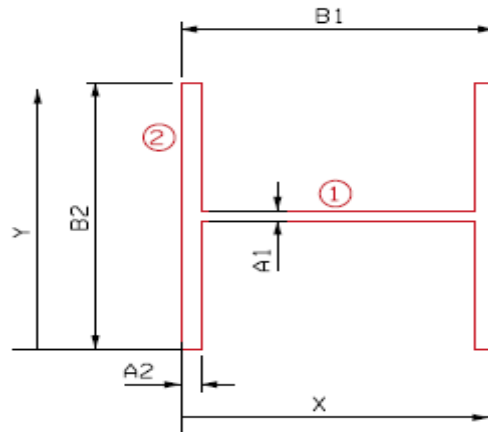
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x100

- $A_1 = t_w = 0.4700$ in
- $A_2 = t_f = 0.7670$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 12.0000$ in



Member U14-L14

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		10.5590	6.0000	63.3541	0.1944	0.0000	0.0000	0.1944
2	Flange Plates		18.4080	6.0000	110.4480	220.8960	0.0000	0.0000	220.8960
Total			28.97		173.80	221.09		0.00	221.09
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0000	in	$S_{top} =$	36.85	in ³	y-bar =	6.0000	in	$S_{top} =$	36.85	in ³
$I_x =$	221.09	in ⁴	$S_{bott.} =$	36.85	in ³	$I_x =$	221.09	in ⁴	$S_{bott.} =$	36.85	in ³
$c_{top} =$	6.0000	in	A =	28.9670	in ²	$c_{top} =$	6.0000	in	A =	28.9670	in ²
$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in	$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	12.0000	126.7082	444.1134	0.0000	0.0000	444.1134
2	Left Flange		9.2040	0.3835	3.5297	0.4512	11.6165	1242.0160	1242.4673
	Right Flange		9.2040	23.6165	217.3663	0.4512	11.6165	1242.0160	1242.4673
Total			28.97		347.60	445.02		2484.03	2929.05
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.0000	in	S _{right} =	244.09	in ³	x-bar =	12.0000	in	S _{right} =	244.09	in ³
I _y =	2929.05	in ⁴	S _{left} =	244.09	in ³	I _y =	2929.05	in ⁴	S _{left} =	244.09	in ³
C _{right} =	12.0000	in	A =	28.9670	in ²	C _{right} =	12.0000	in	A =	28.9670	in ²
C _{left} =	12.0000	in	r _y =	10.0557	in	C _{left} =	12.0000	in	r _y =	10.0557	in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x160

- $A_1 = t_w = 0.6650$ in
- $A_2 = t_f = 1.1240$ in
- $B_1 = d = 24.7140$ in
- $B_2 = b_f = 14.0950$ in



Member U12-L12

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		14.9399	7.0475	105.2889	0.5506	0.0000	0.0000	0.5506
2	Flange Plates		31.6856	7.0475	223.3040	524.5783	0.0000	0.0000	524.5783
Total			46.63		328.59	525.13		0.00	525.13
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	7.0475	in	$S_{top} = 74.51$	in^3	y-bar =	7.0475	in	$S_{top} = 74.51$	in^3		
$I_x =$	525.13	in^4	$S_{bott.} = 74.51$	in^3	$I_x =$	525.13	in^4	$S_{bott.} = 74.51$	in^3		
$c_{top} =$	7.0475	in	A =	46.6255	in^2	$c_{top} =$	7.0475	in	A =	46.6255	in^2
$c_{bottom} =$	7.0475	in	$r_x =$	3.3560	in	$c_{bottom} =$	7.0475	in	$r_x =$	3.3560	in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	12.3570	184.6122	628.3732	0.0000	0.0000	628.3732
2	Left Flange		15.8428	0.5620	8.9036	1.6679	11.7950	2204.0796	2205.7476
	Right Flange		15.8428	24.1520	382.6348	1.6679	11.7950	2204.0796	2205.7476
Total			46.63		576.15	631.71		4408.16	5039.87
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3570	in	S _{right} = 407.86 in ³	x-bar =	12.3570	in	S _{right} = 407.86 in ³
I _y =	5039.87	in ⁴	S _{left} = 407.86 in ³	I _y =	5039.87	in ⁴	S _{left} = 407.86 in ³
C _{right} =	12.3570	in	A = 46.6255 in ²	C _{right} =	12.3570	in	A = 46.6255 in ²
C _{left} =	12.3570	in	r _y = 10.3968 in	C _{left} =	12.3570	in	r _y = 10.3968 in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in



Member U13-L13

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
Total			37.78		264.47	408.29		0.00	408.29
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	$S_{top} =$	58.33	in ³	y-bar =	7.0000	in	$S_{top} =$	58.33	in ³
$I_x =$	408.29	in ⁴	$S_{bott.} =$	58.33	in ³	$I_x =$	408.29	in ⁴	$S_{bott.} =$	58.33	in ³
$c_{top} =$	7.0000	in	A =	37.7816	in ²	$c_{top} =$	7.0000	in	A =	37.7816	in ²
$c_{bottom} =$	7.0000	in	$r_x =$	3.2873	in	$c_{bottom} =$	7.0000	in	$r_x =$	3.2873	in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	12.8056	12.1250	155.2681	538.6056	0.0000	0.0000	538.6056	
2	Left Flange	12.4880	0.4460	5.5696	0.8280	11.6790	1703.3512	1704.1792	
	Right Flange	12.4880	23.8040	297.2644	0.8280	11.6790	1703.3512	1704.1792	
Total		37.78		458.10	540.26		3406.70	3946.96	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250	in	S _{right} = 325.52 in ³	x-bar =	12.1250	in	S _{right} = 325.52 in ³
I _y =	3946.96	in ⁴	S _{left} = 325.52 in ³	I _y =	3946.96	in ⁴	S _{left} = 325.52 in ³
C _{right} =	12.1250	in	A = 37.7816 in ²	C _{right} =	12.1250	in	A = 37.7816 in ²
C _{left} =	12.1250	in	r _y = 10.2210 in	C _{left} =	12.1250	in	r _y = 10.2210 in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x74

- $A_1 = t_w = 0.4120$ in
- $A_2 = t_f = 0.6800$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 9.0000$ in



Member U15-L15

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		9.3277	4.5000	41.9746	0.1319	0.0000	0.0000	0.1319
2	Flange Plates		12.2400	4.5000	55.0800	82.6200	0.0000	0.0000	82.6200
Total			21.57		97.05	82.75		0.00	82.75
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	4.5000	in	$S_{top} = 18.39$ in ³	y-bar =	4.5000	in	$S_{top} = 18.39$ in ³
$I_x =$	82.75	in ⁴	$S_{bott.} = 18.39$ in ³	$I_x =$	82.75	in ⁴	$S_{bott.} = 18.39$ in ³
$c_{top} =$	4.5000	in	$A = 21.5677$ in ²	$c_{top} =$	4.5000	in	$A = 21.5677$ in ²
$c_{bottom} =$	4.5000	in	$r_x = 1.9588$ in	$c_{bottom} =$	4.5000	in	$r_x = 1.9588$ in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		9.3277	12.0000	111.9322	398.4238	0.0000	0.0000	398.4238
2	Left Flange		6.1200	0.3400	2.0808	0.2358	11.6600	832.0483	832.2841
	Right Flange		6.1200	23.6600	144.7992	0.2358	11.6600	832.0483	832.2841
Total			21.57		258.81	398.90		1664.10	2062.99
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.0000	in	S _{right} =	171.92	in ³	x-bar =	12.0000	in	S _{right} =	171.92	in ³
I _y =	2062.99	in ⁴	S _{left} =	171.92	in ³	I _y =	2062.99	in ⁴	S _{left} =	171.92	in ³
C _{right} =	12.0000	in	A =	21.5677	in ²	C _{right} =	12.0000	in	A =	21.5677	in ²
C _{left} =	12.0000	in	r _y =	9.7802	in	C _{left} =	12.0000	in	r _y =	9.7802	in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

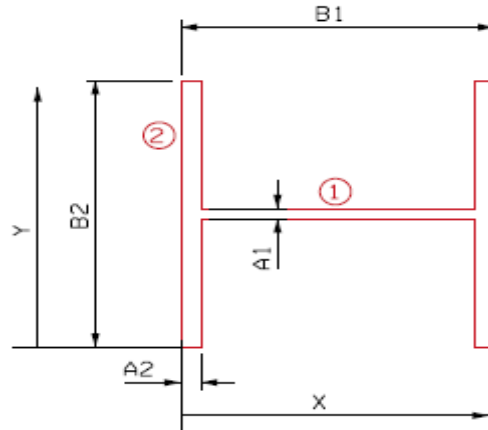
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x100

- $A_1 = t_w = 0.4700$ in
- $A_2 = t_f = 0.7670$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 12.0000$ in



Member U16-L16

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		10.5590	6.0000	63.3541	0.1944	0.0000	0.0000	0.1944
2	Flange Plates		18.4080	6.0000	110.4480	220.8960	0.0000	0.0000	220.8960
Total			28.97		173.80	221.09		0.00	221.09
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0000	in	$S_{top} =$	36.85	in ³	y-bar =	6.0000	in	$S_{top} =$	36.85	in ³
$I_x =$	221.09	in ⁴	$S_{bott.} =$	36.85	in ³	$I_x =$	221.09	in ⁴	$S_{bott.} =$	36.85	in ³
$c_{top} =$	6.0000	in	A =	28.9670	in ²	$c_{top} =$	6.0000	in	A =	28.9670	in ²
$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in	$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	12.0000	126.7082	444.1134	0.0000	0.0000	444.1134
2	Left Flange		9.2040	0.3835	3.5297	0.4512	11.6165	1242.0160	1242.4673
	Right Flange		9.2040	23.6165	217.3663	0.4512	11.6165	1242.0160	1242.4673
Total			28.97		347.60	445.02		2484.03	2929.05
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.0000	in	S _{right} =	244.09	in ³	x-bar =	12.0000	in	S _{right} =	244.09	in ³
I _y =	2929.05	in ⁴	S _{left} =	244.09	in ³	I _y =	2929.05	in ⁴	S _{left} =	244.09	in ³
C _{right} =	12.0000	in	A =	28.9670	in ²	C _{right} =	12.0000	in	A =	28.9670	in ²
C _{left} =	12.0000	in	r _y =	10.0557	in	C _{left} =	12.0000	in	r _y =	10.0557	in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in



Member U17-L17

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
Total			37.78		264.47	408.29		0.00	408.29
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	7.0000	in	$S_{top} = 58.33$	in ³	y-bar =	7.0000	in	$S_{top} = 58.33$	in ³		
$I_x =$	408.29	in ⁴	$S_{bott.} = 58.33$	in ³	$I_x =$	408.29	in ⁴	$S_{bott.} = 58.33$	in ³		
$c_{top} =$	7.0000	in	A =	37.7816	in ²	$c_{top} =$	7.0000	in	A =	37.7816	in ²
$c_{bottom} =$	7.0000	in	$r_x =$	3.2873	in	$c_{bottom} =$	7.0000	in	$r_x =$	3.2873	in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.1250	155.2681	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	0.4460	5.5696	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	23.8040	297.2644	0.8280	11.6790	1703.3512	1704.1792
Total			37.78		458.10	540.26		3406.70	3946.96
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.1250	in	S _{right} =	325.52	in ³	x-bar =	12.1250	in	S _{right} =	325.52	in ³
I _y =	3946.96	in ⁴	S _{left} =	325.52	in ³	I _y =	3946.96	in ⁴	S _{left} =	325.52	in ³
C _{right} =	12.1250	in	A =	37.7816	in ²	C _{right} =	12.1250	in	A =	37.7816	in ²
C _{left} =	12.1250	in	r _y =	10.2210	in	C _{left} =	12.1250	in	r _y =	10.2210	in



Made By KMW
Checked By ADK

Date 1/31/2012
Date 2/16/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x160

- $A_1 = t_w = 0.6650$ in
- $A_2 = t_f = 1.1240$ in
- $B_1 = d = 24.7140$ in
- $B_2 = b_f = 14.0950$ in



Member U18-L18

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		14.9399	7.0475	105.2889	0.5506	0.0000	0.0000	0.5506
2	Flange Plates		31.6856	7.0475	223.3040	524.5783	0.0000	0.0000	524.5783
Total			46.63		328.59	525.13		0.00	525.13
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	14.0950	0.0625	-0.8809	7.0475	-6.2084	-0.0003	0.0542	-0.0026	-0.0029
2	12.0000	0.1875	-2.2500	6.0000	-13.5000	-0.0066	1.1017	-2.7309	-2.7375
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-3.13		-19.71	-0.01		-2.73	-2.74

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	7.0475	in	$S_{top} = 74.51$	in ³	y-bar =	7.1017	in	$S_{top} = 74.70$	in ³		
$I_x =$	525.13	in ⁴	$S_{bott.} = 74.51$	in ³	$I_x =$	522.39	in ⁴	$S_{bott.} = 73.56$	in ³		
$c_{top} =$	7.0475	in	A =	46.6255	in ²	$c_{top} =$	6.9933	in	A =	43.4945	in ²
$c_{bottom} =$	7.0475	in	$r_x =$	3.3560	in	$c_{bottom} =$	7.1017	in	$r_x =$	3.4656	in



Made By KMW
 Checked By ADK

Date 1/31/2012
 Date 2/16/2012

Job No. P402110046
 Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	12.3570	184.6122	628.3732	0.0000	0.0000	628.3732
2	Left Flange		15.8428	0.5620	8.9036	1.6679	11.7950	2204.0796	2205.7476
	Right Flange		15.8428	24.1520	382.6348	1.6679	11.7950	2204.0796	2205.7476
Total			46.63		576.15	631.71		4408.16	5039.87
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0625	14.0950	-0.8809	0.0313	-0.0275	-14.5846	11.9410	-125.6109	-140.1954
2	0.1875	12.0000	-2.2500	24.6203	-55.3956	-27.0000	12.6480	-359.9362	-386.9362
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-3.13		-55.42	-41.58		-485.55	-527.13

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3570	in	S _{right} = 407.86 in ³	x-bar =	11.9723	in	S _{right} = 354.17 in ³
I _y =	5039.87	n ⁴	S _{left} = 407.86 in ³	I _y =	4512.74	n ⁴	S _{left} = 376.93 in ³
C _{right} =	12.3570	in	A = 46.6255 in ²	C _{right} =	12.7417	in	A = 43.4945 in ²
C _{left} =	12.3570	in	r _y = 10.3968 in	C _{left} =	11.9723	in	r _y = 10.1860 in



Made By NRF
Checked By SFH

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.6250$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

$A_4 = h = 20.0000$ in
 $B_4 = t = 0.5000$ in

Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 0.5000$ in

Cover Plate:

$A_6 = t = 0.5000$ in
 $B_6 = l = 23.5000$ in



Member U19-L19

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	16.1875	44.0098	0.0319	5.6961	88.2123	88.2442
	Vertical Leg	3.0000	18.0000	54.0000	4.0000	7.5086	169.1386	173.1386
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	6.6789	121.2761	121.3079
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	8.4914	216.3100	220.3100
3	Perforated Plate	7.5000	4.3125	32.3438	0.2441	6.1789	286.3381	286.5823
4	Plate	10.0000	10.0000	100.0000	333.3333	0.4914	2.4144	335.7478
5	Plate	10.0000	10.0000	100.0000	333.3333	0.4914	2.4144	335.7478
6	Cover Plate	11.7500	15.7500	185.0625	0.2448	5.2586	324.9251	325.1699
Total		50.69		531.78	675.22		1211.03	1886.25
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By NRF
Checked By SFH

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	10.4914	in	S _{top} =	198.37	in ³	y-bar =	10.4914	in	S _{top} =	198.37	in ³
I _x =	1886.25	in ⁴	S _{bott.} =	179.79	in ³	I _x =	1886.25	in ⁴	S _{bott.} =	179.79	in ³
C _{top} =	9.5086	in	A =	50.6875	in ²	C _{top} =	9.5086	in	A =	50.6875	in ²
C _{bottom} =	10.4914	in	r _x =	6.1003	in	C _{bottom} =	10.4914	in	r _x =	6.1003	in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	2.6875	3.6533	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.6875	1.0313	0.0176	11.5625	200.5371	200.5547	
1 (Right)	Horizontal Leg	1.3594	21.8125	29.6514	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.8125	35.7188	0.0176	11.5625	200.5371	200.5547	
2 (Left)	Horizontal Leg	1.3594	2.6875	3.6533	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.6875	1.0313	0.0176	11.5625	200.5371	200.5547	
2 (Right)	Horizontal Leg	1.3594	21.8125	29.6514	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.8125	35.7188	0.0176	11.5625	200.5371	200.5547	
3 (Left)	Perforated Plate	3.7500	3.5000	13.1250	11.2500	8.7500	287.1094	298.3594	
3 (Right)	Perforated Plate	3.7500	21.0000	78.7500	11.2500	8.7500	287.1094	298.3594	
4	Plate	10.0000	0.2500	2.5000	0.2083	12.0000	1440.0000	1440.2083	
5	Plate	10.0000	24.2500	242.5000	0.2083	12.0000	1440.0000	1440.2083	
6	Cover Plate	11.7500	12.2500	143.9375	540.7448	0.0000	0.0000	540.7448	
Total		50.69		620.92	569.69		4753.58	5323.27	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
x-bar =	12.2500	in	S _{right} =	434.55	in ³	x-bar =	12.2500	in	S _{right} =	434.55	in ³
I _y =	5323.27	in ⁴	S _{left} =	434.55	in ³	I _y =	5323.27	in ⁴	S _{left} =	434.55	in ³
C _{right} =	12.2500	in	A =	50.6875	in ²	C _{right} =	12.2500	in	A =	50.6875	in ²
C _{left} =	12.2500	in	r _y =	10.2480	in	C _{left} =	12.2500	in	r _y =	10.2480	in

South Truss

Member U20-L20



Made By NRF
Checked By SFH

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

$A_4 = h = 22.0000$ in
 $B_4 = t = 0.8750$ in

Right Web Plate:

$A_5 = h = 22.0000$ in
 $B_5 = t = 0.8750$ in

Cover Plate:

$A_6 = t = 0.3750$ in
 $B_6 = l = 23.5000$ in



Member U20-L20

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	18.1875	49.4473	0.0319	6.8858	128.9074	128.9393
	Vertical Leg	3.0000	20.0000	60.0000	4.0000	8.6983	226.9812	230.9812
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	7.4892	152.4896	152.5215
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	9.3017	259.5649	263.5649
3	Perforated Plate	6.0000	4.2500	25.5000	0.1250	7.0517	298.3589	298.4839
4	Plate	19.2500	11.0000	211.7500	776.4167	0.3017	1.7522	778.1689
5	Plate	19.2500	11.0000	211.7500	776.4167	0.3017	1.7522	778.1689
6	Cover Plate	8.8125	17.8125	156.9727	0.1033	6.5108	373.5663	373.6696
Total		64.75		731.79	1561.13		1443.37	3004.50
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By NRF
Checked By SFH

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	11.3017 in	S _{top} =	280.84 in ³	y-bar =	11.3017 in	S _{top} =	280.84 in ³
I _x =	3004.50 in ⁴	S _{bott.} =	265.84 in ³	I _x =	3004.50 in ⁴	S _{bott.} =	265.84 in ³
C _{top} =	10.6983 in	A =	64.7500 in ²	C _{top} =	10.6983 in	A =	64.7500 in ²
C _{bottom} =	11.3017 in	r _x =	6.8119 in	C _{bottom} =	11.3017 in	r _x =	6.8119 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	3.0625	4.1631	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	1.0625	1.5938	0.0176	11.5625	200.5371	200.5547	
1 (Right)	Horizontal Leg	1.3594	22.1875	30.1611	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	24.1875	36.2813	0.0176	11.5625	200.5371	200.5547	
2 (Left)	Horizontal Leg	1.3594	3.0625	4.1631	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	1.0625	1.5938	0.0176	11.5625	200.5371	200.5547	
2 (Right)	Horizontal Leg	1.3594	22.1875	30.1611	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	24.1875	36.2813	0.0176	11.5625	200.5371	200.5547	
3 (Left)	Perforated Plate	3.0000	3.8750	11.6250	9.0000	8.7500	229.6875	238.6875	
3 (Right)	Perforated Plate	3.0000	21.3750	64.1250	9.0000	8.7500	229.6875	238.6875	
4	Plate	19.2500	0.4375	8.4219	1.2282	12.1875	2859.3018	2860.5299	
5	Plate	19.2500	24.8125	477.6406	1.2282	12.1875	2859.3018	2860.5299	
6	Cover Plate	8.8125	12.6250	111.2578	405.5586	0.0000	0.0000	405.5586	
Total		64.75		817.47	432.04		7477.34	7909.38	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.6250 in	S _{right} =	626.49 in ³	x-bar =	12.6250 in	S _{right} =	626.49 in ³
I _y =	7909.38 in ⁴	S _{left} =	626.49 in ³	I _y =	7909.38 in ⁴	S _{left} =	626.49 in ³
C _{right} =	12.6250 in	A =	64.7500 in ²	C _{right} =	12.6250 in	A =	64.7500 in ²
C _{left} =	12.6250 in	r _y =	11.0523 in	C _{left} =	12.6250 in	r _y =	11.0523 in

South Truss

Member U21-L21



Made By NRF
Checked By SFH

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

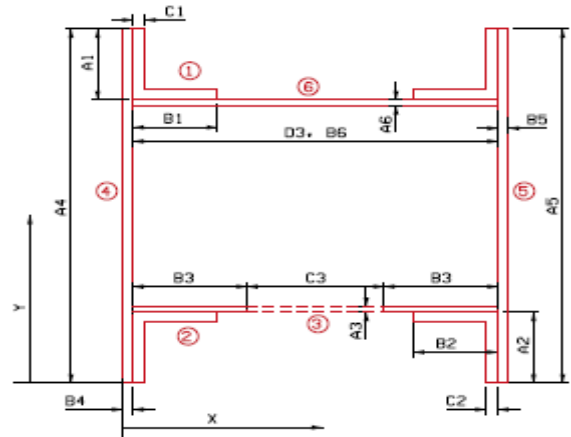
$A_4 = h = 20.0000$ in
 $B_4 = t = 0.5000$ in

Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 0.5000$ in

Cover Plate:

$A_6 = t = 0.3750$ in
 $B_6 = l = 23.5000$ in



Member U21-L21

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	16.1875	44.0098	0.0319	5.8259	92.2783	92.3102
	Vertical Leg	3.0000	18.0000	54.0000	4.0000	7.6384	175.0368	179.0368
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	6.5491	116.6081	116.6399
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	8.3616	209.7476	213.7476
3	Perforated Plate	6.0000	4.2500	25.5000	0.1250	6.1116	224.1078	224.2328
4	Plate	10.0000	10.0000	100.0000	333.3333	0.3616	1.3073	334.6407
5	Plate	10.0000	10.0000	100.0000	333.3333	0.3616	1.3073	334.6407
6	Cover Plate	8.8125	15.8125	139.3477	0.1033	5.4509	261.8425	261.9458
Total		46.25		479.22	674.96		1082.24	1757.19
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By NRF
Checked By SFH

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	10.3616 in	S _{top} =	182.31 in ³	y-bar =	10.3616 in	S _{top} =	182.31 in ³
I _x =	1757.19 in ⁴	S _{bott.} =	169.59 in ³	I _x =	1757.19 in ⁴	S _{bott.} =	169.59 in ³
C _{top} =	9.6384 in	A =	46.2500 in ²	C _{top} =	9.6384 in	A =	46.2500 in ²
C _{bottom} =	10.3616 in	r _x =	6.1639 in	C _{bottom} =	10.3616 in	r _x =	6.1639 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	2.6875	3.6533	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.6875	1.0313	0.0176	11.5625	200.5371	200.5547	
1 (Right)	Horizontal Leg	1.3594	21.8125	29.6514	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.8125	35.7188	0.0176	11.5625	200.5371	200.5547	
2 (Left)	Horizontal Leg	1.3594	2.6875	3.6533	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.6875	1.0313	0.0176	11.5625	200.5371	200.5547	
2 (Right)	Horizontal Leg	1.3594	21.8125	29.6514	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.8125	35.7188	0.0176	11.5625	200.5371	200.5547	
3 (Left)	Perforated Plate	3.0000	3.5000	10.5000	9.0000	8.7500	229.6875	238.6875	
3 (Right)	Perforated Plate	3.0000	21.0000	63.0000	9.0000	8.7500	229.6875	238.6875	
4	Plate	10.0000	0.2500	2.5000	0.2083	12.0000	1440.0000	1440.2083	
5	Plate	10.0000	24.2500	242.5000	0.2083	12.0000	1440.0000	1440.2083	
6	Cover Plate	8.8125	12.2500	107.9531	405.5586	0.0000	0.0000	405.5586	
Total		46.25		566.56	430.00		4638.74	5068.74	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2500 in	S _{right} =	413.77 in ³	x-bar =	12.2500 in	S _{right} =	413.77 in ³
I _y =	5068.74 in ⁴	S _{left} =	413.77 in ³	I _y =	5068.74 in ⁴	S _{left} =	413.77 in ³
C _{right} =	12.2500 in	A =	46.2500 in ²	C _{right} =	12.2500 in	A =	46.2500 in ²
C _{left} =	12.2500 in	r _y =	10.4687 in	C _{left} =	12.2500 in	r _y =	10.4687 in



Made By KMW
Checked By ADK

Date 1/31/2012
Date 2/16/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

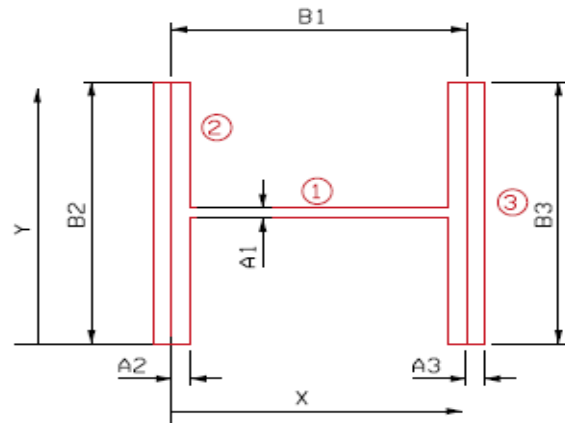
Element Dimensions (without Section Losses):

Rolled Beam CB24x130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.3750$ in
- $B_3 = b = 14.0000$ in



Member U22-L22

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		10.5000	7.0000	73.5000	171.5000	0.0000	0.0000	171.5000
Total			48.28		337.97	579.79		0.00	579.79
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0625	14.0000	-0.8750	7.0000	-6.1250	-14.2917	0.0000	0.0000	-14.2917
2	0.0625	14.0000	-0.8750	7.0000	-6.1250	-14.2917	0.0000	0.0000	-14.2917
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.75		-12.25	-28.58		0.00	-28.58

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	7.0000	in	$S_{top} = 82.83$	in ³	y-bar =	7.0000	in	$S_{top} = 78.74$	in ³		
$I_x =$	579.79	in ⁴	$S_{bott.} = 82.83$	in ³	$I_x =$	551.20	in ⁴	$S_{bott.} = 78.74$	in ³		
$c_{top} =$	7.0000	in	A =	48.2816	in ²	$c_{top} =$	7.0000	in	A =	46.5316	in ²
$c_{bottom} =$	7.0000	in	$r_x =$	3.4653	in	$c_{bottom} =$	7.0000	in	$r_x =$	3.4418	in



Made By KMW
Checked By ADK

Date 1/31/2012
Date 2/16/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	12.8056	12.5000	160.0703	538.6056	0.0000	0.0000	538.6056	
2	Left Flange	12.4880	0.8210	10.2526	0.8280	11.6790	1703.3512	1704.1792	
	Right Flange	12.4880	24.1790	301.9474	0.8280	11.6790	1703.3512	1704.1792	
3	Left Plate	5.2500	0.1875	0.9844	0.0615	12.3125	795.8877	795.9492	
	Right Plate	5.2500	24.8125	130.2656	0.0615	12.3125	795.8877	795.9492	
Total		48.28		603.52	540.38		4998.48	5538.86	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	14.0000	0.0625	-0.8750	0.0313	-0.0273	-0.0003	12.4688	-136.0360	-136.0363
2	14.0000	0.0625	-0.8750	24.9688	-21.8477	-0.0003	12.4688	-136.0360	-136.0363
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.75		-21.88	0.00		-272.07	-272.07

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.5000 in	S _{right} =	443.11 in ³	x-bar =	12.5000 in	S _{right} =	421.34 in ³
I _y =	5538.86 in ⁴	S _{left} =	443.11 in ³	I _y =	5266.79 in ⁴	S _{left} =	421.34 in ³
C _{right} =	12.5000 in	A =	48.2816 in ²	C _{right} =	12.5000 in	A =	46.5316 in ²
C _{left} =	12.5000 in	r _y =	10.7107 in	C _{left} =	12.5000 in	r _y =	10.6390 in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

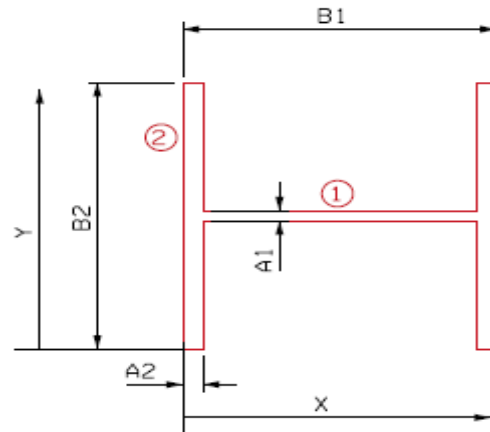
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 100

- $A_1 = t_w = 0.4700$ in
- $A_2 = t_f = 0.7670$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 12.0000$ in



Member U24-L24

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		10.5590	6.0000	63.3541	0.1944	0.0000	0.0000	0.1944
2	Flange Plates		18.4080	6.0000	110.4480	220.8960	0.0000	0.0000	220.8960
Total			28.97		173.80	221.09		0.00	221.09
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	6.0000	in	$S_{top} = 36.85$	in^3	y-bar =	6.0000	in	$S_{top} = 36.85$	in^3		
$I_x =$	221.09	in^4	$S_{bott.} = 36.85$	in^3	$I_x =$	221.09	in^4	$S_{bott.} = 36.85$	in^3		
$c_{top} =$	6.0000	in	A =	28.9670	in^2	$c_{top} =$	6.0000	in	A =	28.9670	in^2
$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in	$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	10.5590	12.0000	126.7082	444.1134	0.0000	0.0000	444.1134	
2	Left Flange	9.2040	0.3835	3.5297	0.4512	11.6165	1242.0160	1242.4673	
	Right Flange	9.2040	23.6165	217.3663	0.4512	11.6165	1242.0160	1242.4673	
Total		28.97		347.60	445.02		2484.03	2929.05	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.0000	in	S _{right} = 244.09 in ³	x-bar =	12.0000	in	S _{right} = 244.09 in ³
I _y =	2929.05	in ⁴	S _{left} = 244.09 in ³	I _y =	2929.05	in ⁴	S _{left} = 244.09 in ³
C _{right} =	12.0000	in	A = 28.9670 in ²	C _{right} =	12.0000	in	A = 28.9670 in ²
C _{left} =	12.0000	in	r _y = 10.0557 in	C _{left} =	12.0000	in	r _y = 10.0557 in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

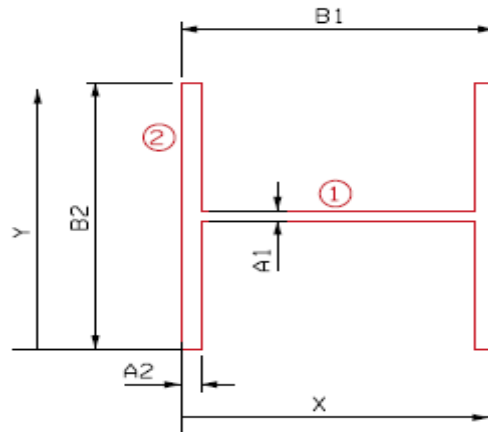
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x140

- $A_1 = t_w = 0.6010$ in
- $A_2 = t_f = 0.9700$ in
- $B_1 = d = 24.4060$ in
- $B_2 = b_f = 14.0310$ in



Member U23-L23

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		13.5021	7.0155	94.7237	0.4064	0.0000	0.0000	0.4064
2	Flange Plates		27.2201	7.0155	190.9629	446.5667	0.0000	0.0000	446.5667
Total			40.72		285.69	446.97		0.00	446.97
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0155	in	$S_{top} =$	63.71	in ³	y-bar =	7.0155	in	$S_{top} =$	63.71	in ³
$I_x =$	446.97	in ⁴	$S_{bott.} =$	63.71	in ³	$I_x =$	446.97	in ⁴	$S_{bott.} =$	63.71	in ³
$c_{top} =$	7.0155	in	A =	40.7222	in ²	$c_{top} =$	7.0155	in	A =	40.7222	in ²
$c_{bottom} =$	7.0155	in	$r_x =$	3.3130	in	$c_{bottom} =$	7.0155	in	$r_x =$	3.3130	in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		13.5021	12.2030	164.7657	567.8982	0.0000	0.0000	567.8982
2	Left Flange		13.6101	0.4850	6.6009	1.0671	11.7180	1868.8195	1869.8866
	Right Flange		13.6101	23.9210	325.5665	1.0671	11.7180	1868.8195	1869.8866
Total			40.72		496.93	570.03		3737.64	4307.67
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.2030	in	S _{right} =	353.00	in ³	x-bar =	12.2030	in	S _{right} =	353.00	in ³
I _y =	4307.67	in ⁴	S _{left} =	353.00	in ³	I _y =	4307.67	in ⁴	S _{left} =	353.00	in ³
C _{right} =	12.2030	in	A =	40.7222	in ²	C _{right} =	12.2030	in	A =	40.7222	in ²
C _{left} =	12.2030	in	r _y =	10.2850	in	C _{left} =	12.2030	in	r _y =	10.2850	in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam **CB24x 74**

- $A_1 = t_w = 0.4120$ in
- $A_2 = t_f = 0.6800$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 9.0000$ in



Member U25-L25

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x, gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		9.3277	4.5000	41.9746	0.1319	0.0000	0.0000	0.1319
2	Flange Plates		12.2400	4.5000	55.0800	82.6200	0.0000	0.0000	82.6200
Total			21.57		97.05	82.75		0.00	82.75
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	4.5000	in	$S_{top} = 18.39$ in ³	y-bar =	4.5000	in	$S_{top} = 18.39$ in ³
$I_x =$	82.75	in ⁴	$S_{bott.} = 18.39$ in ³	$I_x =$	82.75	in ⁴	$S_{bott.} = 18.39$ in ³
$c_{top} =$	4.5000	in	$A = 21.5677$ in ²	$c_{top} =$	4.5000	in	$A = 21.5677$ in ²
$c_{bottom} =$	4.5000	in	$r_x = 1.9588$ in	$c_{bottom} =$	4.5000	in	$r_x = 1.9588$ in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		9.3277	12.0000	111.9322	398.4238	0.0000	0.0000	398.4238
2	Left Flange		6.1200	0.3400	2.0808	0.2358	11.6600	832.0483	832.2841
	Right Flange		6.1200	23.6600	144.7992	0.2358	11.6600	832.0483	832.2841
Total			21.57		258.81	398.90		1664.10	2062.99
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.0000	in	S _{right} =	171.92	in ³	x-bar =	12.0000	in	S _{right} =	171.92	in ³
I _y =	2062.99	in ⁴	S _{left} =	171.92	in ³	I _y =	2062.99	in ⁴	S _{left} =	171.92	in ³
C _{right} =	12.0000	in	A =	21.5677	in ²	C _{right} =	12.0000	in	A =	21.5677	in ²
C _{left} =	12.0000	in	r _y =	9.7802	in	C _{left} =	12.0000	in	r _y =	9.7802	in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

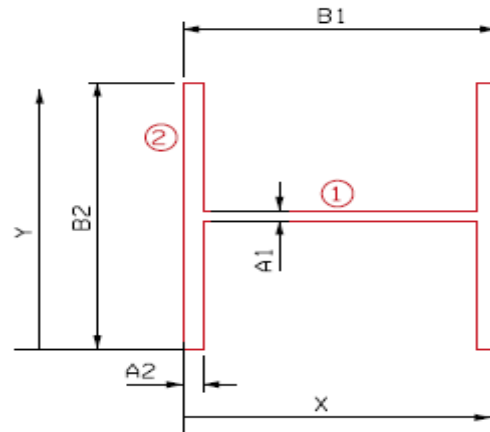
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam **CB24x 100**

- $A_1 = t_w = 0.4700$ in
- $A_2 = t_f = 0.7670$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 12.0000$ in



Member U26-L26

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x, gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		10.5590	6.0000	63.3541	0.1944	0.0000	0.0000	0.1944
2	Flange Plates		18.4080	6.0000	110.4480	220.8960	0.0000	0.0000	220.8960
Total			28.97		173.80	221.09		0.00	221.09
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	6.0000	in	$S_{top} = 36.85$	in^3	y-bar =	6.0000	in	$S_{top} = 36.85$	in^3		
$I_x =$	221.09	in^4	$S_{bott.} = 36.85$	in^3	$I_x =$	221.09	in^4	$S_{bott.} = 36.85$	in^3		
$c_{top} =$	6.0000	in	A =	28.9670	in^2	$c_{top} =$	6.0000	in	A =	28.9670	in^2
$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in	$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	10.5590	12.0000	126.7082	444.1134	0.0000	0.0000	444.1134	
2	Left Flange	9.2040	0.3835	3.5297	0.4512	11.6165	1242.0160	1242.4673	
	Right Flange	9.2040	23.6165	217.3663	0.4512	11.6165	1242.0160	1242.4673	
Total		28.97		347.60	445.02		2484.03	2929.05	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.0000	in	S _{right} = 244.09 in ³	x-bar =	12.0000	in	S _{right} = 244.09 in ³
I _y =	2929.05	in ⁴	S _{left} = 244.09 in ³	I _y =	2929.05	in ⁴	S _{left} = 244.09 in ³
C _{right} =	12.0000	in	A = 28.9670 in ²	C _{right} =	12.0000	in	A = 28.9670 in ²
C _{left} =	12.0000	in	r _y = 10.0557 in	C _{left} =	12.0000	in	r _y = 10.0557 in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam **CB24x 130**

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in



Member U27-L27

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
Total			37.78		264.47	408.29		0.00	408.29
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	$S_{top} =$	58.33	in ³	y-bar =	7.0000	in	$S_{top} =$	58.33	in ³
$I_x =$	408.29	in ⁴	$S_{bott.} =$	58.33	in ³	$I_x =$	408.29	in ⁴	$S_{bott.} =$	58.33	in ³
$c_{top} =$	7.0000	in	A =	37.7816	in ²	$c_{top} =$	7.0000	in	A =	37.7816	in ²
$c_{bottom} =$	7.0000	in	$r_x =$	3.2873	in	$c_{bottom} =$	7.0000	in	$r_x =$	3.2873	in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate	12.8056	12.1250	155.2681	538.6056	0.0000	0.0000	538.6056
2	Left Flange	12.4880	0.4460	5.5696	0.8280	11.6790	1703.3512	1704.1792
	Right Flange	12.4880	23.8040	297.2644	0.8280	11.6790	1703.3512	1704.1792
Total		37.78		458.10	540.26		3406.70	3946.96
Section Losses		A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250	in	S _{right} = 325.52 in ³	x-bar =	12.1250	in	S _{right} = 325.52 in ³
I _y =	3946.96	in ⁴	S _{left} = 325.52 in ³	I _y =	3946.96	in ⁴	S _{left} = 325.52 in ³
C _{right} =	12.1250	in	A = 37.7816 in ²	C _{right} =	12.1250	in	A = 37.7816 in ²
C _{left} =	12.1250	in	r _y = 10.2210 in	C _{left} =	12.1250	in	r _y = 10.2210 in

South Truss

Member U28-L28



Made By NRF
Checked By SFH

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

$A_4 = h = 20.0000$ in
 $B_4 = t = 0.5000$ in

Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 0.5000$ in

Cover Plate:

$A_6 = t = 0.3750$ in
 $B_6 = l = 23.5000$ in



Member U28-L28

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	16.1875	44.0098	0.0319	5.8259	92.2783	92.3102
	Vertical Leg	3.0000	18.0000	54.0000	4.0000	7.6384	175.0368	179.0368
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	6.5491	116.6081	116.6399
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	8.3616	209.7476	213.7476
3	Perforated Plate	6.0000	4.2500	25.5000	0.1250	6.1116	224.1078	224.2328
4	Plate	10.0000	10.0000	100.0000	333.3333	0.3616	1.3073	334.6407
5	Plate	10.0000	10.0000	100.0000	333.3333	0.3616	1.3073	334.6407
6	Cover Plate	8.8125	15.8125	139.3477	0.1033	5.4509	261.8425	261.9458
Total		46.25		479.22	674.96		1082.24	1757.19
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By NRF
Checked By SFH

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	10.3616 in	S _{top} =	182.31 in ³	y-bar =	10.3616 in	S _{top} =	182.31 in ³
I _x =	1757.19 in ⁴	S _{bott.} =	169.59 in ³	I _x =	1757.19 in ⁴	S _{bott.} =	169.59 in ³
C _{top} =	9.6384 in	A =	46.2500 in ²	C _{top} =	9.6384 in	A =	46.2500 in ²
C _{bottom} =	10.3616 in	r _x =	6.1639 in	C _{bottom} =	10.3616 in	r _x =	6.1639 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	2.6875	3.6533	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.6875	1.0313	0.0176	11.5625	200.5371	200.5547	
1 (Right)	Horizontal Leg	1.3594	21.8125	29.6514	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.8125	35.7188	0.0176	11.5625	200.5371	200.5547	
2 (Left)	Horizontal Leg	1.3594	2.6875	3.6533	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.6875	1.0313	0.0176	11.5625	200.5371	200.5547	
2 (Right)	Horizontal Leg	1.3594	21.8125	29.6514	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.8125	35.7188	0.0176	11.5625	200.5371	200.5547	
3 (Left)	Perforated Plate	3.0000	3.5000	10.5000	9.0000	8.7500	229.6875	238.6875	
3 (Right)	Perforated Plate	3.0000	21.0000	63.0000	9.0000	8.7500	229.6875	238.6875	
4	Plate	10.0000	0.2500	2.5000	0.2083	12.0000	1440.0000	1440.2083	
5	Plate	10.0000	24.2500	242.5000	0.2083	12.0000	1440.0000	1440.2083	
6	Cover Plate	8.8125	12.2500	107.9531	405.5586	0.0000	0.0000	405.5586	
Total		46.25		566.56	430.00		4638.74	5068.74	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2500 in	S _{right} =	413.77 in ³	x-bar =	12.2500 in	S _{right} =	413.77 in ³
I _y =	5068.74 in ⁴	S _{left} =	413.77 in ³	I _y =	5068.74 in ⁴	S _{left} =	413.77 in ³
C _{right} =	12.2500 in	A =	46.2500 in ²	C _{right} =	12.2500 in	A =	46.2500 in ²
C _{left} =	12.2500 in	r _y =	10.4687 in	C _{left} =	12.2500 in	r _y =	10.4687 in

South Truss

Member U29-L29



Made By NRF
Checked By SFH

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

$A_4 = h = 20.0000$ in
 $B_4 = t = 0.5625$ in

Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 0.5625$ in

Cover Plate:

$A_6 = t = 0.3750$ in
 $B_6 = l = 23.5000$ in



Member U29-L29

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	16.1875	44.0098	0.0319	5.8445	92.8666	92.8985
	Vertical Leg	3.0000	18.0000	54.0000	4.0000	7.6570	175.8876	179.8876
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	6.5305	115.9487	115.9806
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	8.3430	208.8184	212.8184
3	Perforated Plate	6.0000	4.2500	25.5000	0.1250	6.0930	222.7500	222.8750
4	Plate	11.2500	10.0000	112.5000	375.0000	0.3430	1.3238	376.3238
5	Plate	11.2500	10.0000	112.5000	375.0000	0.3430	1.3238	376.3238
6	Cover Plate	8.8125	15.8125	139.3477	0.1033	5.4695	263.6269	263.7302
Total		48.75		504.22	758.29		1082.55	1840.84
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By NRF
Checked By SFH

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	10.3430 in	S _{top} =	190.62 in ³	y-bar =	10.3430 in	S _{top} =	190.62 in ³
I _x =	1840.84 in ⁴	S _{bott.} =	177.98 in ³	I _x =	1840.84 in ⁴	S _{bott.} =	177.98 in ³
C _{top} =	9.6570 in	A =	48.7500 in ²	C _{top} =	9.6570 in	A =	48.7500 in ²
C _{bottom} =	10.3430 in	r _x =	6.1450 in	C _{bottom} =	10.3430 in	r _x =	6.1450 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	2.7500	3.7383	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.7500	1.1250	0.0176	11.5625	200.5371	200.5547	
1 (Right)	Horizontal Leg	1.3594	21.8750	29.7363	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.8750	35.8125	0.0176	11.5625	200.5371	200.5547	
2 (Left)	Horizontal Leg	1.3594	2.7500	3.7383	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.7500	1.1250	0.0176	11.5625	200.5371	200.5547	
2 (Right)	Horizontal Leg	1.3594	21.8750	29.7363	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.8750	35.8125	0.0176	11.5625	200.5371	200.5547	
3 (Left)	Perforated Plate	3.0000	3.5625	10.6875	9.0000	8.7500	229.6875	238.6875	
3 (Right)	Perforated Plate	3.0000	21.0625	63.1875	9.0000	8.7500	229.6875	238.6875	
4	Plate	11.2500	0.2813	3.1641	0.2966	12.0313	1628.4485	1628.7451	
5	Plate	11.2500	24.3438	273.8672	0.2966	12.0313	1628.4485	1628.7451	
6	Cover Plate	8.8125	12.3125	108.5039	405.5586	0.0000	0.0000	405.5586	
Total		48.75		600.23	430.18		5015.63	5445.81	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3125 in	S _{right} =	442.30 in ³	x-bar =	12.3125 in	S _{right} =	442.30 in ³
I _y =	5445.81 in ⁴	S _{left} =	442.30 in ³	I _y =	5445.81 in ⁴	S _{left} =	442.30 in ³
C _{right} =	12.3125 in	A =	48.7500 in ²	C _{right} =	12.3125 in	A =	48.7500 in ²
C _{left} =	12.3125 in	r _y =	10.5692 in	C _{left} =	12.3125 in	r _y =	10.5692 in

South Truss

Member U30-L30



Made By NRF
Checked By SFH

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.6250$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.6250$ in

Perforated Plate:

$A_3 = t = 0.6250$ in
 $B_3 = l = 5.2500$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 22.0000$ in

Left Web Plate:

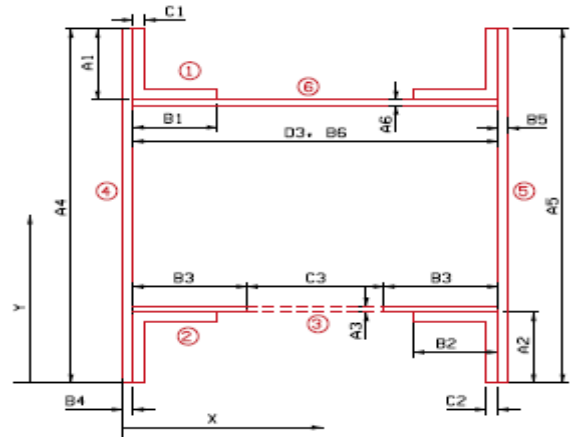
$A_4 = h = 24.0000$ in
 $B_4 = t = 1.3750$ in

Right Web Plate:

$A_5 = h = 24.0000$ in
 $B_5 = t = 1.3750$ in

Cover Plate:

$A_6 = t = 0.5000$ in
 $B_6 = l = 22.0000$ in



Member U30-L30

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	4.2188	20.3125	85.6934	0.1373	7.9713	268.0673	268.2046
	Vertical Leg	5.0000	22.0000	110.0000	6.6667	9.6588	466.4636	473.1303
2	Horizontal Leg	4.2188	3.6875	15.5566	0.1373	8.6537	315.9264	316.0637
	Vertical Leg	5.0000	2.0000	10.0000	6.6667	10.3412	534.7004	541.3671
3	Perforated Plate	6.5625	4.3125	28.3008	0.2136	8.0287	423.0172	423.2309
4	Plate	33.0000	12.0000	396.0000	1584.0000	0.3412	3.8414	1587.8414
5	Plate	33.0000	12.0000	396.0000	1584.0000	0.3412	3.8414	1587.8414
6	Cover Plate	11.0000	19.7500	217.2500	0.2292	7.4088	603.7961	604.0252
Total		102.00		1258.80	3182.05		2619.65	5801.70
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00	0.00	0.00	0.00



Made By NRF
Checked By SFH

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	12.3412 in	S _{top} =	497.62 in ³	y-bar =	12.3412 in	S _{top} =	497.62 in ³
I _x =	5801.70 in ⁴	S _{bott.} =	470.11 in ³	I _x =	5801.70 in ⁴	S _{bott.} =	470.11 in ³
C _{top} =	11.6588 in	A =	102.0000 in ²	C _{top} =	11.6588 in	A =	102.0000 in ²
C _{bottom} =	12.3412 in	r _x =	7.5418 in	C _{bottom} =	12.3412 in	r _x =	7.5418 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.1094	3.6875	7.7783	2.0023	8.6875	159.2001	161.2024	
	Vertical Leg	2.5000	1.6875	4.2188	0.0814	10.6875	285.5566	285.6380	
1 (Right)	Horizontal Leg	2.1094	21.0625	44.4287	2.0023	8.6875	159.2001	161.2024	
	Vertical Leg	2.5000	23.0625	57.6563	0.0814	10.6875	285.5566	285.6380	
2 (Left)	Horizontal Leg	2.1094	3.6875	7.7783	2.0023	8.6875	159.2001	161.2024	
	Vertical Leg	2.5000	1.6875	4.2188	0.0814	10.6875	285.5566	285.6380	
2 (Right)	Horizontal Leg	2.1094	21.0625	44.4287	2.0023	8.6875	159.2001	161.2024	
	Vertical Leg	2.5000	23.0625	57.6563	0.0814	10.6875	285.5566	285.6380	
3 (Left)	Perforated Plate	3.2813	4.0000	13.1250	7.5366	8.3750	230.1489	237.6855	
3 (Right)	Perforated Plate	3.2813	20.7500	68.0859	7.5366	8.3750	230.1489	237.6855	
4	Plate	33.0000	0.6875	22.6875	5.1992	11.6875	4507.7227	4512.9219	
5	Plate	33.0000	24.0625	794.0625	5.1992	11.6875	4507.7227	4512.9219	
6	Cover Plate	11.0000	12.3750	136.1250	443.6667	0.0000	0.0000	443.6667	
Total		102.00		1262.25	477.47		11254.77	11732.24	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3750 in	S _{right} =	948.06 in ³	x-bar =	12.3750 in	S _{right} =	948.06 in ³
I _y =	11732.24 in ⁴	S _{left} =	948.06 in ³	I _y =	11732.24 in ⁴	S _{left} =	948.06 in ³
C _{right} =	12.3750 in	A =	102.0000 in ²	C _{right} =	12.3750 in	A =	102.0000 in ²
C _{left} =	12.3750 in	r _y =	10.7248 in	C _{left} =	12.3750 in	r _y =	10.7248 in

South Truss

Member U31-L31



Made By NRF
Checked By SFH

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.5000$ in

Perforated Plate:

$A_3 = t = 0.6250$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

$A_4 = h = 24.0000$ in
 $B_4 = t = 0.5000$ in

Right Web Plate:

$A_5 = h = 24.0000$ in
 $B_5 = t = 0.5000$ in

Cover Plate:

$A_6 = t = 0.5000$ in
 $B_6 = l = 23.5000$ in



Member U31-L31

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.5000	20.2500	70.8750	0.0729	7.6765	206.2504	206.3233
	Vertical Leg	4.0000	22.0000	88.0000	5.3333	9.4265	355.4358	360.7691
2	Horizontal Leg	3.5000	3.7500	13.1250	0.0729	8.8235	272.4894	272.5623
	Vertical Leg	4.0000	2.0000	8.0000	5.3333	10.5735	447.1954	452.5288
3	Perforated Plate	7.5000	4.3125	32.3438	0.2441	8.2610	511.8306	512.0748
4	Plate	12.0000	12.0000	144.0000	576.0000	0.5735	3.9468	579.9468
5	Plate	12.0000	12.0000	144.0000	576.0000	0.5735	3.9468	579.9468
6	Cover Plate	11.7500	19.7500	232.0625	0.2448	7.1765	605.1507	605.3954
Total		58.25		732.41	1163.30		2406.25	3569.55
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00	0.00	0.00	0.00



Made By NRF
Checked By SFH

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	12.5735 in	S _{top} =	312.39 in ³	y-bar =	12.5735 in	S _{top} =	312.39 in ³
I _x =	3569.55 in ⁴	S _{bott.} =	283.89 in ³	I _x =	3569.55 in ⁴	S _{bott.} =	283.89 in ³
C _{top} =	11.4265 in	A =	58.2500 in ²	C _{top} =	11.4265 in	A =	58.2500 in ²
C _{bottom} =	12.5735 in	r _x =	7.8281 in	C _{bottom} =	12.5735 in	r _x =	7.8281 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.7500	2.7500	4.8125	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	0.7500	1.5000	0.0417	11.5000	264.5000	264.5417	
1 (Right)	Horizontal Leg	1.7500	21.7500	38.0625	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	23.7500	47.5000	0.0417	11.5000	264.5000	264.5417	
2 (Left)	Horizontal Leg	1.7500	2.7500	4.8125	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	0.7500	1.5000	0.0417	11.5000	264.5000	264.5417	
2 (Right)	Horizontal Leg	1.7500	21.7500	38.0625	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	23.7500	47.5000	0.0417	11.5000	264.5000	264.5417	
3 (Left)	Perforated Plate	3.7500	3.5000	13.1250	11.2500	8.7500	287.1094	298.3594	
3 (Right)	Perforated Plate	3.7500	21.0000	78.7500	11.2500	8.7500	287.1094	298.3594	
4	Plate	12.0000	0.2500	3.0000	0.2500	12.0000	1728.0000	1728.2500	
5	Plate	12.0000	24.2500	291.0000	0.2500	12.0000	1728.0000	1728.2500	
6	Cover Plate	11.7500	12.2500	143.9375	540.7448	0.0000	0.0000	540.7448	
Total		58.25		713.56	571.06		5719.97	6291.03	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2500 in	S _{right} =	513.55 in ³	x-bar =	12.2500 in	S _{right} =	513.55 in ³
I _y =	6291.03 in ⁴	S _{left} =	513.55 in ³	I _y =	6291.03 in ⁴	S _{left} =	513.55 in ³
C _{right} =	12.2500 in	A =	58.2500 in ²	C _{right} =	12.2500 in	A =	58.2500 in ²
C _{left} =	12.2500 in	r _y =	10.3923 in	C _{left} =	12.2500 in	r _y =	10.3923 in



Made By NRF
Checked By SFH

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

$A_4 = h = 22.0000$ in
 $B_4 = t = 0.6250$ in

Right Web Plate:

$A_5 = h = 22.0000$ in
 $B_5 = t = 0.6250$ in

Cover Plate:

$A_6 = t = 0.3750$ in
 $B_6 = l = 23.5000$ in



Member U32-L32

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	18.1875	49.4473	0.0319	6.8241	126.6060	126.6379
	Vertical Leg	3.0000	20.0000	60.0000	4.0000	8.6366	223.7703	227.7703
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	7.5509	155.0143	155.0462
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	9.3634	263.0223	267.0223
3	Perforated Plate	6.0000	4.2500	25.5000	0.1250	7.1134	303.6066	303.7316
4	Plate	13.7500	11.0000	151.2500	554.5833	0.3634	1.8163	556.3996
5	Plate	13.7500	11.0000	151.2500	554.5833	0.3634	1.8163	556.3996
6	Cover Plate	8.8125	17.8125	156.9727	0.1033	6.4491	366.5146	366.6179
Total		53.75		610.79	1117.46		1442.17	2559.63
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By NRF
Checked By SFH

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	11.3634 in	S _{top} =	240.64 in ³	y-bar =	11.3634 in	S _{top} =	240.64 in ³
I _x =	2559.63 in ⁴	S _{bott.} =	225.25 in ³	I _x =	2559.63 in ⁴	S _{bott.} =	225.25 in ³
C _{top} =	10.6366 in	A =	53.7500 in ²	C _{top} =	10.6366 in	A =	53.7500 in ²
C _{bottom} =	11.3634 in	r _x =	6.9008 in	C _{bottom} =	11.3634 in	r _x =	6.9008 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	2.8125	3.8232	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.8125	1.2188	0.0176	11.5625	200.5371	200.5547	
1 (Right)	Horizontal Leg	1.3594	21.9375	29.8213	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.9375	35.9063	0.0176	11.5625	200.5371	200.5547	
2 (Left)	Horizontal Leg	1.3594	2.8125	3.8232	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.8125	1.2188	0.0176	11.5625	200.5371	200.5547	
2 (Right)	Horizontal Leg	1.3594	21.9375	29.8213	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.9375	35.9063	0.0176	11.5625	200.5371	200.5547	
3 (Left)	Perforated Plate	3.0000	3.6250	10.8750	9.0000	8.7500	229.6875	238.6875	
3 (Right)	Perforated Plate	3.0000	21.1250	63.3750	9.0000	8.7500	229.6875	238.6875	
4	Plate	13.7500	0.3125	4.2969	0.4476	12.0625	2000.6787	2001.1263	
5	Plate	13.7500	24.4375	336.0156	0.4476	12.0625	2000.6787	2001.1263	
6	Cover Plate	8.8125	12.3750	109.0547	405.5586	0.0000	0.0000	405.5586	
Total		53.75		665.16	430.48		5760.09	6190.57	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3750 in	S _{right} =	500.25 in ³	x-bar =	12.3750 in	S _{right} =	500.25 in ³
I _y =	6190.57 in ⁴	S _{left} =	500.25 in ³	I _y =	6190.57 in ⁴	S _{left} =	500.25 in ³
C _{right} =	12.3750 in	A =	53.7500 in ²	C _{right} =	12.3750 in	A =	53.7500 in ²
C _{left} =	12.3750 in	r _y =	10.7319 in	C _{left} =	12.3750 in	r _y =	10.7319 in

South Truss

Member U33-L33



Made By NRF
Checked By SFH

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

$A_4 = h = 20.0000$ in
 $B_4 = t = 0.5000$ in

Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 0.5000$ in

Cover Plate:

$A_6 = t = 0.3750$ in
 $B_6 = l = 23.5000$ in



Member U33-L33

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	16.1875	44.0098	0.0319	5.8259	92.2783	92.3102
	Vertical Leg	3.0000	18.0000	54.0000	4.0000	7.6384	175.0368	179.0368
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	6.5491	116.6081	116.6399
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	8.3616	209.7476	213.7476
3	Perforated Plate	6.0000	4.2500	25.5000	0.1250	6.1116	224.1078	224.2328
4	Plate	10.0000	10.0000	100.0000	333.3333	0.3616	1.3073	334.6407
5	Plate	10.0000	10.0000	100.0000	333.3333	0.3616	1.3073	334.6407
6	Cover Plate	8.8125	15.8125	139.3477	0.1033	5.4509	261.8425	261.9458
Total		46.25		479.22	674.96		1082.24	1757.19
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By NRF
Checked By SFH

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	10.3616 in	S _{top} =	182.31 in ³	y-bar =	10.3616 in	S _{top} =	182.31 in ³
I _x =	1757.19 in ⁴	S _{bott.} =	169.59 in ³	I _x =	1757.19 in ⁴	S _{bott.} =	169.59 in ³
C _{top} =	9.6384 in	A =	46.2500 in ²	C _{top} =	9.6384 in	A =	46.2500 in ²
C _{bottom} =	10.3616 in	r _x =	6.1639 in	C _{bottom} =	10.3616 in	r _x =	6.1639 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	2.6875	3.6533	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.6875	1.0313	0.0176	11.5625	200.5371	200.5547	
1 (Right)	Horizontal Leg	1.3594	21.8125	29.6514	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.8125	35.7188	0.0176	11.5625	200.5371	200.5547	
2 (Left)	Horizontal Leg	1.3594	2.6875	3.6533	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.6875	1.0313	0.0176	11.5625	200.5371	200.5547	
2 (Right)	Horizontal Leg	1.3594	21.8125	29.6514	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.8125	35.7188	0.0176	11.5625	200.5371	200.5547	
3 (Left)	Perforated Plate	3.0000	3.5000	10.5000	9.0000	8.7500	229.6875	238.6875	
3 (Right)	Perforated Plate	3.0000	21.0000	63.0000	9.0000	8.7500	229.6875	238.6875	
4	Plate	10.0000	0.2500	2.5000	0.2083	12.0000	1440.0000	1440.2083	
5	Plate	10.0000	24.2500	242.5000	0.2083	12.0000	1440.0000	1440.2083	
6	Cover Plate	8.8125	12.2500	107.9531	405.5586	0.0000	0.0000	405.5586	
Total		46.25		566.56	430.00		4638.74	5068.74	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2500 in	S _{right} =	413.77 in ³	x-bar =	12.2500 in	S _{right} =	413.77 in ³
I _y =	5068.74 in ⁴	S _{left} =	413.77 in ³	I _y =	5068.74 in ⁴	S _{left} =	413.77 in ³
C _{right} =	12.2500 in	A =	46.2500 in ²	C _{right} =	12.2500 in	A =	46.2500 in ²
C _{left} =	12.2500 in	r _y =	10.4687 in	C _{left} =	12.2500 in	r _y =	10.4687 in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam **CB24x 100**

- $A_1 = t_w = 0.4700$ in
- $A_2 = t_f = 0.7670$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 12.0000$ in



Member U34-L34

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		10.5590	6.0000	63.3541	0.1944	0.0000	0.0000	0.1944
2	Flange Plates		18.4080	6.0000	110.4480	220.8960	0.0000	0.0000	220.8960
Total			28.97		173.80	221.09		0.00	221.09
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	6.0000	in	$S_{top} = 36.85$	in^3	y-bar =	6.0000	in	$S_{top} = 36.85$	in^3		
$I_x =$	221.09	in^4	$S_{bott.} = 36.85$	in^3	$I_x =$	221.09	in^4	$S_{bott.} = 36.85$	in^3		
$c_{top} =$	6.0000	in	A =	28.9670	in^2	$c_{top} =$	6.0000	in	A =	28.9670	in^2
$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in	$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in



Made By NRF
Checked By SFH

Date 1/19/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	12.0000	126.7082	444.1134	0.0000	0.0000	444.1134
2	Left Flange		9.2040	0.3835	3.5297	0.4512	11.6165	1242.0160	1242.4673
	Right Flange		9.2040	23.6165	217.3663	0.4512	11.6165	1242.0160	1242.4673
Total			28.97		347.60	445.02		2484.03	2929.05
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.0000	in	S _{right} =	244.09	in ³	x-bar =	12.0000	in	S _{right} =	244.09	in ³
I _y =	2929.05	in ⁴	S _{left} =	244.09	in ³	I _y =	2929.05	in ⁴	S _{left} =	244.09	in ³
C _{right} =	12.0000	in	A =	28.9670	in ²	C _{right} =	12.0000	in	A =	28.9670	in ²
C _{left} =	12.0000	in	r _y =	10.0557	in	C _{left} =	12.0000	in	r _y =	10.0557	in



Made By NRF
Checked By SFH

Date 1/20/2012
Date 1/25/2012

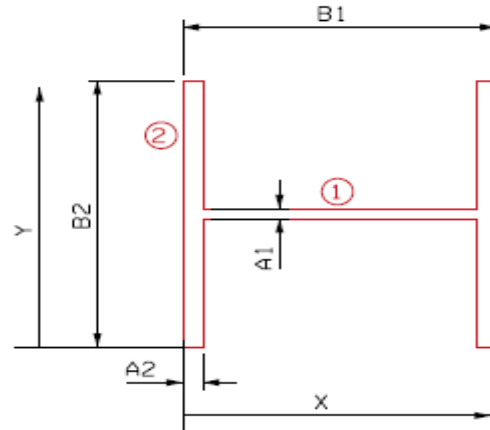
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam **CB24x 80**

- $A_1 = t_w = 0.4530$ in
- $A_2 = t_f = 0.7400$ in
- $B_1 = d = 24.1200$ in
- $B_2 = b_f = 9.0410$ in



Member U35-L35

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x, gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		10.2559	4.5205	46.3619	0.1754	0.0000	0.0000	0.1754
2	Flange Plates		13.3807	4.5205	60.4874	91.1444	0.0000	0.0000	91.1444
Total			23.64		106.85	91.32		0.00	91.32
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	4.5205	in	$S_{top} = 20.20$	in^3	y-bar =	4.5205	in	$S_{top} = 20.20$	in^3		
$I_x =$	91.32	in^4	$S_{bott.} = 20.20$	in^3	$I_x =$	91.32	in^4	$S_{bott.} = 20.20$	in^3		
$c_{top} =$	4.5205	in	A =	23.6366	in^2	$c_{top} =$	4.5205	in	A =	23.6366	in^2
$c_{bottom} =$	4.5205	in	$r_x =$	1.9656	in	$c_{bottom} =$	4.5205	in	$r_x =$	1.9656	in



Made By NRF
Checked By SFH

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate	10.2559	12.0600	123.6864	438.0727	0.0000	0.0000	438.0727
2	Left Flange	6.6903	0.3700	2.4754	0.3053	11.6900	914.2758	914.5811
	Right Flange	6.6903	23.7500	158.8956	0.3053	11.6900	914.2758	914.5811
Total		23.64		285.06	438.68		1828.55	2267.23
Section Losses		A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.0600	in	S _{right} = 188.00 in ³	x-bar =	12.0600	in	S _{right} = 188.00 in ³
I _y =	2267.23	in ⁴	S _{left} = 188.00 in ³	I _y =	2267.23	in ⁴	S _{left} = 188.00 in ³
C _{right} =	12.0600	in	A = 23.6366 in ²	C _{right} =	12.0600	in	A = 23.6366 in ²
C _{left} =	12.0600	in	r _y = 9.7939 in	C _{left} =	12.0600	in	r _y = 9.7939 in



Made By KMW
Checked By ADK

Date 1/30/2012
Date 2/16/2012

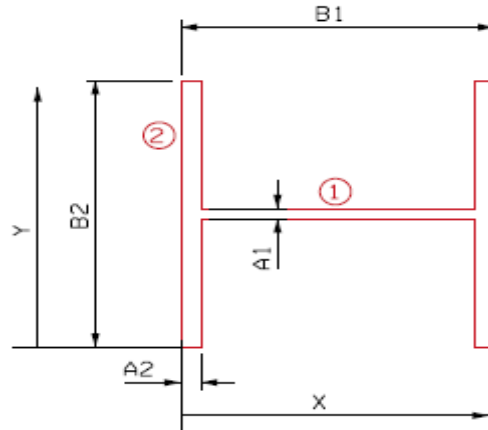
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 150

- $A_1 = t_w = 0.6330$ in
- $A_2 = t_f = 1.0480$ in
- $B_1 = d = 24.5620$ in
- $B_2 = b_f = 14.0630$ in



Member U36-L36

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		14.2210	7.0315	99.9948	0.4748	0.0000	0.0000	0.4748
2	Flange Plates		29.4760	7.0315	207.2608	485.7848	0.0000	0.0000	485.7848
Total			43.70		307.26	486.26		0.00	486.26
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0625	7.0000	-0.4375	3.5000	-1.5313	-1.7865	3.5848	-5.6222	-7.4087
2	0.0625	2.0000	-0.1250	1.0000	-0.1250	-0.0417	6.0848	-4.6281	-4.6698
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.56		-1.66	-1.83		-10.25	-12.08

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	7.0315	in	$S_{top} = 69.15$	in^3	y-bar =	7.0848	in	$S_{top} = 67.95$	in^3		
$I_x =$	486.26	in^4	$S_{bott.} = 69.15$	in^3	$I_x =$	474.18	in^4	$S_{bott.} = 66.93$	in^3		
$c_{top} =$	7.0315	in	A =	43.6970	in^2	$c_{top} =$	6.9782	in	A =	43.1345	in^2
$c_{bottom} =$	7.0315	in	$r_x =$	3.3359	in	$c_{bottom} =$	7.0848	in	$r_x =$	3.3156	in



Made By KMW
Checked By ADK

Date 1/30/2012
Date 2/16/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.2210	12.2810	174.6478	598.1357	0.0000	0.0000	598.1357
2	Left Flange		14.7380	0.5240	7.7227	1.3489	11.7570	2037.1936	2038.5425
	Right Flange		14.7380	24.0380	354.2726	1.3489	11.7570	2037.1936	2038.5425
Total			43.70		536.64	600.83		4074.39	4675.22
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	7.0000	0.0625	-0.4375	0.0313	-0.0137	-0.0001	12.4066	-67.3420	-67.3422
2	2.0000	0.0625	-0.1250	1.0168	-0.1271	0.0000	11.4211	-16.3053	-16.3053
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.56		-0.14	0.00		-83.65	-83.65

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.2810	in	S _{right} =	380.69	in ³	x-bar =	12.4379	in	S _{right} =	378.71	in ³
I _y =	4675.22	in ⁴	S _{left} =	380.69	in ³	I _y =	4591.57	in ⁴	S _{left} =	369.16	in ³
C _{right} =	12.2810	in	A =	43.6970	in ²	C _{right} =	12.1241	in	A =	43.1345	in ²
C _{left} =	12.2810	in	r _y =	10.3437	in	C _{left} =	12.4379	in	r _y =	10.3174	in

South Truss

Member U37-L37



Made By NRF
Checked By SFH

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

$A_4 = h = 20.0000$ in
 $B_4 = t = 0.5625$ in

Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 0.5625$ in

Cover Plate:

$A_6 = t = 0.3750$ in
 $B_6 = l = 23.5000$ in



Member U37-L37

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	16.1875	44.0098	0.0319	5.8445	92.8666	92.8985
	Vertical Leg	3.0000	18.0000	54.0000	4.0000	7.6570	175.8876	179.8876
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	6.5305	115.9487	115.9806
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	8.3430	208.8184	212.8184
3	Perforated Plate	6.0000	4.2500	25.5000	0.1250	6.0930	222.7500	222.8750
4	Plate	11.2500	10.0000	112.5000	375.0000	0.3430	1.3238	376.3238
5	Plate	11.2500	10.0000	112.5000	375.0000	0.3430	1.3238	376.3238
6	Cover Plate	8.8125	15.8125	139.3477	0.1033	5.4695	263.6269	263.7302
Total		48.75		504.22	758.29		1082.55	1840.84
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By NRF
Checked By SFH

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	10.3430 in	S _{top} =	190.62 in ³	y-bar =	10.3430 in	S _{top} =	190.62 in ³
I _x =	1840.84 in ⁴	S _{bott.} =	177.98 in ³	I _x =	1840.84 in ⁴	S _{bott.} =	177.98 in ³
C _{top} =	9.6570 in	A =	48.7500 in ²	C _{top} =	9.6570 in	A =	48.7500 in ²
C _{bottom} =	10.3430 in	r _x =	6.1450 in	C _{bottom} =	10.3430 in	r _x =	6.1450 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	2.7500	3.7383	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.7500	1.1250	0.0176	11.5625	200.5371	200.5547	
1 (Right)	Horizontal Leg	1.3594	21.8750	29.7363	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.8750	35.8125	0.0176	11.5625	200.5371	200.5547	
2 (Left)	Horizontal Leg	1.3594	2.7500	3.7383	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.7500	1.1250	0.0176	11.5625	200.5371	200.5547	
2 (Right)	Horizontal Leg	1.3594	21.8750	29.7363	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.8750	35.8125	0.0176	11.5625	200.5371	200.5547	
3 (Left)	Perforated Plate	3.0000	3.5625	10.6875	9.0000	8.7500	229.6875	238.6875	
3 (Right)	Perforated Plate	3.0000	21.0625	63.1875	9.0000	8.7500	229.6875	238.6875	
4	Plate	11.2500	0.2813	3.1641	0.2966	12.0313	1628.4485	1628.7451	
5	Plate	11.2500	24.3438	273.8672	0.2966	12.0313	1628.4485	1628.7451	
6	Cover Plate	8.8125	12.3125	108.5039	405.5586	0.0000	0.0000	405.5586	
Total		48.75		600.23	430.18		5015.63	5445.81	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3125 in	S _{right} =	442.30 in ³	x-bar =	12.3125 in	S _{right} =	442.30 in ³
I _y =	5445.81 in ⁴	S _{left} =	442.30 in ³	I _y =	5445.81 in ⁴	S _{left} =	442.30 in ³
C _{right} =	12.3125 in	A =	48.7500 in ²	C _{right} =	12.3125 in	A =	48.7500 in ²
C _{left} =	12.3125 in	r _y =	10.5692 in	C _{left} =	12.3125 in	r _y =	10.5692 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2011

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

$A_4 = h = 22.0000$ in
 $B_4 = t = 0.6250$ in

Right Web Plate:

$A_5 = h = 22.0000$ in
 $B_5 = t = 0.6250$ in

Cover Plate:

$A_6 = t = 0.3750$ in
 $B_6 = l = 23.5000$ in



Member U38-L38

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	18.1875	49.4473	0.0319	6.8241	126.6060	126.6379
	Vertical Leg	3.0000	20.0000	60.0000	4.0000	8.6366	223.7703	227.7703
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	7.5509	155.0143	155.0462
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	9.3634	263.0223	267.0223
3	Perforated Plate	6.0000	4.2500	25.5000	0.1250	7.1134	303.6066	303.7316
4	Plate	13.7500	11.0000	151.2500	554.5833	0.3634	1.8163	556.3996
5	Plate	13.7500	11.0000	151.2500	554.5833	0.3634	1.8163	556.3996
6	Cover Plate	8.8125	17.8125	156.9727	0.1033	6.4491	366.5146	366.6179
Total		53.75		610.79	1117.46		1442.17	2559.63
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00	0.00	0.00	0.00



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2011

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	11.3634 in	S _{top} =	240.64 in ³	y-bar =	11.3634 in	S _{top} =	240.64 in ³
I _x =	2559.63 in ⁴	S _{bott.} =	225.25 in ³	I _x =	2559.63 in ⁴	S _{bott.} =	225.25 in ³
C _{top} =	10.6366 in	A =	53.7500 in ²	C _{top} =	10.6366 in	A =	53.7500 in ²
C _{bottom} =	11.3634 in	r _x =	6.9008 in	C _{bottom} =	11.3634 in	r _x =	6.9008 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	2.8125	3.8232	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.8125	1.2188	0.0176	11.5625	200.5371	200.5547	
1 (Right)	Horizontal Leg	1.3594	21.9375	29.8213	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.9375	35.9063	0.0176	11.5625	200.5371	200.5547	
2 (Left)	Horizontal Leg	1.3594	2.8125	3.8232	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.8125	1.2188	0.0176	11.5625	200.5371	200.5547	
2 (Right)	Horizontal Leg	1.3594	21.9375	29.8213	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.9375	35.9063	0.0176	11.5625	200.5371	200.5547	
3 (Left)	Perforated Plate	3.0000	3.6250	10.8750	9.0000	8.7500	229.6875	238.6875	
3 (Right)	Perforated Plate	3.0000	21.1250	63.3750	9.0000	8.7500	229.6875	238.6875	
4	Plate	13.7500	0.3125	4.2969	0.4476	12.0625	2000.6787	2001.1263	
5	Plate	13.7500	24.4375	336.0156	0.4476	12.0625	2000.6787	2001.1263	
6	Cover Plate	8.8125	12.3750	109.0547	405.5586	0.0000	0.0000	405.5586	
Total		53.75		665.16	430.48		5760.09	6190.57	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3750 in	S _{right} =	500.25 in ³	x-bar =	12.3750 in	S _{right} =	500.25 in ³
I _y =	6190.57 in ⁴	S _{left} =	500.25 in ³	I _y =	6190.57 in ⁴	S _{left} =	500.25 in ³
C _{right} =	12.3750 in	A =	53.7500 in ²	C _{right} =	12.3750 in	A =	53.7500 in ²
C _{left} =	12.3750 in	r _y =	10.7319 in	C _{left} =	12.3750 in	r _y =	10.7319 in

South Truss

Member U40-L40



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/26/2011

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.6250$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.6250$ in

Perforated Plate:

$A_3 = t = 0.3750$ in
 $B_3 = l = 5.2500$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 22.0000$ in

Left Web Plate:

$A_4 = h = 26.0000$ in
 $B_4 = t = 1.4375$ in

Right Web Plate:

$A_5 = h = 26.0000$ in
 $B_5 = t = 1.4375$ in

Cover Plate:

$A_6 = t = 0.5000$ in
 $B_6 = l = 22.0000$ in



Member U40-L40

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	4.2188	22.3125	94.1309	0.1373	8.7432	322.4995	322.6368
	Vertical Leg	5.0000	24.0000	120.0000	6.6667	10.4307	544.0021	550.6688
2	Horizontal Leg	4.2188	3.6875	15.5566	0.1373	9.8818	411.9571	412.0945
	Vertical Leg	5.0000	2.0000	10.0000	6.6667	11.5693	669.2384	675.9051
3	Perforated Plate	3.9375	4.1875	16.4883	0.0461	9.3818	346.5683	346.6144
4	Plate	37.3750	13.0000	485.8750	2105.4583	0.5693	12.1114	2117.5698
5	Plate	37.3750	13.0000	485.8750	2105.4583	0.5693	12.1114	2117.5698
6	Cover Plate	11.0000	21.7500	239.2500	0.2292	8.1807	736.1703	736.3995
Total		108.13		1467.18	4224.80		3054.66	7279.46
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/26/2011

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	13.5693 in	S _{top} =	585.60 in ³	y-bar =	13.5693 in	S _{top} =	585.60 in ³
I _x =	7279.46 in ⁴	S _{bott.} =	536.47 in ³	I _x =	7279.46 in ⁴	S _{bott.} =	536.47 in ³
C _{top} =	12.4307 in	A =	108.1250 in ²	C _{top} =	12.4307 in	A =	108.1250 in ²
C _{bottom} =	13.5693 in	r _x =	8.2051 in	C _{bottom} =	13.5693 in	r _x =	8.2051 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.1094	3.7500	7.9102	2.0023	8.6875	159.2001	161.2024	
	Vertical Leg	2.5000	1.7500	4.3750	0.0814	10.6875	285.5566	285.6380	
1 (Right)	Horizontal Leg	2.1094	21.1250	44.5605	2.0023	8.6875	159.2001	161.2024	
	Vertical Leg	2.5000	23.1250	57.8125	0.0814	10.6875	285.5566	285.6380	
2 (Left)	Horizontal Leg	2.1094	3.7500	7.9102	2.0023	8.6875	159.2001	161.2024	
	Vertical Leg	2.5000	1.7500	4.3750	0.0814	10.6875	285.5566	285.6380	
2 (Right)	Horizontal Leg	2.1094	21.1250	44.5605	2.0023	8.6875	159.2001	161.2024	
	Vertical Leg	2.5000	23.1250	57.8125	0.0814	10.6875	285.5566	285.6380	
3 (Left)	Perforated Plate	1.9688	4.0625	7.9980	4.5220	8.3750	138.0894	142.6113	
3 (Right)	Perforated Plate	1.9688	20.8125	40.9746	4.5220	8.3750	138.0894	142.6113	
4	Plate	37.3750	0.7188	26.8633	6.4360	11.7188	5132.6752	5139.1112	
5	Plate	37.3750	24.1563	902.8398	6.4360	11.7188	5132.6752	5139.1112	
6	Cover Plate	11.0000	12.4375	136.8125	443.6667	0.0000	0.0000	443.6667	
Total		108.13		1344.80	473.92		12320.56	12794.47	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.4375 in	S _{right} =	1028.70 in ³	x-bar =	12.4375 in	S _{right} =	1028.70 in ³
I _y =	12794.47 in ⁴	S _{left} =	1028.70 in ³	I _y =	12794.47 in ⁴	S _{left} =	1028.70 in ³
C _{right} =	12.4375 in	A =	108.1250 in ²	C _{right} =	12.4375 in	A =	108.1250 in ²
C _{left} =	12.4375 in	r _y =	10.8780 in	C _{left} =	12.4375 in	r _y =	10.8780 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2011

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

$A_4 = h = 24.0000$ in
 $B_4 = t = 0.6875$ in

Right Web Plate:

$A_5 = h = 24.0000$ in
 $B_5 = t = 0.6875$ in

Cover Plate:

$A_6 = t = 0.3750$ in
 $B_6 = l = 23.5000$ in



Member U39-L39

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	20.1875	54.8848	0.0319	7.8103	165.8469	165.8788
	Vertical Leg	3.0000	22.0000	66.0000	4.0000	9.6228	277.7962	281.7962
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	8.5647	199.4303	199.4621
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	10.3772	323.0573	327.0573
3	Perforated Plate	6.0000	4.2500	25.5000	0.1250	8.1272	396.3059	396.4309
4	Plate	16.5000	12.0000	198.0000	792.0000	0.3772	2.3473	794.3473
5	Plate	16.5000	12.0000	198.0000	792.0000	0.3772	2.3473	794.3473
6	Cover Plate	8.8125	19.8125	174.5977	0.1033	7.4353	487.1907	487.2939
Total		59.25		733.35	1592.29		1854.32	3446.61
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2011

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	12.3772 in	S _{top} =	296.54 in ³	y-bar =	12.3772 in	S _{top} =	296.54 in ³
I _x =	3446.61 in ⁴	S _{bott.} =	278.47 in ³	I _x =	3446.61 in ⁴	S _{bott.} =	278.47 in ³
C _{top} =	11.6228 in	A =	59.2500 in ²	C _{top} =	11.6228 in	A =	59.2500 in ²
C _{bottom} =	12.3772 in	r _x =	7.6270 in	C _{bottom} =	12.3772 in	r _x =	7.6270 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	2.8750	3.9082	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.8750	1.3125	0.0176	11.5625	200.5371	200.5547	
1 (Right)	Horizontal Leg	1.3594	22.0000	29.9063	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	24.0000	36.0000	0.0176	11.5625	200.5371	200.5547	
2 (Left)	Horizontal Leg	1.3594	2.8750	3.9082	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.8750	1.3125	0.0176	11.5625	200.5371	200.5547	
2 (Right)	Horizontal Leg	1.3594	22.0000	29.9063	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	24.0000	36.0000	0.0176	11.5625	200.5371	200.5547	
3 (Left)	Perforated Plate	3.0000	3.6875	11.0625	9.0000	8.7500	229.6875	238.6875	
3 (Right)	Perforated Plate	3.0000	21.1875	63.5625	9.0000	8.7500	229.6875	238.6875	
4	Plate	16.5000	0.3438	5.6719	0.6499	12.0938	2413.2700	2413.9199	
5	Plate	16.5000	24.5313	404.7656	0.6499	12.0938	2413.2700	2413.9199	
6	Cover Plate	8.8125	12.4375	109.6055	405.5586	0.0000	0.0000	405.5586	
Total		59.25		736.92	430.88		6585.28	7016.16	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.4375 in	S _{right} =	564.11 in ³	x-bar =	12.4375 in	S _{right} =	564.11 in ³
I _y =	7016.16 in ⁴	S _{left} =	564.11 in ³	I _y =	7016.16 in ⁴	S _{left} =	564.11 in ³
C _{right} =	12.4375 in	A =	59.2500 in ²	C _{right} =	12.4375 in	A =	59.2500 in ²
C _{left} =	12.4375 in	r _y =	10.8819 in	C _{left} =	12.4375 in	r _y =	10.8819 in

South Truss

Member U41-L41



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

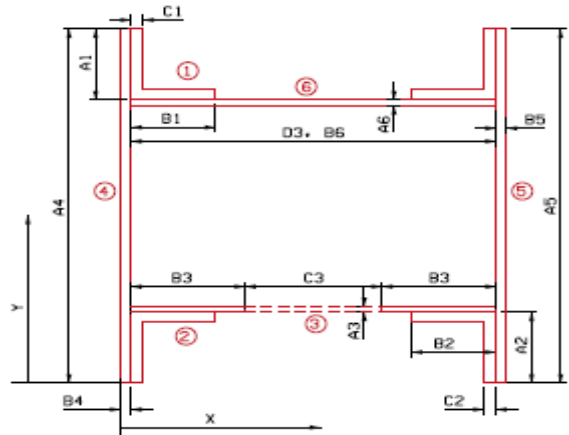
$A_4 = h = 24.0000$ in
 $B_4 = t = 0.5625$ in

Right Web Plate:

$A_5 = h = 24.0000$ in
 $B_5 = t = 0.5625$ in

Cover Plate:

$A_6 = t = 0.3750$ in
 $B_6 = l = 23.5000$ in



Member U41-L41

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	20.1875	54.8848	0.0319	7.7678	164.0470	164.0788
	Vertical Leg	3.0000	22.0000	66.0000	4.0000	9.5803	275.3479	279.3479
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	8.6072	201.4144	201.4462
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	10.4197	325.7088	329.7088
3	Perforated Plate	6.0000	4.2500	25.5000	0.1250	8.1697	400.4615	400.5865
4	Plate	13.5000	12.0000	162.0000	648.0000	0.4197	2.3777	650.3777
5	Plate	13.5000	12.0000	162.0000	648.0000	0.4197	2.3777	650.3777
6	Cover Plate	8.8125	19.8125	174.5977	0.1033	7.3928	481.6372	481.7405
Total		53.25		661.35	1304.29		1853.37	3157.66
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	12.4197 in	S _{top} =	272.67 in ³	y-bar =	12.4197 in	S _{top} =	272.67 in ³
I _x =	3157.66 in ⁴	S _{bott.} =	254.25 in ³	I _x =	3157.66 in ⁴	S _{bott.} =	254.25 in ³
C _{top} =	11.5803 in	A =	53.2500 in ²	C _{top} =	11.5803 in	A =	53.2500 in ²
C _{bottom} =	12.4197 in	r _x =	7.7006 in	C _{bottom} =	12.4197 in	r _x =	7.7006 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	2.7500	3.7383	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.7500	1.1250	0.0176	11.5625	200.5371	200.5547	
1 (Right)	Horizontal Leg	1.3594	21.8750	29.7363	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.8750	35.8125	0.0176	11.5625	200.5371	200.5547	
2 (Left)	Horizontal Leg	1.3594	2.7500	3.7383	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.7500	1.1250	0.0176	11.5625	200.5371	200.5547	
2 (Right)	Horizontal Leg	1.3594	21.8750	29.7363	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.8750	35.8125	0.0176	11.5625	200.5371	200.5547	
3 (Left)	Perforated Plate	3.0000	3.5625	10.6875	9.0000	8.7500	229.6875	238.6875	
3 (Right)	Perforated Plate	3.0000	21.0625	63.1875	9.0000	8.7500	229.6875	238.6875	
4	Plate	13.5000	0.2813	3.7969	0.3560	12.0313	1954.1382	1954.4941	
5	Plate	13.5000	24.3438	328.6406	0.3560	12.0313	1954.1382	1954.4941	
6	Cover Plate	8.8125	12.3125	108.5039	405.5586	0.0000	0.0000	405.5586	
Total		53.25		655.64	430.30		5667.01	6097.31	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3125 in	S _{right} =	495.21 in ³	x-bar =	12.3125 in	S _{right} =	495.21 in ³
I _y =	6097.31 in ⁴	S _{left} =	495.21 in ³	I _y =	6097.31 in ⁴	S _{left} =	495.21 in ³
C _{right} =	12.3125 in	A =	53.2500 in ²	C _{right} =	12.3125 in	A =	53.2500 in ²
C _{left} =	12.3125 in	r _y =	10.7006 in	C _{left} =	12.3125 in	r _y =	10.7006 in

South Truss

Member U42-L42



Made By KMW
Checked By ADK

Date 1/30/2012
Date 2/16/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

$A_4 = h = 20.0000$ in
 $B_4 = t = 0.5625$ in

Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 0.5625$ in

Cover Plate:

$A_6 = t = 0.3750$ in
 $B_6 = l = 23.5000$ in



Member U42-L42

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	16.1875	44.0098	0.0319	5.8445	92.8666	92.8985
	Vertical Leg	3.0000	18.0000	54.0000	4.0000	7.6570	175.8876	179.8876
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	6.5305	115.9487	115.9806
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	8.3430	208.8184	212.8184
3	Perforated Plate	6.0000	4.2500	25.5000	0.1250	6.0930	222.7500	222.8750
4	Plate	11.2500	10.0000	112.5000	375.0000	0.3430	1.3238	376.3238
5	Plate	11.2500	10.0000	112.5000	375.0000	0.3430	1.3238	376.3238
6	Cover Plate	8.8125	15.8125	139.3477	0.1033	5.4695	263.6269	263.7302
Total		48.75		504.22	758.29		1082.55	1840.84
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	20.0000	0.0625	-1.2500	10.0000	-12.5000	-0.0004	0.3521	-0.1549
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.25	-12.50	0.00		-0.15	-0.16



Made By KMW
Checked By ADK

Date 1/30/2012
Date 2/16/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	10.3430 in	S _{top} =	190.62 in ³	y-bar =	10.3521 in	S _{top} =	190.78 in ³
I _x =	1840.84 in ⁴	S _{bott.} =	177.98 in ³	I _x =	1840.68 in ⁴	S _{bott.} =	177.81 in ³
C _{top} =	9.6570 in	A =	48.7500 in ²	C _{top} =	9.6479 in	A =	47.5000 in ²
C _{bottom} =	10.3430 in	r _x =	6.1450 in	C _{bottom} =	10.3521 in	r _x =	6.2250 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	2.7500	3.7383	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.7500	1.1250	0.0176	11.5625	200.5371	200.5547	
1 (Right)	Horizontal Leg	1.3594	21.8750	29.7363	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.8750	35.8125	0.0176	11.5625	200.5371	200.5547	
2 (Left)	Horizontal Leg	1.3594	2.7500	3.7383	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.7500	1.1250	0.0176	11.5625	200.5371	200.5547	
2 (Right)	Horizontal Leg	1.3594	21.8750	29.7363	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.8750	35.8125	0.0176	11.5625	200.5371	200.5547	
3 (Left)	Perforated Plate	3.0000	3.5625	10.6875	9.0000	8.7500	229.6875	238.6875	
3 (Right)	Perforated Plate	3.0000	21.0625	63.1875	9.0000	8.7500	229.6875	238.6875	
4	Plate	11.2500	0.2813	3.1641	0.2966	12.0313	1628.4485	1628.7451	
5	Plate	11.2500	24.3438	273.8672	0.2966	12.0313	1628.4485	1628.7451	
6	Cover Plate	8.8125	12.3125	108.5039	405.5586	0.0000	0.0000	405.5586	
Total		48.75		600.23	430.18		5015.63	5445.81	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0625	20.0000	-1.2500	0.0313	-0.0391	-41.6667	12.6044	-198.5899	-240.2566
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.25		-0.04	-41.67		-198.59	-240.26

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3125 in	S _{right} =	442.30 in ³	x-bar =	12.6357 in	S _{right} =	434.18 in ³
I _y =	5445.81 in ⁴	S _{left} =	442.30 in ³	I _y =	5205.55 in ⁴	S _{left} =	411.97 in ³
C _{right} =	12.3125 in	A =	48.7500 in ²	C _{right} =	11.9893 in	A =	47.5000 in ²
C _{left} =	12.3125 in	r _y =	10.5692 in	C _{left} =	12.6357 in	r _y =	10.4686 in



Made By NRF
Checked By SFH

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam **CB24x 160**

- $A_1 = t_w = 0.6650$ in
- $A_2 = t_f = 1.1240$ in
- $B_1 = d = 24.7140$ in
- $B_2 = b_f = 14.0950$ in



Member U43-L43

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		14.9399	7.0475	105.2889	0.5506	0.0000	0.0000	0.5506
2	Flange Plates		31.6856	7.0475	223.3040	524.5783	0.0000	0.0000	524.5783
Total			46.63		328.59	525.13		0.00	525.13
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	7.0475	in	$S_{top} = 74.51$ in ³	y-bar =	7.0475	in	$S_{top} = 74.51$ in ³
$I_x =$	525.13	in ⁴	$S_{bott.} = 74.51$ in ³	$I_x =$	525.13	in ⁴	$S_{bott.} = 74.51$ in ³
$c_{top} =$	7.0475	in	$A = 46.6255$ in ²	$c_{top} =$	7.0475	in	$A = 46.6255$ in ²
$c_{bottom} =$	7.0475	in	$r_x = 3.3560$ in	$c_{bottom} =$	7.0475	in	$r_x = 3.3560$ in



Made By NRF
Checked By SFH

Date 1/20/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	14.9399	12.3570	184.6122	628.3732	0.0000	0.0000	628.3732	
2	Left Flange	15.8428	0.5620	8.9036	1.6679	11.7950	2204.0796	2205.7476	
	Right Flange	15.8428	24.1520	382.6348	1.6679	11.7950	2204.0796	2205.7476	
Total		46.63		576.15	631.71		4408.16	5039.87	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3570	in	S _{right} = 407.86 in ³	x-bar =	12.3570	in	S _{right} = 407.86 in ³
I _y =	5039.87	in ⁴	S _{left} = 407.86 in ³	I _y =	5039.87	in ⁴	S _{left} = 407.86 in ³
C _{right} =	12.3570	in	A = 46.6255 in ²	C _{right} =	12.3570	in	A = 46.6255 in ²
C _{left} =	12.3570	in	r _y = 10.3968 in	C _{left} =	12.3570	in	r _y = 10.3968 in



Made By NRF
Checked By SFH

Date 1/20/2012
Date 1/25/2012

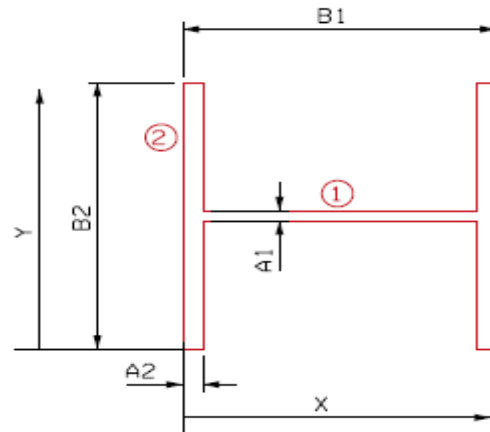
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam **CB24x 100**

- $A_1 = t_w = 0.4700$ in
- $A_2 = t_f = 0.7670$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 12.0000$ in



Member U44-L44

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		10.5590	6.0000	63.3541	0.1944	0.0000	0.0000	0.1944
2	Flange Plates		18.4080	6.0000	110.4480	220.8960	0.0000	0.0000	220.8960
Total			28.97		173.80	221.09		0.00	221.09
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	6.0000	in	$S_{top} = 36.85$	in^3	y-bar =	6.0000	in	$S_{top} = 36.85$	in^3		
$I_x =$	221.09	in^4	$S_{bott.} = 36.85$	in^3	$I_x =$	221.09	in^4	$S_{bott.} = 36.85$	in^3		
$c_{top} =$	6.0000	in	A =	28.9670	in^2	$c_{top} =$	6.0000	in	A =	28.9670	in^2
$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in	$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in



Made By NRF
 Checked By SFH

Date 1/20/2012
 Date 1/25/2012

Job No. P402110046
 Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	12.0000	126.7082	444.1134	0.0000	0.0000	444.1134
2	Left Flange		9.2040	0.3835	3.5297	0.4512	11.6165	1242.0160	1242.4673
	Right Flange		9.2040	23.6165	217.3663	0.4512	11.6165	1242.0160	1242.4673
Total			28.97		347.60	445.02		2484.03	2929.05
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.0000	in	S _{right} =	244.09	in ³	x-bar =	12.0000	in	S _{right} =	244.09	in ³
I _y =	2929.05	in ⁴	S _{left} =	244.09	in ³	I _y =	2929.05	in ⁴	S _{left} =	244.09	in ³
C _{right} =	12.0000	in	A =	28.9670	in ²	C _{right} =	12.0000	in	A =	28.9670	in ²
C _{left} =	12.0000	in	r _y =	10.0557	in	C _{left} =	12.0000	in	r _y =	10.0557	in



Made By KMW
Checked By ADK

Date 2/2/2012
Date 2/16/2012

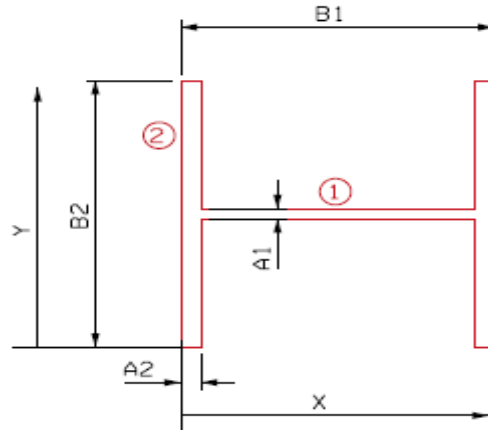
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam **CB24x 87**

- $A_1 = t_w = 0.4800$ in
- $A_2 = t_f = 0.8070$ in
- $B_1 = d = 24.1600$ in
- $B_2 = b_f = 9.0250$ in



Member U45-L45

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		10.8221	4.5125	48.8346	0.2078	0.0000	0.0000	0.2078
2	Flange Plates		14.5664	4.5125	65.7307	98.8699	0.0000	0.0000	98.8699
Total			25.39		114.57	99.08		0.00	99.08
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0625	9.0250	-0.5641	4.5125	-2.5453	-3.8286	0.0000	0.0000	-3.8286
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.56		-2.55	-3.83		0.00	-3.83

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	4.5125	in	$S_{top} =$	21.96	in ³	y-bar =	4.5125	in	$S_{top} =$	21.11	in ³
$I_x =$	99.08	in ⁴	$S_{bott.} =$	21.96	in ³	$I_x =$	95.25	in ⁴	$S_{bott.} =$	21.11	in ³
$c_{top} =$	4.5125	in	A =	25.3884	in ²	$c_{top} =$	4.5125	in	A =	24.8244	in ²
$c_{bottom} =$	4.5125	in	$r_x =$	1.9755	in	$c_{bottom} =$	4.5125	in	$r_x =$	1.9588	in



Made By KMW
Checked By ADK

Date 2/2/2012
Date 2/16/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.8221	12.0800	130.7307	458.4252	0.0000	0.0000	458.4252
2	Left Flange		7.2832	0.4035	2.9388	0.3953	11.6765	992.9928	993.3881
	Right Flange		7.2832	23.7565	173.0227	0.3953	11.6765	992.9928	993.3881
Total			25.39		306.69	459.22		1985.99	2445.20
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	9.0250	0.0625	-0.5641	0.0313	-0.0176	-0.0002	12.3225	-85.6498	-85.6500
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.56		-0.02	0.00		-85.65	-85.65

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.0800	in	S _{right} = 202.42 in ³	x-bar =	12.3538	in	S _{right} = 199.86 in ³
I _y =	2445.20	in ⁴	S _{left} = 202.42 in ³	I _y =	2359.55	in ⁴	S _{left} = 191.00 in ³
C _{right} =	12.0800	in	A = 25.3884 in ²	C _{right} =	11.8062	in	A = 24.8244 in ²
C _{left} =	12.0800	in	r _y = 9.8138 in	C _{left} =	12.3538	in	r _y = 9.7493 in



Made By NRF
Checked By SFH

Date 1/20/2012
Date 1/25/2012

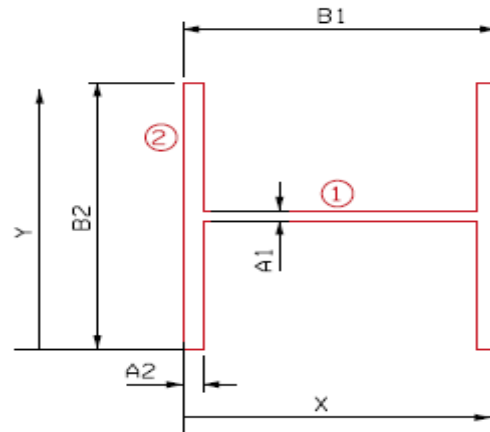
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 100

- $A_1 = t_w = 0.4700$ in
- $A_2 = t_f = 0.7670$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 12.0000$ in



Member U46-L46

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x, gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		10.5590	6.0000	63.3541	0.1944	0.0000	0.0000	0.1944
2	Flange Plates		18.4080	6.0000	110.4480	220.8960	0.0000	0.0000	220.8960
Total			28.97		173.80	221.09		0.00	221.09
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	6.0000	in	$S_{top} = 36.85$	in^3	y-bar =	6.0000	in	$S_{top} = 36.85$	in^3		
$I_x =$	221.09	in^4	$S_{bott.} = 36.85$	in^3	$I_x =$	221.09	in^4	$S_{bott.} = 36.85$	in^3		
$c_{top} =$	6.0000	in	A =	28.9670	in^2	$c_{top} =$	6.0000	in	A =	28.9670	in^2
$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in	$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in



Made By NRF
 Checked By SFH

Date 1/20/2012
 Date 1/25/2012

Job No. P402110046
 Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	12.0000	126.7082	444.1134	0.0000	0.0000	444.1134
2	Left Flange		9.2040	0.3835	3.5297	0.4512	11.6165	1242.0160	1242.4673
	Right Flange		9.2040	23.6165	217.3663	0.4512	11.6165	1242.0160	1242.4673
Total			28.97		347.60	445.02		2484.03	2929.05
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.0000	in	S _{right} =	244.09	in ³	x-bar =	12.0000	in	S _{right} =	244.09	in ³
I _y =	2929.05	in ⁴	S _{left} =	244.09	in ³	I _y =	2929.05	in ⁴	S _{left} =	244.09	in ³
C _{right} =	12.0000	in	A =	28.9670	in ²	C _{right} =	12.0000	in	A =	28.9670	in ²
C _{left} =	12.0000	in	r _y =	10.0557	in	C _{left} =	12.0000	in	r _y =	10.0557	in



Made By KMW
Checked By ADK

Date 2/2/2012
Date 2/16/2012

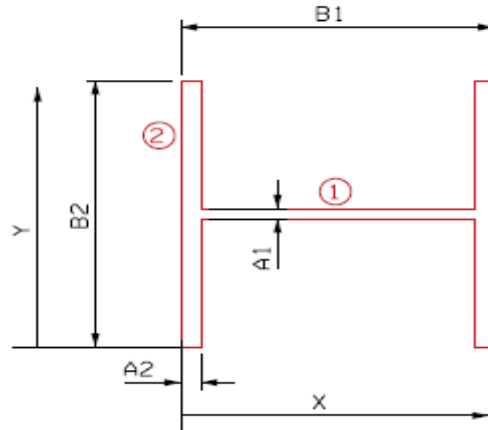
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 160

- $A_1 = t_w = 0.6650$ in
- $A_2 = t_f = 1.1240$ in
- $B_1 = d = 24.7140$ in
- $B_2 = b_f = 14.0950$ in



Member U47-L47

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		14.9399	7.0475	105.2889	0.5506	0.0000	0.0000	0.5506
2	Flange Plates		31.6856	7.0475	223.3040	524.5783	0.0000	0.0000	524.5783
Total			46.63		328.59	525.13		0.00	525.13
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1250	8.0000	-1.0000	10.0950	-10.0950	-5.3333	3.0813	-9.4947	-14.8280
2	0.1250	2.0000	-0.2500	1.0000	-0.2500	-0.0833	6.0137	-9.0410	-9.1244
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.25		-10.35	-5.42		-18.54	-23.95

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	7.0475	in	$S_{top} = 74.51$	in ³	y-bar =	7.0137	in	$S_{top} = 70.77$	in ³		
$I_x =$	525.13	in ⁴	$S_{bott.} = 74.51$	in ³	$I_x =$	501.18	in ⁴	$S_{bott.} = 71.46$	in ³		
$c_{top} =$	7.0475	in	A =	46.6255	in ²	$c_{top} =$	7.0813	in	A =	45.3755	in ²
$c_{bottom} =$	7.0475	in	$r_x =$	3.3560	in	$c_{bottom} =$	7.0137	in	$r_x =$	3.3234	in



Made By KMW
Checked By ADK

Date 2/2/2012
Date 2/16/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	12.3570	184.6122	628.3732	0.0000	0.0000	628.3732
2	Left Flange		15.8428	0.5620	8.9036	1.6679	11.7950	2204.0796	2205.7476
	Right Flange		15.8428	24.1520	382.6348	1.6679	11.7950	2204.0796	2205.7476
Total			46.63		576.15	631.71		4408.16	5039.87
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	8.0000	0.1250	-1.0000	24.5890	-24.5890	-0.0013	12.5690	-157.9789	-157.9802
2	2.0000	0.1250	-0.2500	24.5890	-6.1473	-0.0003	12.5690	-39.4947	-39.4951
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.25		-30.74	0.00		-197.47	-197.48

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3570	in	S _{right} = 407.86 in ³	x-bar =	12.0200	in	S _{right} = 381.47 in ³
I _y =	5039.87	in ⁴	S _{left} = 407.86 in ³	I _y =	4842.39	in ⁴	S _{left} = 402.86 in ³
C _{right} =	12.3570	in	A = 46.6255 in ²	C _{right} =	12.6940	in	A = 45.3755 in ²
C _{left} =	12.3570	in	r _y = 10.3968 in	C _{left} =	12.0200	in	r _y = 10.3305 in

South Truss

Member U48-L48



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441** kmw **2/2/2012**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

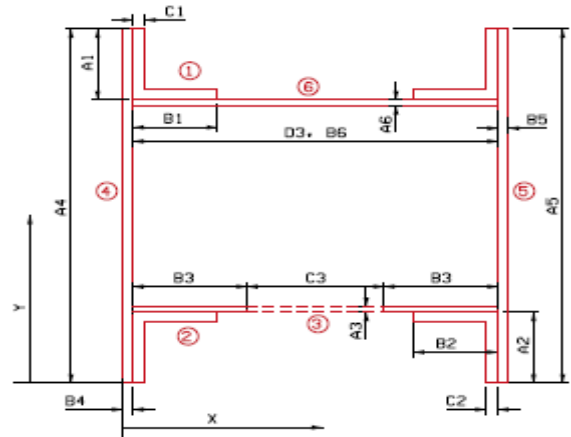
$A_4 = h = 20.0000$ in
 $B_4 = t = 0.6250$ in

Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 0.6250$ in

Cover Plate:

$A_6 = t = 0.3750$ in
 $B_6 = l = 23.5000$ in



Member U48-L48

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	16.1875	44.0098	0.0319	5.8612	93.3992	93.4310
	Vertical Leg	3.0000	18.0000	54.0000	4.0000	7.6737	176.6572	180.6572
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	6.5138	115.3553	115.3872
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	8.3263	207.9816	211.9816
3	Perforated Plate	6.0000	4.2500	25.5000	0.1250	6.0763	221.5282	221.6532
4	Plate	12.5000	10.0000	125.0000	416.6667	0.3263	1.3309	417.9975
5	Plate	12.5000	10.0000	125.0000	416.6667	0.3263	1.3309	417.9975
6	Cover Plate	8.8125	15.8125	139.3477	0.1033	5.4862	265.2425	265.3457
Total		51.25		529.22	841.63		1082.83	1924.45
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.1875	20.0000	-3.7500	10.0000	-37.5000	-125.0000	0.1698	-0.1081
2	0.2500	3.6250	-0.9063	18.1875	-16.4824	-0.9924	8.0177	-58.2572
3	0.0625	3.6250	-0.2266	18.1875	-4.1206	-0.2481	8.0177	-14.5643
4	0.1250	20.0000	-2.5000	10.0000	-25.0000	-83.3333	0.1698	-0.0721
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-7.38	-83.10	-209.57		-73.00	-282.58



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441** kmw **2/2/2012**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	10.3263 in	S _{top} =	198.94 in ³	y-bar =	10.1698 in	S _{top} =	167.02 in ³
I _x =	1924.45 in ⁴	S _{bott.} =	186.36 in ³	I _x =	1641.88 in ⁴	S _{bott.} =	161.45 in ³
C _{top} =	9.6737 in	A =	51.2500 in ²	C _{top} =	9.8302 in	A =	43.8672 in ²
C _{bottom} =	10.3263 in	r _x =	6.1278 in	C _{bottom} =	10.1698 in	r _x =	6.1179 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	2.8125	3.8232	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.8125	1.2188	0.0176	11.5625	200.5371	200.5547	
1 (Right)	Horizontal Leg	1.3594	21.9375	29.8213	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.9375	35.9063	0.0176	11.5625	200.5371	200.5547	
2 (Left)	Horizontal Leg	1.3594	2.8125	3.8232	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.8125	1.2188	0.0176	11.5625	200.5371	200.5547	
2 (Right)	Horizontal Leg	1.3594	21.9375	29.8213	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.9375	35.9063	0.0176	11.5625	200.5371	200.5547	
3 (Left)	Perforated Plate	3.0000	3.6250	10.8750	9.0000	8.7500	229.6875	238.6875	
3 (Right)	Perforated Plate	3.0000	21.1250	63.3750	9.0000	8.7500	229.6875	238.6875	
4	Plate	12.5000	0.3125	3.9063	0.4069	12.0625	1818.7988	1819.2057	
5	Plate	12.5000	24.4375	305.4688	0.4069	12.0625	1818.7988	1819.2057	
6	Cover Plate	8.8125	12.3750	109.0547	405.5586	0.0000	0.0000	405.5586	
Total		51.25		634.22	430.40		5396.33	5826.73	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	20.0000	0.1875	-3.7500	0.0938	-0.3516	-0.0110	14.2454	-760.9955	-761.0065
2	3.6250	0.2500	-0.9063	0.8750	-0.7930	-0.0047	13.4642	-164.2886	-164.2934
3	3.6250	0.0625	-0.2266	0.6563	-0.1487	-0.0001	13.6829	-42.4176	-42.4177
4	20.0000	0.1250	-2.5000	1.5625	-3.9063	-0.0033	12.7767	-408.1086	-408.1118
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-7.38		-5.20	-0.02		-1375.81	-1375.83

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3750 in	S _{right} =	470.85 in ³	x-bar =	14.3392 in	S _{right} =	427.53 in ³
I _y =	5826.73 in ⁴	S _{left} =	470.85 in ³	I _y =	4450.90 in ⁴	S _{left} =	310.40 in ³
C _{right} =	12.3750 in	A =	51.2500 in ²	C _{right} =	10.4108 in	A =	43.8672 in ²
C _{left} =	12.3750 in	r _y =	10.6627 in	C _{left} =	14.3392 in	r _y =	10.0729 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.5000$ in

Perforated Plate:

$A_3 = t = 0.6250$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

$A_4 = h = 20.0000$ in
 $B_4 = t = 0.5625$ in

Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 0.5625$ in

Cover Plate:

$A_6 = t = 0.5000$ in
 $B_6 = l = 23.5000$ in



Member U49-L49

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.5000	16.2500	56.8750	0.0729	5.8111	118.1920	118.2650
	Vertical Leg	4.0000	18.0000	72.0000	5.3333	7.5611	228.6823	234.0157
2	Horizontal Leg	3.5000	3.7500	13.1250	0.0729	6.6889	156.5937	156.6667
	Vertical Leg	4.0000	2.0000	8.0000	5.3333	8.4389	284.8586	290.1919
3	Perforated Plate	7.5000	4.3125	32.3438	0.2441	6.1264	281.4937	281.7378
4	Plate	11.2500	10.0000	112.5000	375.0000	0.4389	2.1669	377.1669
5	Plate	11.2500	10.0000	112.5000	375.0000	0.4389	2.1669	377.1669
6	Cover Plate	11.7500	15.7500	185.0625	0.2448	5.3111	331.4444	331.6892
Total		56.75		592.41	761.30		1405.60	2166.90
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	10.4389 in	S _{top} =	226.64 in ³	y-bar =	10.4389 in	S _{top} =	226.64 in ³
I _x =	2166.90 in ⁴	S _{bott.} =	207.58 in ³	I _x =	2166.90 in ⁴	S _{bott.} =	207.58 in ³
C _{top} =	9.5611 in	A =	56.7500 in ²	C _{top} =	9.5611 in	A =	56.7500 in ²
C _{bottom} =	10.4389 in	r _x =	6.1793 in	C _{bottom} =	10.4389 in	r _x =	6.1793 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.7500	2.8125	4.9219	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	0.8125	1.6250	0.0417	11.5000	264.5000	264.5417	
1 (Right)	Horizontal Leg	1.7500	21.8125	38.1719	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	23.8125	47.6250	0.0417	11.5000	264.5000	264.5417	
2 (Left)	Horizontal Leg	1.7500	2.8125	4.9219	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	0.8125	1.6250	0.0417	11.5000	264.5000	264.5417	
2 (Right)	Horizontal Leg	1.7500	21.8125	38.1719	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	23.8125	47.6250	0.0417	11.5000	264.5000	264.5417	
3 (Left)	Perforated Plate	3.7500	3.5625	13.3594	11.2500	8.7500	287.1094	298.3594	
3 (Right)	Perforated Plate	3.7500	21.0625	78.9844	11.2500	8.7500	287.1094	298.3594	
4	Plate	11.2500	0.2813	3.1641	0.2966	12.0313	1628.4485	1628.7451	
5	Plate	11.2500	24.3438	273.8672	0.2966	12.0313	1628.4485	1628.7451	
6	Cover Plate	11.7500	12.3125	144.6719	540.7448	0.0000	0.0000	540.7448	
Total		56.75		698.73	571.15		5520.87	6092.02	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3125 in	S _{right} =	494.78 in ³	x-bar =	12.3125 in	S _{right} =	494.78 in ³
I _y =	6092.02 in ⁴	S _{left} =	494.78 in ³	I _y =	6092.02 in ⁴	S _{left} =	494.78 in ³
C _{right} =	12.3125 in	A =	56.7500 in ²	C _{right} =	12.3125 in	A =	56.7500 in ²
C _{left} =	12.3125 in	r _y =	10.3609 in	C _{left} =	12.3125 in	r _y =	10.3609 in

South Truss

Member U50-L50



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.6250$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.6250$ in

Perforated Plate:

$A_3 = t = 0.6875$ in
 $B_3 = l = 5.5000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 22.5000$ in

Left Web Plate:

$A_4 = h = 26.0000$ in
 $B_4 = t = 1.3750$ in

Right Web Plate:

$A_5 = h = 26.0000$ in
 $B_5 = t = 1.3750$ in

Cover Plate:

$A_6 = t = 0.5625$ in
 $B_6 = l = 22.5000$ in



Member U50-L50

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	4.2188	22.3125	94.1309	0.1373	8.9050	334.5461	334.6834
	Vertical Leg	5.0000	24.0000	120.0000	6.6667	10.5925	561.0100	567.6766
2	Horizontal Leg	4.2188	3.6875	15.5566	0.1373	9.7200	398.5771	398.7144
	Vertical Leg	5.0000	2.0000	10.0000	6.6667	11.4075	650.6502	657.3169
3	Perforated Plate	7.5625	4.3438	32.8496	0.2979	9.0637	621.2651	621.5630
4	Plate	35.7500	13.0000	464.7500	2013.9167	0.4075	5.9352	2019.8519
5	Plate	35.7500	13.0000	464.7500	2013.9167	0.4075	5.9352	2019.8519
6	Cover Plate	12.6563	21.7188	274.8779	0.3337	8.3113	874.2635	874.5973
Total		110.16		1476.92	4042.07		3452.18	7494.26
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	13.4075 in	S _{top} =	595.13 in ³	y-bar =	13.4075 in	S _{top} =	595.13 in ³
I _x =	7494.26 in ⁴	S _{bott.} =	558.96 in ³	I _x =	7494.26 in ⁴	S _{bott.} =	558.96 in ³
C _{top} =	12.5925 in	A =	110.1563 in ²	C _{top} =	12.5925 in	A =	110.1563 in ²
C _{bottom} =	13.4075 in	r _x =	8.2482 in	C _{bottom} =	13.4075 in	r _x =	8.2482 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.1094	3.6875	7.7783	2.0023	8.9375	168.4946	170.4968	
	Vertical Leg	2.5000	1.6875	4.2188	0.0814	10.9375	299.0723	299.1536	
1 (Right)	Horizontal Leg	2.1094	21.5625	45.4834	2.0023	8.9375	168.4946	170.4968	
	Vertical Leg	2.5000	23.5625	58.9063	0.0814	10.9375	299.0723	299.1536	
2 (Left)	Horizontal Leg	2.1094	3.6875	7.7783	2.0023	8.9375	168.4946	170.4968	
	Vertical Leg	2.5000	1.6875	4.2188	0.0814	10.9375	299.0723	299.1536	
2 (Right)	Horizontal Leg	2.1094	21.5625	45.4834	2.0023	8.9375	168.4946	170.4968	
	Vertical Leg	2.5000	23.5625	58.9063	0.0814	10.9375	299.0723	299.1536	
3 (Left)	Perforated Plate	3.7813	4.1250	15.5977	9.5319	8.5000	273.1953	282.7272	
3 (Right)	Perforated Plate	3.7813	21.1250	79.8789	9.5319	8.5000	273.1953	282.7272	
4	Plate	35.7500	0.6875	24.5781	5.6325	11.9375	5094.5146	5100.1471	
5	Plate	35.7500	24.5625	878.1094	5.6325	11.9375	5094.5146	5100.1471	
6	Cover Plate	12.6563	12.6250	159.7852	533.9355	0.0000	0.0000	533.9355	
Total		110.16		1390.72	572.60		12605.69	13178.29	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.6250 in	S _{right} =	1043.82 in ³	x-bar =	12.6250 in	S _{right} =	1043.82 in ³
I _y =	13178.29 in ⁴	S _{left} =	1043.82 in ³	I _y =	13178.29 in ⁴	S _{left} =	1043.82 in ³
C _{right} =	12.6250 in	A =	110.1563 in ²	C _{right} =	12.6250 in	A =	110.1563 in ²
C _{left} =	12.6250 in	r _y =	10.9377 in	C _{left} =	12.6250 in	r _y =	10.9377 in

South Truss

Member U51-L51



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.5000$ in

Perforated Plate:

$A_3 = t = 0.6875$ in
 $B_3 = l = 5.7500$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.0000$ in

Left Web Plate:

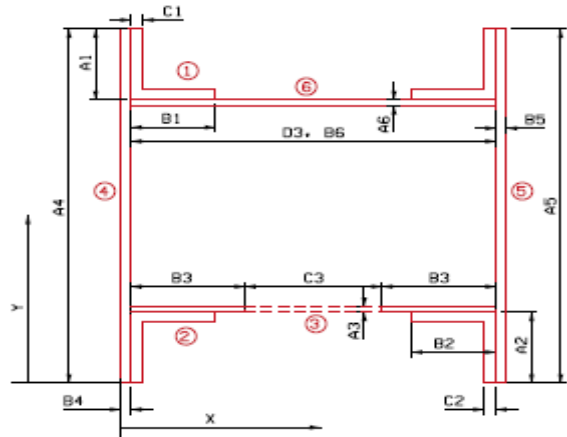
$A_4 = h = 20.0000$ in
 $B_4 = t = 0.9375$ in

Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 0.9375$ in

Cover Plate:

$A_6 = t = 0.5625$ in
 $B_6 = l = 23.0000$ in



Member U51-L51

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.5000	16.2500	56.8750	0.0729	5.8510	119.8183	119.8913
	Vertical Leg	4.0000	18.0000	72.0000	5.3333	7.6010	231.0988	236.4321
2	Horizontal Leg	3.5000	3.7500	13.1250	0.0729	6.6490	154.7338	154.8067
	Vertical Leg	4.0000	2.0000	8.0000	5.3333	8.3990	282.1750	287.5084
3	Perforated Plate	7.9063	4.3438	34.3428	0.3114	6.0553	289.8942	290.2056
4	Plate	18.7500	10.0000	187.5000	625.0000	0.3990	2.9855	627.9855
5	Plate	18.7500	10.0000	187.5000	625.0000	0.3990	2.9855	627.9855
6	Cover Plate	12.9375	15.7188	203.3613	0.3411	5.3197	366.1233	366.4644
Total		73.34		762.70	1261.47		1449.81	2711.28
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	10.3990 in	S _{top} =	282.40 in ³	y-bar =	10.3990 in	S _{top} =	282.40 in ³
I _x =	2711.28 in ⁴	S _{bott.} =	260.72 in ³	I _x =	2711.28 in ⁴	S _{bott.} =	260.72 in ³
C _{top} =	9.6010 in	A =	73.3438 in ²	C _{top} =	9.6010 in	A =	73.3438 in ²
C _{bottom} =	10.3990 in	r _x =	6.0800 in	C _{bottom} =	10.3990 in	r _x =	6.0800 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.7500	3.1875	5.5781	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	1.1875	2.3750	0.0417	11.2500	253.1250	253.1667	
1 (Right)	Horizontal Leg	1.7500	21.6875	37.9531	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	23.6875	47.3750	0.0417	11.2500	253.1250	253.1667	
2 (Left)	Horizontal Leg	1.7500	3.1875	5.5781	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	1.1875	2.3750	0.0417	11.2500	253.1250	253.1667	
2 (Right)	Horizontal Leg	1.7500	21.6875	37.9531	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	23.6875	47.3750	0.0417	11.2500	253.1250	253.1667	
3 (Left)	Perforated Plate	3.9531	3.8125	15.0713	10.8917	8.6250	294.0754	304.9671	
3 (Right)	Perforated Plate	3.9531	21.0625	83.2627	10.8917	8.6250	294.0754	304.9671	
4	Plate	18.7500	0.4688	8.7891	1.3733	11.9688	2685.9558	2687.3291	
5	Plate	18.7500	24.4063	457.6172	1.3733	11.9688	2685.9558	2687.3291	
6	Cover Plate	12.9375	12.4375	160.9102	570.3281	0.0000	0.0000	570.3281	
Total		73.34		912.21	602.17		7571.50	8173.67	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.4375 in	S _{right} =	657.18 in ³	x-bar =	12.4375 in	S _{right} =	657.18 in ³
I _y =	8173.67 in ⁴	S _{left} =	657.18 in ³	I _y =	8173.67 in ⁴	S _{left} =	657.18 in ³
C _{right} =	12.4375 in	A =	73.3438 in ²	C _{right} =	12.4375 in	A =	73.3438 in ²
C _{left} =	12.4375 in	r _y =	10.5567 in	C _{left} =	12.4375 in	r _y =	10.5567 in

South Truss

Member U52-L52



Made By KMW
Checked By DWC

Date 1/31/2012
Date 2/16/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_t = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_t = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 5.7500$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.0000$ in

Left Web Plate:

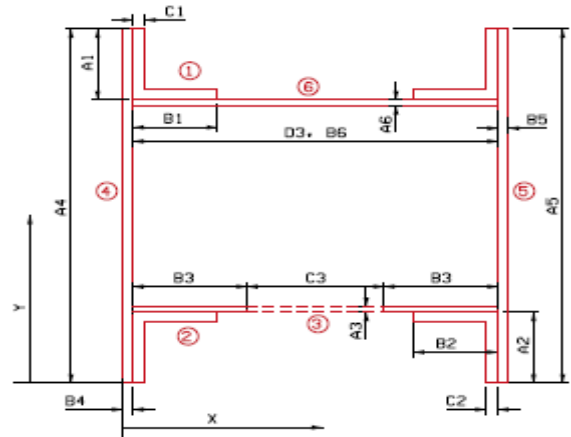
$A_4 = h = 20.0000$ in
 $B_4 = t = 0.9375$ in

Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 0.9375$ in

Cover Plate:

$A_6 = t = 0.3750$ in
 $B_6 = l = 23.0000$ in



Member U52-L52

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	16.1875	44.0098	0.0319	5.9179	95.2142	95.2460
	Vertical Leg	3.0000	18.0000	54.0000	4.0000	7.7304	179.2763	183.2763
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	6.4571	113.3566	113.3885
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	8.2696	205.1598	209.1598
3	Perforated Plate	5.7500	4.2500	24.4375	0.1198	6.0196	208.3560	208.4758
4	Plate	18.7500	10.0000	187.5000	625.0000	0.2696	1.3630	626.3630
5	Plate	18.7500	10.0000	187.5000	625.0000	0.2696	1.3630	626.3630
6	Cover Plate	8.6250	15.8125	136.3828	0.1011	5.5429	264.9904	265.0914
Total		63.31		650.20	1258.28		1069.08	2327.36
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in ⁴)	(in ⁴)
1	0.1250	2.5000	-0.3125	18.7500	-5.8594	-0.1628	8.5649	-22.9244
2	0.1250	2.5000	-0.3125	18.7500	-5.8594	-0.1628	8.5649	-22.9244
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.63	-11.72	-0.33		-45.85	-46.17



Made By KMW
Checked By DWC

Date 1/31/2012
Date 2/16/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	10.2696 in	S _{top} =	239.19 in ³	y-bar =	10.1851 in	S _{top} =	232.42 in ³
I _x =	2327.36 in ⁴	S _{bott.} =	226.63 in ³	I _x =	2281.19 in ⁴	S _{bott.} =	223.97 in ³
C _{top} =	9.7304 in	A =	63.3125 in ²	C _{top} =	9.8149 in	A =	62.6875 in ²
C _{bottom} =	10.2696 in	r _x =	6.0630 in	C _{bottom} =	10.1851 in	r _x =	6.0324 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	3.1250	4.2480	1.4886	9.3125	117.8886	119.3772	
	Vertical Leg	1.5000	1.1250	1.6875	0.0176	11.3125	191.9590	191.9766	
1 (Right)	Horizontal Leg	1.3594	21.7500	29.5664	1.4886	9.3125	117.8886	119.3772	
	Vertical Leg	1.5000	23.7500	35.6250	0.0176	11.3125	191.9590	191.9766	
2 (Left)	Horizontal Leg	1.3594	3.1250	4.2480	1.4886	9.3125	117.8886	119.3772	
	Vertical Leg	1.5000	1.1250	1.6875	0.0176	11.3125	191.9590	191.9766	
2 (Right)	Horizontal Leg	1.3594	21.7500	29.5664	1.4886	9.3125	117.8886	119.3772	
	Vertical Leg	1.5000	23.7500	35.6250	0.0176	11.3125	191.9590	191.9766	
3 (Left)	Perforated Plate	2.8750	3.8125	10.9609	7.9212	8.6250	213.8730	221.7943	
3 (Right)	Perforated Plate	2.8750	21.0625	60.5547	7.9212	8.6250	213.8730	221.7943	
4	Plate	18.7500	0.4688	8.7891	1.3733	11.9688	2685.9558	2687.3291	
5	Plate	18.7500	24.4063	457.6172	1.3733	11.9688	2685.9558	2687.3291	
6	Cover Plate	8.6250	12.4375	107.2734	380.2188	0.0000	0.0000	380.2188	
Total		63.31		787.45	404.83		7039.05	7443.88	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	2.5000	0.1250	-0.3125	0.9375	-0.2930	-0.0004	11.5000	-41.3281	-41.3285
2	2.5000	0.1250	-0.3125	23.9375	-7.4805	-0.0004	11.5000	-41.3281	-41.3285
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-0.63		-7.77	0.00		-82.66	-82.66

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.4375 in	S _{right} =	598.50 in ³	x-bar =	12.4375 in	S _{right} =	591.86 in ³
I _y =	7443.88 in ⁴	S _{left} =	598.50 in ³	I _y =	7361.22 in ⁴	S _{left} =	591.86 in ³
C _{right} =	12.4375 in	A =	63.3125 in ²	C _{right} =	12.4375 in	A =	62.6875 in ²
C _{left} =	12.4375 in	r _y =	10.8431 in	C _{left} =	12.4375 in	r _y =	10.8364 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.9375$ in
- $B_3 = b = 16.0000$ in



Member U53-L53

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	8.0000	102.4450	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	8.0000	199.8080	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		30.0000	8.0000	240.0000	640.0000	0.0000	0.0000	640.0000
Total			67.78		542.25	1048.29		0.00	1048.29
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	8.0000	in	S _{top} = 131.04 in ³	y-bar =	8.0000	in	S _{top} = 131.04 in ³
I _x =	1048.29	in ⁴	S _{bott.} = 131.04 in ³	I _x =	1048.29	in ⁴	S _{bott.} = 131.04 in ³
c _{top} =	8.0000	in	A = 67.7816 in ²	c _{top} =	8.0000	in	A = 67.7816 in ²
c _{bottom} =	8.0000	in	r _x = 3.9326 in	c _{bottom} =	8.0000	in	r _x = 3.9326 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	12.8056	13.0625	167.2734	538.6056	0.0000	0.0000	538.6056	
2	Left Flange	12.4880	1.3835	17.2771	0.8280	11.6790	1703.3512	1704.1792	
	Right Flange	12.4880	24.7415	308.9719	0.8280	11.6790	1703.3512	1704.1792	
3	Left Plate	15.0000	0.4688	7.0313	1.0986	12.5938	2379.0381	2380.1367	
	Right Plate	15.0000	25.6563	384.8438	1.0986	12.5938	2379.0381	2380.1367	
Total		67.78		885.40	542.46		8164.78	8707.24	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	13.0625	in	S _{right} = 666.58 in ³	x-bar =	13.0625	in	S _{right} = 666.58 in ³
I _y =	8707.24	n ⁴	S _{left} = 666.58 in ³	I _y =	8707.24	n ⁴	S _{left} = 666.58 in ³
C _{right} =	13.0625	in	A = 67.7816 in ²	C _{right} =	13.0625	in	A = 67.7816 in ²
C _{left} =	13.0625	in	r _y = 11.3340 in	C _{left} =	13.0625	in	r _y = 11.3340 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

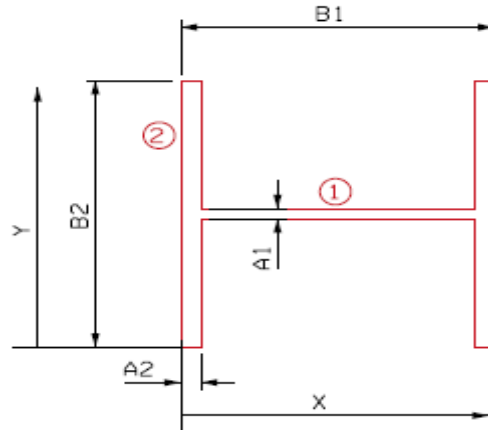
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 160

- $A_1 = t_w = 0.6650$ in
- $A_2 = t_f = 1.1240$ in
- $B_1 = d = 24.7140$ in
- $B_2 = b_f = 14.0950$ in



Member U54-L54

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		14.9399	7.0475	105.2889	0.5506	0.0000	0.0000	0.5506
2	Flange Plates		31.6856	7.0475	223.3040	524.5783	0.0000	0.0000	524.5783
Total			46.63		328.59	525.13		0.00	525.13
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	7.0475	in	$S_{top} = 74.51$ in ³	y-bar =	7.0475	in	$S_{top} = 74.51$ in ³
$I_x =$	525.13	in ⁴	$S_{bott.} = 74.51$ in ³	$I_x =$	525.13	in ⁴	$S_{bott.} = 74.51$ in ³
$c_{top} =$	7.0475	in	$A = 46.6255$ in ²	$c_{top} =$	7.0475	in	$A = 46.6255$ in ²
$c_{bottom} =$	7.0475	in	$r_x = 3.3560$ in	$c_{bottom} =$	7.0475	in	$r_x = 3.3560$ in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	12.3570	184.6122	628.3732	0.0000	0.0000	628.3732
2	Left Flange		15.8428	0.5620	8.9036	1.6679	11.7950	2204.0796	2205.7476
	Right Flange		15.8428	24.1520	382.6348	1.6679	11.7950	2204.0796	2205.7476
Total			46.63		576.15	631.71		4408.16	5039.87
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3570	in	S _{right} = 407.86 in ³	x-bar =	12.3570	in	S _{right} = 407.86 in ³
I _y =	5039.87	in ⁴	S _{left} = 407.86 in ³	I _y =	5039.87	in ⁴	S _{left} = 407.86 in ³
C _{right} =	12.3570	in	A = 46.6255 in ²	C _{right} =	12.3570	in	A = 46.6255 in ²
C _{left} =	12.3570	in	r _y = 10.3968 in	C _{left} =	12.3570	in	r _y = 10.3968 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

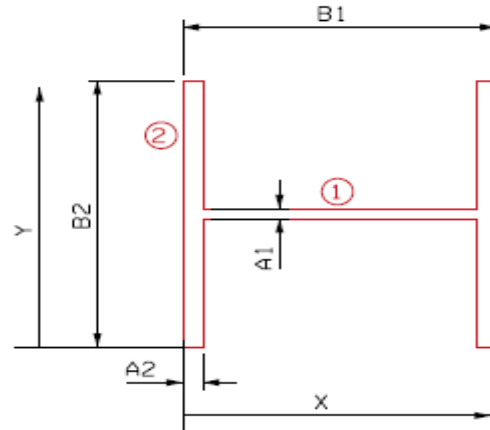
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 100

- $A_1 = t_w = 0.4700$ in
- $A_2 = t_f = 0.7670$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 12.0000$ in



Member U55-L55

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		10.5590	6.0000	63.3541	0.1944	0.0000	0.0000	0.1944
2	Flange Plates		18.4080	6.0000	110.4480	220.8960	0.0000	0.0000	220.8960
Total			28.97		173.80	221.09		0.00	221.09
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	6.0000	in	$S_{top} = 36.85$	in^3	y-bar =	6.0000	in	$S_{top} = 36.85$	in^3		
$I_x =$	221.09	in^4	$S_{bott.} = 36.85$	in^3	$I_x =$	221.09	in^4	$S_{bott.} = 36.85$	in^3		
$c_{top} =$	6.0000	in	A =	28.9670	in^2	$c_{top} =$	6.0000	in	A =	28.9670	in^2
$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in	$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	12.0000	126.7082	444.1134	0.0000	0.0000	444.1134
2	Left Flange		9.2040	0.3835	3.5297	0.4512	11.6165	1242.0160	1242.4673
	Right Flange		9.2040	23.6165	217.3663	0.4512	11.6165	1242.0160	1242.4673
Total			28.97		347.60	445.02		2484.03	2929.05
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.0000	in	S _{right} =	244.09	in ³	x-bar =	12.0000	in	S _{right} =	244.09	in ³
I _y =	2929.05	in ⁴	S _{left} =	244.09	in ³	I _y =	2929.05	in ⁴	S _{left} =	244.09	in ³
C _{right} =	12.0000	in	A =	28.9670	in ²	C _{right} =	12.0000	in	A =	28.9670	in ²
C _{left} =	12.0000	in	r _y =	10.0557	in	C _{left} =	12.0000	in	r _y =	10.0557	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

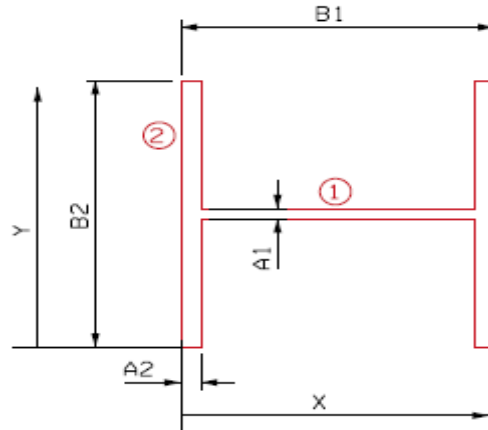
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 94

- $A_1 = t_w = 0.5160$ in
- $A_2 = t_f = 0.8720$ in
- $B_1 = d = 24.2900$ in
- $B_2 = b_f = 9.0610$ in



Member U56-L56

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x, gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		11.6337	4.5305	52.7066	0.2581	0.0000	0.0000	0.2581
2	Flange Plates		15.8024	4.5305	71.5927	108.1169	0.0000	0.0000	108.1169
Total			27.44		124.30	108.38		0.00	108.38
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	4.5305	in	$S_{top} = 23.92$	in^3	y-bar =	4.5305	in	$S_{top} = 23.92$	in^3		
$I_x =$	108.38	in^4	$S_{bott.} = 23.92$	in^3	$I_x =$	108.38	in^4	$S_{bott.} = 23.92$	in^3		
$c_{top} =$	4.5305	in	A =	27.4361	in^2	$c_{top} =$	4.5305	in	A =	27.4361	in^2
$c_{bottom} =$	4.5305	in	$r_x =$	1.9875	in	$c_{bottom} =$	4.5305	in	$r_x =$	1.9875	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		11.6337	12.1450	141.2917	492.8071	0.0000	0.0000	492.8071
2	Left Flange		7.9012	0.4360	3.4449	0.5007	11.7090	1083.2588	1083.7595
	Right Flange		7.9012	23.8540	188.4750	0.5007	11.7090	1083.2588	1083.7595
Total			27.44		333.21	493.81		2166.52	2660.33
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.1450	in	S _{right} =	219.05	in ³	x-bar =	12.1450	in	S _{right} =	219.05	in ³
I _y =	2660.33	in ⁴	S _{left} =	219.05	in ³	I _y =	2660.33	in ⁴	S _{left} =	219.05	in ³
C _{right} =	12.1450	in	A =	27.4361	in ²	C _{right} =	12.1450	in	A =	27.4361	in ²
C _{left} =	12.1450	in	r _y =	9.8470	in	C _{left} =	12.1450	in	r _y =	9.8470	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 120

- $A_1 = t_w = 0.5590$ in
- $A_2 = t_f = 0.9220$ in
- $B_1 = d = 24.3100$ in
- $B_2 = b_f = 12.0890$ in



Member U57-L57

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		12.5585	6.0445	75.9098	0.3270	0.0000	0.0000	0.3270
2	Flange Plates		22.2921	6.0445	134.7447	271.4881	0.0000	0.0000	271.4881
Total			34.85		210.65	271.82		0.00	271.82
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	6.0445	in	$S_{top} = 44.97$	in^3	y-bar =	6.0445	in	$S_{top} = 44.97$	in^3		
$I_x =$	271.82	in^4	$S_{bott.} = 44.97$	in^3	$I_x =$	271.82	in^4	$S_{bott.} = 44.97$	in^3		
$c_{top} =$	6.0445	in	A =	34.8506	in^2	$c_{top} =$	6.0445	in	A =	34.8506	in^2
$c_{bottom} =$	6.0445	in	$r_x =$	2.7927	in	$c_{bottom} =$	6.0445	in	$r_x =$	2.7927	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate	12.5585	12.1550	152.6485	528.2115	0.0000	0.0000	528.2115
2	Left Flange	11.1461	0.4610	5.1383	0.7896	11.6940	1524.2194	1525.0090
	Right Flange	11.1461	23.8490	265.8223	0.7896	11.6940	1524.2194	1525.0090
Total		34.85		423.61	529.79		3048.44	3578.23
Section Losses		A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1550	in	S _{right} = 294.38 in ³	x-bar =	12.1550	in	S _{right} = 294.38 in ³
I _y =	3578.23	in ⁴	S _{left} = 294.38 in ³	I _y =	3578.23	in ⁴	S _{left} = 294.38 in ³
C _{right} =	12.1550	in	A = 34.8506 in ²	C _{right} =	12.1550	in	A = 34.8506 in ²
C _{left} =	12.1550	in	r _y = 10.1328 in	C _{left} =	12.1550	in	r _y = 10.1328 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.6875$ in
- $B_3 = b = 14.0000$ in



Member U58-L58

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		19.2500	7.0000	134.7500	314.4167	0.0000	0.0000	314.4167
Total			57.03		399.22	722.70		0.00	722.70
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	7.0000	in	$S_{top} = 103.24$	in ³	y-bar =	7.0000	in	$S_{top} = 103.24$	in ³		
$I_x =$	722.70	in ⁴	$S_{bott.} = 103.24$	in ³	$I_x =$	722.70	in ⁴	$S_{bott.} = 103.24$	in ³		
$c_{top} =$	7.0000	in	A =	57.0316	in ²	$c_{top} =$	7.0000	in	A =	57.0316	in ²
$c_{bottom} =$	7.0000	in	$r_x =$	3.5598	in	$c_{bottom} =$	7.0000	in	$r_x =$	3.5598	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.8125	164.0720	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	1.1335	14.1551	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	24.4915	305.8499	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		9.6250	0.3438	3.3086	0.3791	12.4688	1496.3961	1496.7752
	Right Plate		9.6250	25.2813	243.3320	0.3791	12.4688	1496.3961	1496.7752
Total			57.03		730.72	541.02		6399.49	6940.51
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.8125	in	S _{right} =	541.70	in ³	x-bar =	12.8125	in	S _{right} =	541.70	in ³
I _y =	6940.51	n ⁴	S _{left} =	541.70	in ³	I _y =	6940.51	n ⁴	S _{left} =	541.70	in ³
C _{right} =	12.8125	in	A =	57.0316	in ²	C _{right} =	12.8125	in	A =	57.0316	in ²
C _{left} =	12.8125	in	r _y =	11.0316	in	C _{left} =	12.8125	in	r _y =	11.0316	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 1.1250$ in
- $B_3 = b = 16.0000$ in



Member U59-L59

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	8.0000	102.4450	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	8.0000	199.8080	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		36.0000	8.0000	288.0000	768.0000	0.0000	0.0000	768.0000
Total			73.78		590.25	1176.29		0.00	1176.29
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	8.0000	in	S _{top} = 147.04 in ³	y-bar =	8.0000	in	S _{top} = 147.04 in ³
I _x =	1176.29	in ⁴	S _{bott.} = 147.04 in ³	I _x =	1176.29	in ⁴	S _{bott.} = 147.04 in ³
c _{top} =	8.0000	in	A = 73.7816 in ²	c _{top} =	8.0000	in	A = 73.7816 in ²
c _{bottom} =	8.0000	in	r _x = 3.9928 in	c _{bottom} =	8.0000	in	r _x = 3.9928 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	13.2500	169.6745	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	1.5710	19.6186	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	24.9290	311.3134	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		18.0000	0.5625	10.1250	1.8984	12.6875	2897.5078	2899.4063
	Right Plate		18.0000	25.9375	466.8750	1.8984	12.6875	2897.5078	2899.4063
Total			73.78		977.61	544.06		9201.72	9745.78
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	13.2500	in	S _{right} = 735.53 in ³	x-bar =	13.2500	in	S _{right} = 735.53 in ³
I _y =	9745.78	in ⁴	S _{left} = 735.53 in ³	I _y =	9745.78	in ⁴	S _{left} = 735.53 in ³
C _{right} =	13.2500	in	A = 73.7816 in ²	C _{right} =	13.2500	in	A = 73.7816 in ²
C _{left} =	13.2500	in	r _y = 11.4930 in	C _{left} =	13.2500	in	r _y = 11.4930 in

South Truss

Member U60-L60



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 5.7500$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.0000$ in

Left Web Plate:

$A_4 = h = 20.0000$ in
 $B_4 = t = 1.0000$ in

Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 1.0000$ in

Cover Plate:

$A_6 = t = 0.3750$ in
 $B_6 = l = 23.0000$ in



Member U60-L60

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	16.1875	44.0098	0.0319	5.9281	95.5440	95.5759
	Vertical Leg	3.0000	18.0000	54.0000	4.0000	7.7406	179.7517	183.7517
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	6.4469	112.9973	113.0292
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	8.2594	204.6520	208.6520
3	Perforated Plate	5.7500	4.2500	24.4375	0.1198	6.0094	207.6476	207.7674
4	Plate	20.0000	10.0000	200.0000	666.6667	0.2594	1.3455	668.0122
5	Plate	20.0000	10.0000	200.0000	666.6667	0.2594	1.3455	668.0122
6	Cover Plate	8.6250	15.8125	136.3828	0.1011	5.5531	265.9705	266.0716
Total		65.81		675.20	1341.62		1069.25	2410.87
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00	0.00	0.00	0.00



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	10.2594 in	S _{top} =	247.51 in ³	y-bar =	10.2594 in	S _{top} =	247.51 in ³
I _x =	2410.87 in ⁴	S _{bott.} =	234.99 in ³	I _x =	2410.87 in ⁴	S _{bott.} =	234.99 in ³
C _{top} =	9.7406 in	A =	65.8125 in ²	C _{top} =	9.7406 in	A =	65.8125 in ²
C _{bottom} =	10.2594 in	r _x =	6.0525 in	C _{bottom} =	10.2594 in	r _x =	6.0525 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	3.1875	4.3330	1.4886	9.3125	117.8886	119.3772	
	Vertical Leg	1.5000	1.1875	1.7813	0.0176	11.3125	191.9590	191.9766	
1 (Right)	Horizontal Leg	1.3594	21.8125	29.6514	1.4886	9.3125	117.8886	119.3772	
	Vertical Leg	1.5000	23.8125	35.7188	0.0176	11.3125	191.9590	191.9766	
2 (Left)	Horizontal Leg	1.3594	3.1875	4.3330	1.4886	9.3125	117.8886	119.3772	
	Vertical Leg	1.5000	1.1875	1.7813	0.0176	11.3125	191.9590	191.9766	
2 (Right)	Horizontal Leg	1.3594	21.8125	29.6514	1.4886	9.3125	117.8886	119.3772	
	Vertical Leg	1.5000	23.8125	35.7188	0.0176	11.3125	191.9590	191.9766	
3 (Left)	Perforated Plate	2.8750	3.8750	11.1406	7.9212	8.6250	213.8730	221.7943	
3 (Right)	Perforated Plate	2.8750	21.1250	60.7344	7.9212	8.6250	213.8730	221.7943	
4	Plate	20.0000	0.5000	10.0000	1.6667	12.0000	2880.0000	2881.6667	
5	Plate	20.0000	24.5000	490.0000	1.6667	12.0000	2880.0000	2881.6667	
6	Cover Plate	8.6250	12.5000	107.8125	380.2188	0.0000	0.0000	380.2188	
Total		65.81		822.66	405.42		7427.14	7832.56	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.5000 in	S _{right} =	626.60 in ³	x-bar =	12.5000 in	S _{right} =	626.60 in ³
I _y =	7832.56 in ⁴	S _{left} =	626.60 in ³	I _y =	7832.56 in ⁴	S _{left} =	626.60 in ³
C _{right} =	12.5000 in	A =	65.8125 in ²	C _{right} =	12.5000 in	A =	65.8125 in ²
C _{left} =	12.5000 in	r _y =	10.9093 in	C _{left} =	12.5000 in	r _y =	10.9093 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.5000$ in

Perforated Plate:

$A_3 = t = 0.6875$ in
 $B_3 = l = 5.7500$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.0000$ in

Left Web Plate:

$A_4 = h = 20.0000$ in
 $B_4 = t = 0.8125$ in

Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 0.8125$ in

Cover Plate:

$A_6 = t = 0.5625$ in
 $B_6 = l = 23.0000$ in



Member U61-L61

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.5000	16.2500	56.8750	0.0729	5.8218	118.6257	118.6986
	Vertical Leg	4.0000	18.0000	72.0000	5.3333	7.5718	229.3270	234.6604
2	Horizontal Leg	3.5000	3.7500	13.1250	0.0729	6.6782	156.0955	156.1684
	Vertical Leg	4.0000	2.0000	8.0000	5.3333	8.4282	284.1400	289.4733
3	Perforated Plate	7.9063	4.3438	34.3428	0.3114	6.0845	292.6961	293.0075
4	Plate	16.2500	10.0000	162.5000	541.6667	0.4282	2.9799	544.6466
5	Plate	16.2500	10.0000	162.5000	541.6667	0.4282	2.9799	544.6466
6	Cover Plate	12.9375	15.7188	203.3613	0.3411	5.2905	362.1160	362.4571
Total		68.34		712.70	1094.80		1448.96	2543.76
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00	0.00	0.00	0.00



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	10.4282 in	S _{top} =	265.76 in ³	y-bar =	10.4282 in	S _{top} =	265.76 in ³
I _x =	2543.76 in ⁴	S _{bott.} =	243.93 in ³	I _x =	2543.76 in ⁴	S _{bott.} =	243.93 in ³
C _{top} =	9.5718 in	A =	68.3438 in ²	C _{top} =	9.5718 in	A =	68.3438 in ²
C _{bottom} =	10.4282 in	r _x =	6.1008 in	C _{bottom} =	10.4282 in	r _x =	6.1008 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.7500	3.0625	5.3594	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	1.0625	2.1250	0.0417	11.2500	253.1250	253.1667	
1 (Right)	Horizontal Leg	1.7500	21.5625	37.7344	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	23.5625	47.1250	0.0417	11.2500	253.1250	253.1667	
2 (Left)	Horizontal Leg	1.7500	3.0625	5.3594	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	1.0625	2.1250	0.0417	11.2500	253.1250	253.1667	
2 (Right)	Horizontal Leg	1.7500	21.5625	37.7344	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	23.5625	47.1250	0.0417	11.2500	253.1250	253.1667	
3 (Left)	Perforated Plate	3.9531	3.6875	14.5771	10.8917	8.6250	294.0754	304.9671	
3 (Right)	Perforated Plate	3.9531	20.9375	82.7686	10.8917	8.6250	294.0754	304.9671	
4	Plate	16.2500	0.4063	6.6016	0.8940	11.9063	2303.5803	2304.4743	
5	Plate	16.2500	24.2188	393.5547	0.8940	11.9063	2303.5803	2304.4743	
6	Cover Plate	12.9375	12.3125	159.2930	570.3281	0.0000	0.0000	570.3281	
Total		68.34		841.48	601.21		6806.75	7407.96	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3125 in	S _{right} =	601.66 in ³	x-bar =	12.3125 in	S _{right} =	601.66 in ³
I _y =	7407.96 in ⁴	S _{left} =	601.66 in ³	I _y =	7407.96 in ⁴	S _{left} =	601.66 in ³
C _{right} =	12.3125 in	A =	68.3438 in ²	C _{right} =	12.3125 in	A =	68.3438 in ²
C _{left} =	12.3125 in	r _y =	10.4112 in	C _{left} =	12.3125 in	r _y =	10.4112 in



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_t = 0.6250$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_t = 0.6250$ in

Perforated Plate:

$A_3 = t = 0.6250$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

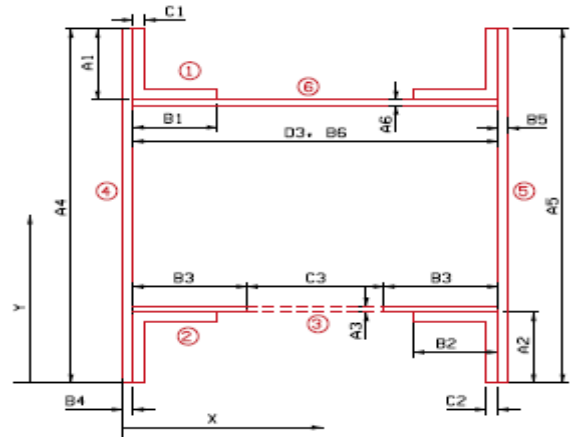
$A_4 = h = 26.0000$ in
 $B_4 = t = 1.2500$ in

Right Web Plate:

$A_5 = h = 26.0000$ in
 $B_5 = t = 1.2500$ in

Cover Plate:

$A_6 = t = 0.5000$ in
 $B_6 = l = 23.5000$ in



Member U62-L62

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	4.2188	22.3125	94.1309	0.1373	8.9458	337.6148	337.7521
	Vertical Leg	5.0000	24.0000	120.0000	6.6667	10.6333	565.3346	572.0012
2	Horizontal Leg	4.2188	3.6875	15.5566	0.1373	9.6792	395.2423	395.3796
	Vertical Leg	5.0000	2.0000	10.0000	6.6667	11.3667	646.0102	652.6768
3	Perforated Plate	7.5000	4.3125	32.3438	0.2441	9.0542	614.8400	615.0842
4	Plate	32.5000	13.0000	422.5000	1830.8333	0.3667	4.3704	1835.2037
5	Plate	32.5000	13.0000	422.5000	1830.8333	0.3667	4.3704	1835.2037
6	Cover Plate	11.7500	21.7500	255.5625	0.2448	8.3833	825.7853	826.0301
Total		102.69		1372.59	3675.76		3393.57	7069.33
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00	0.00	0.00	0.00



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	13.3667 in	S _{top} =	559.58 in ³	y-bar =	13.3667 in	S _{top} =	559.58 in ³
I _x =	7069.33 in ⁴	S _{bott.} =	528.88 in ³	I _x =	7069.33 in ⁴	S _{bott.} =	528.88 in ³
C _{top} =	12.6333 in	A =	102.6875 in ²	C _{top} =	12.6333 in	A =	102.6875 in ²
C _{bottom} =	13.3667 in	r _x =	8.2972 in	C _{bottom} =	13.3667 in	r _x =	8.2972 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.1094	3.5625	7.5146	2.0023	9.4375	187.8745	189.8767	
	Vertical Leg	2.5000	1.5625	3.9063	0.0814	11.4375	327.0410	327.1224	
1 (Right)	Horizontal Leg	2.1094	22.4375	47.3291	2.0023	9.4375	187.8745	189.8767	
	Vertical Leg	2.5000	24.4375	61.0938	0.0814	11.4375	327.0410	327.1224	
2 (Left)	Horizontal Leg	2.1094	3.5625	7.5146	2.0023	9.4375	187.8745	189.8767	
	Vertical Leg	2.5000	1.5625	3.9063	0.0814	11.4375	327.0410	327.1224	
2 (Right)	Horizontal Leg	2.1094	22.4375	47.3291	2.0023	9.4375	187.8745	189.8767	
	Vertical Leg	2.5000	24.4375	61.0938	0.0814	11.4375	327.0410	327.1224	
3 (Left)	Perforated Plate	3.7500	4.2500	15.9375	11.2500	8.7500	287.1094	298.3594	
3 (Right)	Perforated Plate	3.7500	21.7500	81.5625	11.2500	8.7500	287.1094	298.3594	
4	Plate	32.5000	0.6250	20.3125	4.2318	12.3750	4977.0703	4981.3021	
5	Plate	32.5000	25.3750	824.6875	4.2318	12.3750	4977.0703	4981.3021	
6	Cover Plate	11.7500	13.0000	152.7500	540.7448	0.0000	0.0000	540.7448	
Total		102.69		1334.94	580.04		12588.02	13168.06	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	13.0000 in	S _{right} =	1012.93 in ³	x-bar =	13.0000 in	S _{right} =	1012.93 in ³
I _y =	13168.06 in ⁴	S _{left} =	1012.93 in ³	I _y =	13168.06 in ⁴	S _{left} =	1012.93 in ³
C _{right} =	13.0000 in	A =	102.6875 in ²	C _{right} =	13.0000 in	A =	102.6875 in ²
C _{left} =	13.0000 in	r _y =	11.3241 in	C _{left} =	13.0000 in	r _y =	11.3241 in



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.5000$ in

Perforated Plate:

$A_3 = t = 0.6250$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

$A_4 = h = 20.0000$ in
 $B_4 = t = 0.6250$ in

Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 0.6250$ in

Cover Plate:

$A_6 = t = 0.5000$ in
 $B_6 = l = 23.5000$ in



Member U63-L63

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.5000	16.2500	56.8750	0.0729	5.8296	118.9465	119.0194
	Vertical Leg	4.0000	18.0000	72.0000	5.3333	7.5796	229.8039	235.1372
2	Horizontal Leg	3.5000	3.7500	13.1250	0.0729	6.6704	155.7279	155.8008
	Vertical Leg	4.0000	2.0000	8.0000	5.3333	8.4204	283.6098	288.9431
3	Perforated Plate	7.5000	4.3125	32.3438	0.2441	6.1079	279.7945	280.0387
4	Plate	12.5000	10.0000	125.0000	416.6667	0.4204	2.2088	418.8754
5	Plate	12.5000	10.0000	125.0000	416.6667	0.4204	2.2088	418.8754
6	Cover Plate	11.7500	15.7500	185.0625	0.2448	5.3296	333.7597	334.0044
Total		59.25		617.41	844.63		1406.06	2250.69
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00	0.00	0.00	0.00



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	10.4204 in	S _{top} =	234.95 in ³	y-bar =	10.4204 in	S _{top} =	234.95 in ³
I _x =	2250.69 in ⁴	S _{bott.} =	215.99 in ³	I _x =	2250.69 in ⁴	S _{bott.} =	215.99 in ³
C _{top} =	9.5796 in	A =	59.2500 in ²	C _{top} =	9.5796 in	A =	59.2500 in ²
C _{bottom} =	10.4204 in	r _x =	6.1633 in	C _{bottom} =	10.4204 in	r _x =	6.1633 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.7500	2.8750	5.0313	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	0.8750	1.7500	0.0417	11.5000	264.5000	264.5417	
1 (Right)	Horizontal Leg	1.7500	21.8750	38.2813	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	23.8750	47.7500	0.0417	11.5000	264.5000	264.5417	
2 (Left)	Horizontal Leg	1.7500	2.8750	5.0313	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	0.8750	1.7500	0.0417	11.5000	264.5000	264.5417	
2 (Right)	Horizontal Leg	1.7500	21.8750	38.2813	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	23.8750	47.7500	0.0417	11.5000	264.5000	264.5417	
3 (Left)	Perforated Plate	3.7500	3.6250	13.5938	11.2500	8.7500	287.1094	298.3594	
3 (Right)	Perforated Plate	3.7500	21.1250	79.2188	11.2500	8.7500	287.1094	298.3594	
4	Plate	12.5000	0.3125	3.9063	0.4069	12.0625	1818.7988	1819.2057	
5	Plate	12.5000	24.4375	305.4688	0.4069	12.0625	1818.7988	1819.2057	
6	Cover Plate	11.7500	12.3750	145.4063	540.7448	0.0000	0.0000	540.7448	
Total		59.25		733.22	571.37		5901.57	6472.94	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3750 in	S _{right} =	523.07 in ³	x-bar =	12.3750 in	S _{right} =	523.07 in ³
I _y =	6472.94 in ⁴	S _{left} =	523.07 in ³	I _y =	6472.94 in ⁴	S _{left} =	523.07 in ³
C _{right} =	12.3750 in	A =	59.2500 in ²	C _{right} =	12.3750 in	A =	59.2500 in ²
C _{left} =	12.3750 in	r _y =	10.4522 in	C _{left} =	12.3750 in	r _y =	10.4522 in

South Truss

Member U64-L64



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.5000$ in

Perforated Plate:

$A_3 = t = 0.6250$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

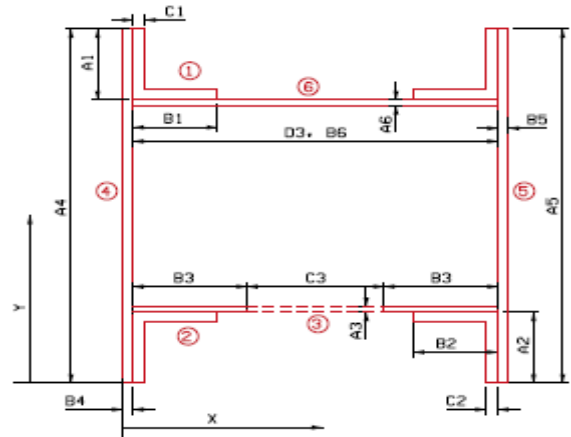
$A_4 = h = 20.0000$ in
 $B_4 = t = 0.5000$ in

Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 0.5000$ in

Cover Plate:

$A_6 = t = 0.5000$ in
 $B_6 = l = 23.5000$ in



Member U64-L64

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.5000	16.2500	56.8750	0.0729	5.7909	117.3708	117.4437
	Vertical Leg	4.0000	18.0000	72.0000	5.3333	7.5409	227.4606	232.7939
2	Horizontal Leg	3.5000	3.7500	13.1250	0.0729	6.7091	157.5421	157.6151
	Vertical Leg	4.0000	2.0000	8.0000	5.3333	8.4591	286.2256	291.5589
3	Perforated Plate	7.5000	4.3125	32.3438	0.2441	6.1466	283.3553	283.5995
4	Plate	10.0000	10.0000	100.0000	333.3333	0.4591	2.1077	335.4411
5	Plate	10.0000	10.0000	100.0000	333.3333	0.4591	2.1077	335.4411
6	Cover Plate	11.7500	15.7500	185.0625	0.2448	5.2909	328.9249	329.1697
Total		54.25		567.41	677.97		1405.09	2083.06
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00	0.00	0.00	0.00



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	10.4591 in	S _{top} =	218.33 in ³	y-bar =	10.4591 in	S _{top} =	218.33 in ³
I _x =	2083.06 in ⁴	S _{bott.} =	199.16 in ³	I _x =	2083.06 in ⁴	S _{bott.} =	199.16 in ³
C _{top} =	9.5409 in	A =	54.2500 in ²	C _{top} =	9.5409 in	A =	54.2500 in ²
C _{bottom} =	10.4591 in	r _x =	6.1966 in	C _{bottom} =	10.4591 in	r _x =	6.1966 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.7500	2.7500	4.8125	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	0.7500	1.5000	0.0417	11.5000	264.5000	264.5417	
1 (Right)	Horizontal Leg	1.7500	21.7500	38.0625	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	23.7500	47.5000	0.0417	11.5000	264.5000	264.5417	
2 (Left)	Horizontal Leg	1.7500	2.7500	4.8125	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	0.7500	1.5000	0.0417	11.5000	264.5000	264.5417	
2 (Right)	Horizontal Leg	1.7500	21.7500	38.0625	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	23.7500	47.5000	0.0417	11.5000	264.5000	264.5417	
3 (Left)	Perforated Plate	3.7500	3.5000	13.1250	11.2500	8.7500	287.1094	298.3594	
3 (Right)	Perforated Plate	3.7500	21.0000	78.7500	11.2500	8.7500	287.1094	298.3594	
4	Plate	10.0000	0.2500	2.5000	0.2083	12.0000	1440.0000	1440.2083	
5	Plate	10.0000	24.2500	242.5000	0.2083	12.0000	1440.0000	1440.2083	
6	Cover Plate	11.7500	12.2500	143.9375	540.7448	0.0000	0.0000	540.7448	
Total		54.25		664.56	570.97		5143.97	5714.94	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2500 in	S _{right} =	466.53 in ³	x-bar =	12.2500 in	S _{right} =	466.53 in ³
I _y =	5714.94 in ⁴	S _{left} =	466.53 in ³	I _y =	5714.94 in ⁴	S _{left} =	466.53 in ³
C _{right} =	12.2500 in	A =	54.2500 in ²	C _{right} =	12.2500 in	A =	54.2500 in ²
C _{left} =	12.2500 in	r _y =	10.2638 in	C _{left} =	12.2500 in	r _y =	10.2638 in



Made By KMW
Checked By ADK

Date 1/31/2012
Date 2/16/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.5000$ in
- $B_3 = b = 16.0000$ in



Member U65-L65

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x, gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	8.0000	102.4450	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	8.0000	199.8080	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		16.0000	8.0000	128.0000	341.3333	0.0000	0.0000	341.3333
Total			53.78		430.25	749.62		0.00	749.62
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1250	16.0000	-2.0000	8.0000	-16.0000	-42.6667	0.0181	-0.0007	-42.6673
2	0.1250	1.0000	-0.1250	0.5000	-0.0625	-0.0104	7.5181	-7.0653	-7.0757
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.13		-16.06	-42.68		-7.07	-49.74

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	8.0000	in	$S_{top} =$	93.70	in ³	y-bar =	8.0181	in	$S_{top} =$	87.68	in ³
$I_x =$	749.62	in ⁴	$S_{bott.} =$	93.70	in ³	$I_x =$	699.88	in ⁴	$S_{bott.} =$	87.29	in ³
$c_{top} =$	8.0000	in	A =	53.7816	in ²	$c_{top} =$	7.9819	in	A =	51.6566	in ²
$c_{bottom} =$	8.0000	in	$r_x =$	3.7334	in	$c_{bottom} =$	8.0181	in	$r_x =$	3.6809	in



Made By KMW
Checked By ADK

Date 1/31/2012
Date 2/16/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.6250	161.6710	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	0.9460	11.8136	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	24.3040	303.5084	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		8.0000	0.2500	2.0000	0.1667	12.3750	1225.1250	1225.2917
	Right Plate		8.0000	25.0000	200.0000	0.1667	12.3750	1225.1250	1225.2917
Total			53.78		678.99	540.59		5856.95	6397.55
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	16.0000	0.1250	-2.0000	25.1875	-50.3750	-0.0026	13.0790	-342.1195	-342.1221
2	1.0000	0.1250	-0.1250	25.0625	-3.1328	-0.0002	12.9540	-20.9757	-20.9759
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-2.13		-53.51	0.00		-363.10	-363.10

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.6250	in	S _{right} = 506.74 in ³	x-bar =	12.1085	in	S _{right} = 459.19 in ³
I _y =	6397.55	n ⁴	S _{left} = 506.74 in ³	I _y =	6034.45	n ⁴	S _{left} = 498.36 in ³
C _{right} =	12.6250	in	A = 53.7816 in ²	C _{right} =	13.1415	in	A = 51.6566 in ²
C _{left} =	12.6250	in	r _y = 10.9066 in	C _{left} =	12.1085	in	r _y = 10.8083 in



Made By SFH
Checked By NRF

Date 1/25/2012
Date 1/26/2011

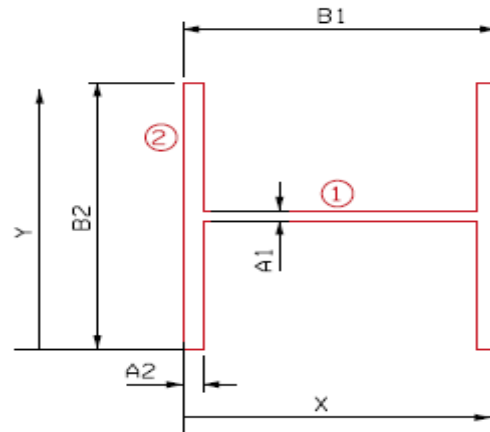
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 150

- $A_1 = t_w = 0.6330$ in
- $A_2 = t_f = 1.0480$ in
- $B_1 = d = 24.5620$ in
- $B_2 = b_f = 14.0630$ in



Member U66-L66

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		14.2210	7.0315	99.9948	0.4748	0.0000	0.0000	0.4748
2	Flange Plates		29.4760	7.0315	207.2608	485.7848	0.0000	0.0000	485.7848
Total			43.70		307.26	486.26		0.00	486.26
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0315	in	$S_{top} =$	69.15	in ³	y-bar =	7.0315	in	$S_{top} =$	69.15	in ³
$I_x =$	486.26	in ⁴	$S_{bott.} =$	69.15	in ³	$I_x =$	486.26	in ⁴	$S_{bott.} =$	69.15	in ³
$c_{top} =$	7.0315	in	A =	43.6970	in ²	$c_{top} =$	7.0315	in	A =	43.6970	in ²
$c_{bottom} =$	7.0315	in	$r_x =$	3.3359	in	$c_{bottom} =$	7.0315	in	$r_x =$	3.3359	in



Made By SFH
Checked By NRF

Date 1/25/2012
Date 1/26/2011

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y, gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	14.2210	12.2810	174.6478	598.1357	0.0000	0.0000	598.1357	
2	Left Flange	14.7380	0.5240	7.7227	1.3489	11.7570	2037.1936	2038.5425	
	Right Flange	14.7380	24.0380	354.2726	1.3489	11.7570	2037.1936	2038.5425	
Total		43.70		536.64	600.83		4074.39	4675.22	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2810	in	S _{right} = 380.69 in ³	x-bar =	12.2810	in	S _{right} = 380.69 in ³
I _y =	4675.22	in ⁴	S _{left} = 380.69 in ³	I _y =	4675.22	in ⁴	S _{left} = 380.69 in ³
C _{right} =	12.2810	in	A = 43.6970 in ²	C _{right} =	12.2810	in	A = 43.6970 in ²
C _{left} =	12.2810	in	r _y = 10.3437 in	C _{left} =	12.2810	in	r _y = 10.3437 in



Made By SFH
Checked By NRF

Date 1/25/2012
Date 1/26/2011

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 100

- $A_1 = t_w = 0.4700$ in
- $A_2 = t_f = 0.7670$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 12.0000$ in



Member U67-L67

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		10.5590	6.0000	63.3541	0.1944	0.0000	0.0000	0.1944
2	Flange Plates		18.4080	6.0000	110.4480	220.8960	0.0000	0.0000	220.8960
Total			28.97		173.80	221.09		0.00	221.09
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	6.0000	in	$S_{top} = 36.85$	in^3	y-bar =	6.0000	in	$S_{top} = 36.85$	in^3		
$I_x =$	221.09	in^4	$S_{bott.} = 36.85$	in^3	$I_x =$	221.09	in^4	$S_{bott.} = 36.85$	in^3		
$c_{top} =$	6.0000	in	A =	28.9670	in^2	$c_{top} =$	6.0000	in	A =	28.9670	in^2
$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in	$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in



Made By SFH
Checked By NRF

Date 1/25/2012
Date 1/26/2011

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	12.0000	126.7082	444.1134	0.0000	0.0000	444.1134
2	Left Flange		9.2040	0.3835	3.5297	0.4512	11.6165	1242.0160	1242.4673
	Right Flange		9.2040	23.6165	217.3663	0.4512	11.6165	1242.0160	1242.4673
Total			28.97		347.60	445.02		2484.03	2929.05
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.0000	in	S _{right} =	244.09	in ³	x-bar =	12.0000	in	S _{right} =	244.09	in ³
I _y =	2929.05	in ⁴	S _{left} =	244.09	in ³	I _y =	2929.05	in ⁴	S _{left} =	244.09	in ³
C _{right} =	12.0000	in	A =	28.9670	in ²	C _{right} =	12.0000	in	A =	28.9670	in ²
C _{left} =	12.0000	in	r _y =	10.0557	in	C _{left} =	12.0000	in	r _y =	10.0557	in



Made By SFH
Checked By NRF

Date 1/25/2012
Date 1/26/2011

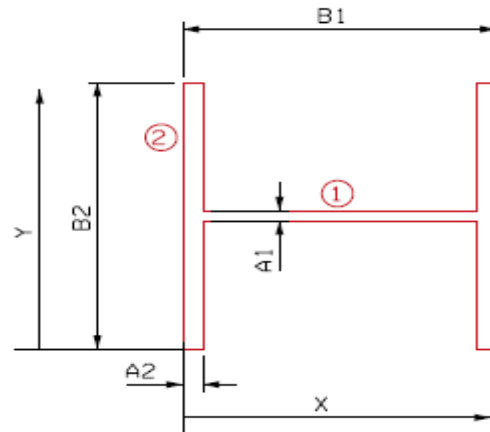
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 100

- $A_1 = t_w = 0.4700$ in
- $A_2 = t_f = 0.7670$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 12.0000$ in



Member U68-L68

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		10.5590	6.0000	63.3541	0.1944	0.0000	0.0000	0.1944
2	Flange Plates		18.4080	6.0000	110.4480	220.8960	0.0000	0.0000	220.8960
Total			28.97		173.80	221.09		0.00	221.09
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0000	in	$S_{top} =$	36.85	in ³	y-bar =	6.0000	in	$S_{top} =$	36.85	in ³
$I_x =$	221.09	in ⁴	$S_{bott.} =$	36.85	in ³	$I_x =$	221.09	in ⁴	$S_{bott.} =$	36.85	in ³
$c_{top} =$	6.0000	in	A =	28.9670	in ²	$c_{top} =$	6.0000	in	A =	28.9670	in ²
$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in	$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in



Made By SFH
Checked By NRF

Date 1/25/2012
Date 1/26/2011

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	12.0000	126.7082	444.1134	0.0000	0.0000	444.1134
2	Left Flange		9.2040	0.3835	3.5297	0.4512	11.6165	1242.0160	1242.4673
	Right Flange		9.2040	23.6165	217.3663	0.4512	11.6165	1242.0160	1242.4673
Total			28.97		347.60	445.02		2484.03	2929.05
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.0000	in	S _{right} =	244.09	in ³	x-bar =	12.0000	in	S _{right} =	244.09	in ³
I _y =	2929.05	in ⁴	S _{left} =	244.09	in ³	I _y =	2929.05	in ⁴	S _{left} =	244.09	in ³
C _{right} =	12.0000	in	A =	28.9670	in ²	C _{right} =	12.0000	in	A =	28.9670	in ²
C _{left} =	12.0000	in	r _y =	10.0557	in	C _{left} =	12.0000	in	r _y =	10.0557	in



Made By SFH
Checked By NRF

Date 1/25/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 100

- $A_1 = t_w = 0.4700$ in
- $A_2 = t_f = 0.7670$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 12.0000$ in



*Section properties are assumed

Member U69-L69

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x, gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		10.5590	6.0000	63.3541	0.1944	0.0000	0.0000	0.1944
2	Flange Plates		18.4080	6.0000	110.4480	220.8960	0.0000	0.0000	220.8960
Total			28.97		173.80	221.09		0.00	221.09
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	6.0000	in	$S_{top} = 36.85$	in^3	y-bar =	6.0000	in	$S_{top} = 36.85$	in^3		
$I_x =$	221.09	in^4	$S_{bott.} = 36.85$	in^3	$I_x =$	221.09	in^4	$S_{bott.} = 36.85$	in^3		
$c_{top} =$	6.0000	in	A =	28.9670	in^2	$c_{top} =$	6.0000	in	A =	28.9670	in^2
$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in	$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in



Made By SFH
Checked By NRF

Date 1/25/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	12.0000	126.7082	444.1134	0.0000	0.0000	444.1134
2	Left Flange		9.2040	0.3835	3.5297	0.4512	11.6165	1242.0160	1242.4673
	Right Flange		9.2040	23.6165	217.3663	0.4512	11.6165	1242.0160	1242.4673
Total			28.97		347.60	445.02		2484.03	2929.05
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.0000	in	S _{right} =	244.09	in ³	x-bar =	12.0000	in	S _{right} =	244.09	in ³
I _y =	2929.05	in ⁴	S _{left} =	244.09	in ³	I _y =	2929.05	in ⁴	S _{left} =	244.09	in ³
C _{right} =	12.0000	in	A =	28.9670	in ²	C _{right} =	12.0000	in	A =	28.9670	in ²
C _{left} =	12.0000	in	r _y =	10.0557	in	C _{left} =	12.0000	in	r _y =	10.0557	in



Made By SFH
Checked By NRF

Date 1/25/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 150

- $A_1 = t_w = 0.6330$ in
- $A_2 = t_f = 1.0480$ in
- $B_1 = d = 24.5620$ in
- $B_2 = b_f = 14.0630$ in



*Made Similar to U66-L66

Member U70-L70

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		14.2210	7.0315	99.9948	0.4748	0.0000	0.0000	0.4748
2	Flange Plates		29.4760	7.0315	207.2608	485.7848	0.0000	0.0000	485.7848
Total			43.70		307.26	486.26		0.00	486.26
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0315	in	S _{top} =	69.15	in ³	y-bar =	7.0315	in	S _{top} =	69.15	in ³
I _x =	486.26	in ⁴	S _{bott.} =	69.15	in ³	I _x =	486.26	in ⁴	S _{bott.} =	69.15	in ³
c _{top} =	7.0315	in	A =	43.6970	in ²	c _{top} =	7.0315	in	A =	43.6970	in ²
c _{bottom} =	7.0315	in	r _x =	3.3359	in	c _{bottom} =	7.0315	in	r _x =	3.3359	in



Made By SFH
Checked By NRF

Date 1/25/2012
Date 1/25/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.2210	12.2810	174.6478	598.1357	0.0000	0.0000	598.1357
2	Left Flange		14.7380	0.5240	7.7227	1.3489	11.7570	2037.1936	2038.5425
	Right Flange		14.7380	24.0380	354.2726	1.3489	11.7570	2037.1936	2038.5425
Total			43.70		536.64	600.83		4074.39	4675.22
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties				
x-bar =	12.2810	in	S _{right} =	380.69 in ³	x-bar =	12.2810	in	S _{right} =	380.69 in ³
I _y =	4675.22	in ⁴	S _{left} =	380.69 in ³	I _y =	4675.22	in ⁴	S _{left} =	380.69 in ³
C _{right} =	12.2810	in	A =	43.6970 in ²	C _{right} =	12.2810	in	A =	43.6970 in ²
C _{left} =	12.2810	in	r _y =	10.3437 in	C _{left} =	12.2810	in	r _y =	10.3437 in

South Truss

Member U71-L71



Made By KMW
Checked By ADK

Date 1/31/2012
Date 2/16/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

$A_4 = h = 20.0000$ in
 $B_4 = t = 0.6875$ in

Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 0.6875$ in

Cover Plate:

$A_6 = t = 0.3750$ in
 $B_6 = l = 23.5000$ in



Member U71-L71

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	2.7188	16.1875	44.0098	0.0319	5.8764	93.8835	93.9153	
	Vertical Leg	3.0000	18.0000	54.0000	4.0000	7.6889	177.3567	181.3567	
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	6.4986	114.8184	114.8502	
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	8.3111	207.2241	211.2241	
3	Perforated Plate	6.0000	4.2500	25.5000	0.1250	6.0611	220.4230	220.5480	
4	Plate	13.7500	10.0000	137.5000	458.3333	0.3111	1.3309	459.6643	
5	Plate	13.7500	10.0000	137.5000	458.3333	0.3111	1.3309	459.6643	
6	Cover Plate	8.8125	15.8125	139.3477	0.1033	5.5014	266.7120	266.8153	
Total		53.75		554.22	924.96		1083.08	2008.04	
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	
1	0.3125	20.0000	-6.2500	10.0000	-62.5000	-208.3333	0.3521	-0.7746	-209.1080
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-6.25	-62.50	-208.33		-0.77	-209.11	



Made By KMW
Checked By ADK

Date 1/31/2012
Date 2/16/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	10.3111 in	S _{top} =	207.25 in ³	y-bar =	10.3521 in	S _{top} =	186.46 in ³
I _x =	2008.04 in ⁴	S _{bott.} =	194.74 in ³	I _x =	1798.93 in ⁴	S _{bott.} =	173.78 in ³
C _{top} =	9.6889 in	A =	53.7500 in ²	C _{top} =	9.6479 in	A =	47.5000 in ²
C _{bottom} =	10.3111 in	r _x =	6.1122 in	C _{bottom} =	10.3521 in	r _x =	6.1540 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	2.8750	3.9082	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.8750	1.3125	0.0176	11.5625	200.5371	200.5547	
1 (Right)	Horizontal Leg	1.3594	22.0000	29.9063	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	24.0000	36.0000	0.0176	11.5625	200.5371	200.5547	
2 (Left)	Horizontal Leg	1.3594	2.8750	3.9082	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.8750	1.3125	0.0176	11.5625	200.5371	200.5547	
2 (Right)	Horizontal Leg	1.3594	22.0000	29.9063	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	24.0000	36.0000	0.0176	11.5625	200.5371	200.5547	
3 (Left)	Perforated Plate	3.0000	3.6875	11.0625	9.0000	8.7500	229.6875	238.6875	
3 (Right)	Perforated Plate	3.0000	21.1875	63.5625	9.0000	8.7500	229.6875	238.6875	
4	Plate	13.7500	0.3438	4.7266	0.5416	12.0938	2011.0583	2011.5999	
5	Plate	13.7500	24.5313	337.3047	0.5416	12.0938	2011.0583	2011.5999	
6	Cover Plate	8.8125	12.4375	109.6055	405.5586	0.0000	0.0000	405.5586	
Total		53.75		668.52	430.67		5780.85	6211.52	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	20.0000	0.3125	-6.2500	24.7188	-154.4922	-0.0509	13.8972	-1207.0767	-1207.1276
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-6.25		-154.49	-0.05		-1207.08	-1207.13

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.4375 in	S _{right} =	499.42 in ³	x-bar =	10.8215 in	S _{right} =	356.10 in ³
I _y =	6211.52 in ⁴	S _{left} =	499.42 in ³	I _y =	5004.39 in ⁴	S _{left} =	462.45 in ³
C _{right} =	12.4375 in	A =	53.7500 in ²	C _{right} =	14.0535 in	A =	47.5000 in ²
C _{left} =	12.4375 in	r _y =	10.7500 in	C _{left} =	10.8215 in	r _y =	10.2643 in

South Truss

Member U72-L72



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.5000$ in

Perforated Plate:

$A_3 = t = 0.6250$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

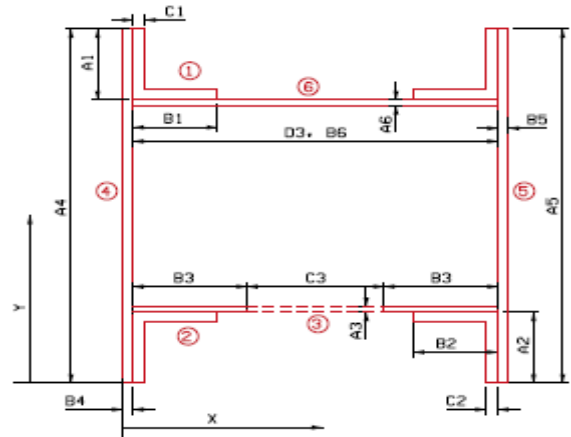
$A_4 = h = 20.0000$ in
 $B_4 = t = 0.5000$ in

Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 0.5000$ in

Cover Plate:

$A_6 = t = 0.5000$ in
 $B_6 = l = 23.5000$ in



Member U72-L72

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.5000	16.2500	56.8750	0.0729	5.7909	117.3708	117.4437
	Vertical Leg	4.0000	18.0000	72.0000	5.3333	7.5409	227.4606	232.7939
2	Horizontal Leg	3.5000	3.7500	13.1250	0.0729	6.7091	157.5421	157.6151
	Vertical Leg	4.0000	2.0000	8.0000	5.3333	8.4591	286.2256	291.5589
3	Perforated Plate	7.5000	4.3125	32.3438	0.2441	6.1466	283.3553	283.5995
4	Plate	10.0000	10.0000	100.0000	333.3333	0.4591	2.1077	335.4411
5	Plate	10.0000	10.0000	100.0000	333.3333	0.4591	2.1077	335.4411
6	Cover Plate	11.7500	15.7500	185.0625	0.2448	5.2909	328.9249	329.1697
Total		54.25		567.41	677.97		1405.09	2083.06
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	10.4591 in	S _{top} =	218.33 in ³	y-bar =	10.4591 in	S _{top} =	218.33 in ³
I _x =	2083.06 in ⁴	S _{bott.} =	199.16 in ³	I _x =	2083.06 in ⁴	S _{bott.} =	199.16 in ³
C _{top} =	9.5409 in	A =	54.2500 in ²	C _{top} =	9.5409 in	A =	54.2500 in ²
C _{bottom} =	10.4591 in	r _x =	6.1966 in	C _{bottom} =	10.4591 in	r _x =	6.1966 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.7500	2.7500	4.8125	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	0.7500	1.5000	0.0417	11.5000	264.5000	264.5417	
1 (Right)	Horizontal Leg	1.7500	21.7500	38.0625	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	23.7500	47.5000	0.0417	11.5000	264.5000	264.5417	
2 (Left)	Horizontal Leg	1.7500	2.7500	4.8125	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	0.7500	1.5000	0.0417	11.5000	264.5000	264.5417	
2 (Right)	Horizontal Leg	1.7500	21.7500	38.0625	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	23.7500	47.5000	0.0417	11.5000	264.5000	264.5417	
3 (Left)	Perforated Plate	3.7500	3.5000	13.1250	11.2500	8.7500	287.1094	298.3594	
3 (Right)	Perforated Plate	3.7500	21.0000	78.7500	11.2500	8.7500	287.1094	298.3594	
4	Plate	10.0000	0.2500	2.5000	0.2083	12.0000	1440.0000	1440.2083	
5	Plate	10.0000	24.2500	242.5000	0.2083	12.0000	1440.0000	1440.2083	
6	Cover Plate	11.7500	12.2500	143.9375	540.7448	0.0000	0.0000	540.7448	
Total		54.25		664.56	570.97		5143.97	5714.94	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2500 in	S _{right} =	466.53 in ³	x-bar =	12.2500 in	S _{right} =	466.53 in ³
I _y =	5714.94 in ⁴	S _{left} =	466.53 in ³	I _y =	5714.94 in ⁴	S _{left} =	466.53 in ³
C _{right} =	12.2500 in	A =	54.2500 in ²	C _{right} =	12.2500 in	A =	54.2500 in ²
C _{left} =	12.2500 in	r _y =	10.2638 in	C _{left} =	12.2500 in	r _y =	10.2638 in



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_t = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_t = 0.5000$ in

Perforated Plate:

$A_3 = t = 0.6250$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

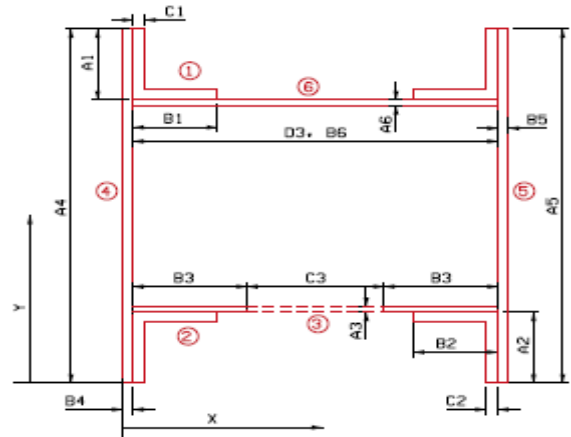
$A_4 = h = 22.0000$ in
 $B_4 = t = 0.5625$ in

Right Web Plate:

$A_5 = h = 22.0000$ in
 $B_5 = t = 0.5625$ in

Cover Plate:

$A_6 = t = 0.5000$ in
 $B_6 = l = 23.5000$ in



Member U73-L73

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.5000	18.2500	63.8750	0.0729	6.7558	159.7442	159.8171
	Vertical Leg	4.0000	20.0000	80.0000	5.3333	8.5058	289.3963	294.7297
2	Horizontal Leg	3.5000	3.7500	13.1250	0.0729	7.7442	209.9028	209.9757
	Vertical Leg	4.0000	2.0000	8.0000	5.3333	9.4942	360.5573	365.8907
3	Perforated Plate	7.5000	4.3125	32.3438	0.2441	7.1817	386.8233	387.0674
4	Plate	12.3750	11.0000	136.1250	499.1250	0.4942	3.0221	502.1471
5	Plate	12.3750	11.0000	136.1250	499.1250	0.4942	3.0221	502.1471
6	Cover Plate	11.7500	17.7500	208.5625	0.2448	6.2558	459.8405	460.0853
Total		59.00		678.16	1009.55		1872.31	2881.86
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	11.4942 in	S _{top} =	274.31 in ³	y-bar =	11.4942 in	S _{top} =	274.31 in ³
I _x =	2881.86 in ⁴	S _{bott.} =	250.72 in ³	I _x =	2881.86 in ⁴	S _{bott.} =	250.72 in ³
C _{top} =	10.5058 in	A =	59.0000 in ²	C _{top} =	10.5058 in	A =	59.0000 in ²
C _{bottom} =	11.4942 in	r _x =	6.9889 in	C _{bottom} =	11.4942 in	r _x =	6.9889 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.7500	2.8125	4.9219	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	0.8125	1.6250	0.0417	11.5000	264.5000	264.5417	
1 (Right)	Horizontal Leg	1.7500	21.8125	38.1719	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	23.8125	47.6250	0.0417	11.5000	264.5000	264.5417	
2 (Left)	Horizontal Leg	1.7500	2.8125	4.9219	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	0.8125	1.6250	0.0417	11.5000	264.5000	264.5417	
2 (Right)	Horizontal Leg	1.7500	21.8125	38.1719	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	23.8125	47.6250	0.0417	11.5000	264.5000	264.5417	
3 (Left)	Perforated Plate	3.7500	3.5625	13.3594	11.2500	8.7500	287.1094	298.3594	
3 (Right)	Perforated Plate	3.7500	21.0625	78.9844	11.2500	8.7500	287.1094	298.3594	
4	Plate	12.3750	0.2813	3.4805	0.3263	12.0313	1791.2933	1791.6196	
5	Plate	12.3750	24.3438	301.2539	0.3263	12.0313	1791.2933	1791.6196	
6	Cover Plate	11.7500	12.3125	144.6719	540.7448	0.0000	0.0000	540.7448	
Total		59.00		726.44	571.21		5846.56	6417.77	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3125 in	S _{right} =	521.24 in ³	x-bar =	12.3125 in	S _{right} =	521.24 in ³
I _y =	6417.77 in ⁴	S _{left} =	521.24 in ³	I _y =	6417.77 in ⁴	S _{left} =	521.24 in ³
C _{right} =	12.3125 in	A =	59.0000 in ²	C _{right} =	12.3125 in	A =	59.0000 in ²
C _{left} =	12.3125 in	r _y =	10.4296 in	C _{left} =	12.3125 in	r _y =	10.4296 in

South Truss

Member U74-L74



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.6250$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.6250$ in

Perforated Plate:

$A_3 = t = 0.6875$ in
 $B_3 = l = 5.2500$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 22.0000$ in

Left Web Plate:

$A_4 = h = 26.0000$ in
 $B_4 = t = 1.6250$ in

Right Web Plate:

$A_5 = h = 26.0000$ in
 $B_5 = t = 1.6250$ in

Cover Plate:

$A_6 = t = 0.5625$ in
 $B_6 = l = 22.0000$ in



Member U74-L74

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	4.2188	22.3125	94.1309	0.1373	8.9419	337.3228	337.4601
	Vertical Leg	5.0000	24.0000	120.0000	6.6667	10.6294	564.9232	571.5899
2	Horizontal Leg	4.2188	3.6875	15.5566	0.1373	9.6831	395.5583	395.6957
	Vertical Leg	5.0000	2.0000	10.0000	6.6667	11.3706	646.4501	653.1167
3	Perforated Plate	7.2188	4.3438	31.3564	0.2843	9.0268	588.2097	588.4941
4	Plate	42.2500	13.0000	549.2500	2380.0833	0.3706	5.8021	2385.8854
5	Plate	42.2500	13.0000	549.2500	2380.0833	0.3706	5.8021	2385.8854
6	Cover Plate	12.3750	21.7188	268.7695	0.3263	8.3482	862.4385	862.7648
Total		122.53		1638.31	4774.39		3406.51	8180.89
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	13.3706 in	S _{top} =	647.76 in ³	y-bar =	13.3706 in	S _{top} =	647.76 in ³
I _x =	8180.89 in ⁴	S _{bott.} =	611.86 in ³	I _x =	8180.89 in ⁴	S _{bott.} =	611.86 in ³
C _{top} =	12.6294 in	A =	122.5313 in ²	C _{top} =	12.6294 in	A =	122.5313 in ²
C _{bottom} =	13.3706 in	r _x =	8.1710 in	C _{bottom} =	13.3706 in	r _x =	8.1710 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.1094	3.9375	8.3057	2.0023	8.6875	159.2001	161.2024	
	Vertical Leg	2.5000	1.9375	4.8438	0.0814	10.6875	285.5566	285.6380	
1 (Right)	Horizontal Leg	2.1094	21.3125	44.9561	2.0023	8.6875	159.2001	161.2024	
	Vertical Leg	2.5000	23.3125	58.2813	0.0814	10.6875	285.5566	285.6380	
2 (Left)	Horizontal Leg	2.1094	3.9375	8.3057	2.0023	8.6875	159.2001	161.2024	
	Vertical Leg	2.5000	1.9375	4.8438	0.0814	10.6875	285.5566	285.6380	
2 (Right)	Horizontal Leg	2.1094	21.3125	44.9561	2.0023	8.6875	159.2001	161.2024	
	Vertical Leg	2.5000	23.3125	58.2813	0.0814	10.6875	285.5566	285.6380	
3 (Left)	Perforated Plate	3.6094	4.2500	15.3398	8.2903	8.3750	253.1638	261.4541	
3 (Right)	Perforated Plate	3.6094	21.0000	75.7969	8.2903	8.3750	253.1638	261.4541	
4	Plate	42.2500	0.8125	34.3281	9.2972	11.8125	5895.3604	5904.6576	
5	Plate	42.2500	24.4375	1032.4844	9.2972	11.8125	5895.3604	5904.6576	
6	Cover Plate	12.3750	12.6250	156.2344	499.1250	0.0000	0.0000	499.1250	
Total		122.53		1546.96	542.63		14076.08	14618.71	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.6250 in	S _{right} =	1157.92 in ³	x-bar =	12.6250 in	S _{right} =	1157.92 in ³
I _y =	14618.71 in ⁴	S _{left} =	1157.92 in ³	I _y =	14618.71 in ⁴	S _{left} =	1157.92 in ³
C _{right} =	12.6250 in	A =	122.5313 in ²	C _{right} =	12.6250 in	A =	122.5313 in ²
C _{left} =	12.6250 in	r _y =	10.9227 in	C _{left} =	12.6250 in	r _y =	10.9227 in

South Truss

Member U75-L75



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.5000$ in

Perforated Plate:

$A_3 = t = 0.6250$ in
 $B_3 = l = 5.7500$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.0000$ in

Left Web Plate:

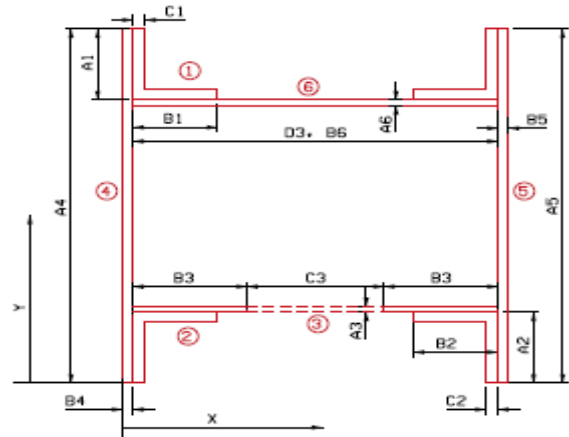
$A_4 = h = 26.0000$ in
 $B_4 = t = 0.8750$ in

Right Web Plate:

$A_5 = h = 26.0000$ in
 $B_5 = t = 0.8750$ in

Cover Plate:

$A_6 = t = 0.5000$ in
 $B_6 = l = 23.0000$ in



Member U75-L75

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.5000	22.2500	77.8750	0.0729	8.7678	269.0606	269.1335
	Vertical Leg	4.0000	24.0000	96.0000	5.3333	10.5178	442.4971	447.8305
2	Horizontal Leg	3.5000	3.7500	13.1250	0.0729	9.7322	331.5045	331.5774
	Vertical Leg	4.0000	2.0000	8.0000	5.3333	11.4822	527.3629	532.6963
3	Perforated Plate	7.1875	4.3125	30.9961	0.2340	9.1697	604.3484	604.5824
4	Plate	22.7500	13.0000	295.7500	1281.5833	0.4822	5.2896	1286.8729
5	Plate	22.7500	13.0000	295.7500	1281.5833	0.4822	5.2896	1286.8729
6	Cover Plate	11.5000	21.7500	250.1250	0.2396	8.2678	786.1014	786.3410
Total		79.19		1067.62	2574.45		2971.45	5545.91
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	13.4822 in	S _{top} =	443.04 in ³	y-bar =	13.4822 in	S _{top} =	443.04 in ³
I _x =	5545.91 in ⁴	S _{bott.} =	411.35 in ³	I _x =	5545.91 in ⁴	S _{bott.} =	411.35 in ³
C _{top} =	12.5178 in	A =	79.1875 in ²	C _{top} =	12.5178 in	A =	79.1875 in ²
C _{bottom} =	13.4822 in	r _x =	8.3687 in	C _{bottom} =	13.4822 in	r _x =	8.3687 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.7500	3.1250	5.4688	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	1.1250	2.2500	0.0417	11.2500	253.1250	253.1667	
1 (Right)	Horizontal Leg	1.7500	21.6250	37.8438	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	23.6250	47.2500	0.0417	11.2500	253.1250	253.1667	
2 (Left)	Horizontal Leg	1.7500	3.1250	5.4688	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	1.1250	2.2500	0.0417	11.2500	253.1250	253.1667	
2 (Right)	Horizontal Leg	1.7500	21.6250	37.8438	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	23.6250	47.2500	0.0417	11.2500	253.1250	253.1667	
3 (Left)	Perforated Plate	3.5938	3.7500	13.4766	9.9015	8.6250	267.3413	277.2428	
3 (Right)	Perforated Plate	3.5938	21.0000	75.4688	9.9015	8.6250	267.3413	277.2428	
4	Plate	22.7500	0.4375	9.9531	1.4515	11.9375	3241.9639	3243.4154	
5	Plate	22.7500	24.3125	553.1094	1.4515	11.9375	3241.9639	3243.4154	
6	Cover Plate	11.5000	12.3750	142.3125	506.9583	0.0000	0.0000	506.9583	
Total		79.19		979.95	536.98		8630.05	9167.02	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3750 in	S _{right} =	740.77 in ³	x-bar =	12.3750 in	S _{right} =	740.77 in ³
I _y =	9167.02 in ⁴	S _{left} =	740.77 in ³	I _y =	9167.02 in ⁴	S _{left} =	740.77 in ³
C _{right} =	12.3750 in	A =	79.1875 in ²	C _{right} =	12.3750 in	A =	79.1875 in ²
C _{left} =	12.3750 in	r _y =	10.7593 in	C _{left} =	12.3750 in	r _y =	10.7593 in



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.5000$ in

Perforated Plate:

$A_3 = t = 0.6250$ in
 $B_3 = l = 5.7500$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.0000$ in

Left Web Plate:

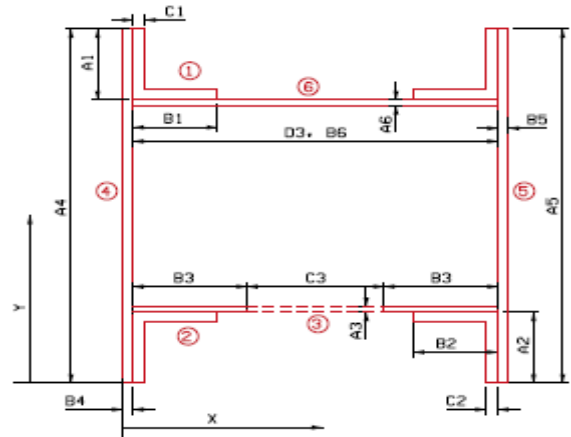
$A_4 = h = 24.0000$ in
 $B_4 = t = 0.8750$ in

Right Web Plate:

$A_5 = h = 24.0000$ in
 $B_5 = t = 0.8750$ in

Cover Plate:

$A_6 = t = 0.5000$ in
 $B_6 = l = 23.0000$ in



Member U76-L76

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.5000	20.2500	70.8750	0.0729	7.8025	213.0758	213.1488
	Vertical Leg	4.0000	22.0000	88.0000	5.3333	9.5525	365.0001	370.3334
2	Horizontal Leg	3.5000	3.7500	13.1250	0.0729	8.6975	264.7635	264.8364
	Vertical Leg	4.0000	2.0000	8.0000	5.3333	10.4475	436.6021	441.9354
3	Perforated Plate	7.1875	4.3125	30.9961	0.2340	8.1350	475.6574	475.8914
4	Plate	21.0000	12.0000	252.0000	1008.0000	0.4475	4.2056	1012.2056
5	Plate	21.0000	12.0000	252.0000	1008.0000	0.4475	4.2056	1012.2056
6	Cover Plate	11.5000	19.7500	227.1250	0.2396	7.3025	613.2527	613.4923
Total		75.69		942.12	2027.29		2376.76	4404.05
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	12.4475	in	S _{top} =	381.22	in ³	y-bar =	12.4475	in	S _{top} =	381.22	in ³
I _x =	4404.05	in ⁴	S _{bott.} =	353.81	in ³	I _x =	4404.05	in ⁴	S _{bott.} =	353.81	in ³
C _{top} =	11.5525	in	A =	75.6875	in ²	C _{top} =	11.5525	in	A =	75.6875	in ²
C _{bottom} =	12.4475	in	r _x =	7.6281	in	C _{bottom} =	12.4475	in	r _x =	7.6281	in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.7500	3.1250	5.4688	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	1.1250	2.2500	0.0417	11.2500	253.1250	253.1667	
1 (Right)	Horizontal Leg	1.7500	21.6250	37.8438	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	23.6250	47.2500	0.0417	11.2500	253.1250	253.1667	
2 (Left)	Horizontal Leg	1.7500	3.1250	5.4688	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	1.1250	2.2500	0.0417	11.2500	253.1250	253.1667	
2 (Right)	Horizontal Leg	1.7500	21.6250	37.8438	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	23.6250	47.2500	0.0417	11.2500	253.1250	253.1667	
3 (Left)	Perforated Plate	3.5938	3.7500	13.4766	9.9015	8.6250	267.3413	277.2428	
3 (Right)	Perforated Plate	3.5938	21.0000	75.4688	9.9015	8.6250	267.3413	277.2428	
4	Plate	21.0000	0.4375	9.1875	1.3398	11.9375	2992.5820	2993.9219	
5	Plate	21.0000	24.3125	510.5625	1.3398	11.9375	2992.5820	2993.9219	
6	Cover Plate	11.5000	12.3750	142.3125	506.9583	0.0000	0.0000	506.9583	
Total		75.69		936.63	536.75		8131.28	8668.04	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.3750	in	S _{right} =	700.45	in ³	x-bar =	12.3750	in	S _{right} =	700.45	in ³
I _y =	8668.04	in ⁴	S _{left} =	700.45	in ³	I _y =	8668.04	in ⁴	S _{left} =	700.45	in ³
C _{right} =	12.3750	in	A =	75.6875	in ²	C _{right} =	12.3750	in	A =	75.6875	in ²
C _{left} =	12.3750	in	r _y =	10.7016	in	C _{left} =	12.3750	in	r _y =	10.7016	in

South Truss

Member U77-L77



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.5000$ in

Perforated Plate:

$A_3 = t = 0.6875$ in
 $B_3 = l = 5.7500$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.0000$ in

Left Web Plate:

$A_4 = h = 22.0000$ in
 $B_4 = t = 1.0625$ in

Right Web Plate:

$A_5 = h = 22.0000$ in
 $B_5 = t = 1.0625$ in

Cover Plate:

$A_6 = t = 0.5625$ in
 $B_6 = l = 23.0000$ in



Member U77-L77

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.5000	18.2500	63.8750	0.0729	6.8347	163.4979	163.5708
	Vertical Leg	4.0000	20.0000	80.0000	5.3333	8.5847	294.7911	300.1244
2	Horizontal Leg	3.5000	3.7500	13.1250	0.0729	7.6653	205.6467	205.7196
	Vertical Leg	4.0000	2.0000	8.0000	5.3333	9.4153	354.5885	359.9218
3	Perforated Plate	7.9063	4.3438	34.3428	0.3114	7.0715	395.3619	395.6733
4	Plate	23.3750	11.0000	257.1250	942.7917	0.4153	4.0308	946.8225
5	Plate	23.3750	11.0000	257.1250	942.7917	0.4153	4.0308	946.8225
6	Cover Plate	12.9375	17.7188	229.2363	0.3411	6.3035	514.0585	514.3996
Total		82.59		942.83	1897.05		1936.01	3833.05
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	11.4153 in	S _{top} =	362.13 in ³	y-bar =	11.4153 in	S _{top} =	362.13 in ³
I _x =	3833.05 in ⁴	S _{bott.} =	335.78 in ³	I _x =	3833.05 in ⁴	S _{bott.} =	335.78 in ³
C _{top} =	10.5847 in	A =	82.5938 in ²	C _{top} =	10.5847 in	A =	82.5938 in ²
C _{bottom} =	11.4153 in	r _x =	6.8124 in	C _{bottom} =	11.4153 in	r _x =	6.8124 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.7500	3.3125	5.7969	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	1.3125	2.6250	0.0417	11.2500	253.1250	253.1667	
1 (Right)	Horizontal Leg	1.7500	21.8125	38.1719	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	23.8125	47.6250	0.0417	11.2500	253.1250	253.1667	
2 (Left)	Horizontal Leg	1.7500	3.3125	5.7969	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	1.3125	2.6250	0.0417	11.2500	253.1250	253.1667	
2 (Right)	Horizontal Leg	1.7500	21.8125	38.1719	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	23.8125	47.6250	0.0417	11.2500	253.1250	253.1667	
3 (Left)	Perforated Plate	3.9531	3.9375	15.5654	10.8917	8.6250	294.0754	304.9671	
3 (Right)	Perforated Plate	3.9531	21.1875	83.7568	10.8917	8.6250	294.0754	304.9671	
4	Plate	23.3750	0.5313	12.4180	2.1990	12.0313	3383.5541	3385.7531	
5	Plate	23.3750	24.5938	574.8789	2.1990	12.0313	3383.5541	3385.7531	
6	Cover Plate	12.9375	12.5625	162.5273	570.3281	0.0000	0.0000	570.3281	
Total		82.59		1037.58	603.82		8966.70	9570.52	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.5625 in	S _{right} =	761.83 in ³	x-bar =	12.5625 in	S _{right} =	761.83 in ³
I _y =	9570.52 in ⁴	S _{left} =	761.83 in ³	I _y =	9570.52 in ⁴	S _{left} =	761.83 in ³
C _{right} =	12.5625 in	A =	82.5938 in ²	C _{right} =	12.5625 in	A =	82.5938 in ²
C _{left} =	12.5625 in	r _y =	10.7645 in	C _{left} =	12.5625 in	r _y =	10.7645 in

South Truss

Member U78-L78



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.5000$ in

Perforated Plate:

$A_3 = t = 0.5625$ in
 $B_3 = l = 5.7500$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.0000$ in

Left Web Plate:

$A_4 = h = 20.0000$ in
 $B_4 = t = 1.0000$ in

Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 1.0000$ in

Cover Plate:

$A_6 = t = 0.4375$ in
 $B_6 = l = 23.0000$ in



Member U78-L78

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.5000	16.2500	56.8750	0.0729	5.9539	124.0711	124.1440
	Vertical Leg	4.0000	18.0000	72.0000	5.3333	7.7039	237.4001	242.7334
2	Horizontal Leg	3.5000	3.7500	13.1250	0.0729	6.5461	149.9802	150.0531
	Vertical Leg	4.0000	2.0000	8.0000	5.3333	8.2961	275.3013	280.6347
3	Perforated Plate	6.4688	4.2813	27.6943	0.1706	6.0149	234.0294	234.2000
4	Plate	20.0000	10.0000	200.0000	666.6667	0.2961	1.7535	668.4202
5	Plate	20.0000	10.0000	200.0000	666.6667	0.2961	1.7535	668.4202
6	Cover Plate	10.0625	15.7813	158.7988	0.1605	5.4851	302.7487	302.9092
Total		71.53		736.49	1344.48		1327.04	2671.51
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	10.2961 in	S _{top} =	275.30 in ³	y-bar =	10.2961 in	S _{top} =	275.30 in ³
I _x =	2671.51 in ⁴	S _{bott.} =	259.47 in ³	I _x =	2671.51 in ⁴	S _{bott.} =	259.47 in ³
C _{top} =	9.7039 in	A =	71.5313 in ²	C _{top} =	9.7039 in	A =	71.5313 in ²
C _{bottom} =	10.2961 in	r _x =	6.1113 in	C _{bottom} =	10.2961 in	r _x =	6.1113 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.7500	3.2500	5.6875	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	1.2500	2.5000	0.0417	11.2500	253.1250	253.1667	
1 (Right)	Horizontal Leg	1.7500	21.7500	38.0625	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	23.7500	47.5000	0.0417	11.2500	253.1250	253.1667	
2 (Left)	Horizontal Leg	1.7500	3.2500	5.6875	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	1.2500	2.5000	0.0417	11.2500	253.1250	253.1667	
2 (Right)	Horizontal Leg	1.7500	21.7500	38.0625	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	23.7500	47.5000	0.0417	11.2500	253.1250	253.1667	
3 (Left)	Perforated Plate	3.2344	3.8750	12.5332	8.9114	8.6250	240.6072	249.5186	
3 (Right)	Perforated Plate	3.2344	21.1250	68.3262	8.9114	8.6250	240.6072	249.5186	
4	Plate	20.0000	0.5000	10.0000	1.6667	12.0000	2880.0000	2881.6667	
5	Plate	20.0000	24.5000	490.0000	1.6667	12.0000	2880.0000	2881.6667	
6	Cover Plate	10.0625	12.5000	125.7813	443.5885	0.0000	0.0000	443.5885	
Total		71.53		894.14	472.06		7852.65	8324.71	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.5000 in	S _{right} =	665.98 in ³	x-bar =	12.5000 in	S _{right} =	665.98 in ³
I _y =	8324.71 in ⁴	S _{left} =	665.98 in ³	I _y =	8324.71 in ⁴	S _{left} =	665.98 in ³
C _{right} =	12.5000 in	A =	71.5313 in ²	C _{right} =	12.5000 in	A =	71.5313 in ²
C _{left} =	12.5000 in	r _y =	10.7879 in	C _{left} =	12.5000 in	r _y =	10.7879 in

South Truss

Member U79-L79



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

$A_4 = h = 20.0000$ in
 $B_4 = t = 0.7500$ in

Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 0.7500$ in

Cover Plate:

$A_6 = t = 0.3750$ in
 $B_6 = l = 23.5000$ in



Member U79-L79

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	16.1875	44.0098	0.0319	5.8902	94.3258	94.3577
	Vertical Leg	3.0000	18.0000	54.0000	4.0000	7.7027	177.9951	181.9951
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	6.4848	114.3303	114.3622
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	8.2973	206.5351	210.5351
3	Perforated Plate	6.0000	4.2500	25.5000	0.1250	6.0473	219.4184	219.5434
4	Plate	15.0000	10.0000	150.0000	500.0000	0.2973	1.3257	501.3257
5	Plate	15.0000	10.0000	150.0000	500.0000	0.2973	1.3257	501.3257
6	Cover Plate	8.8125	15.8125	139.3477	0.1033	5.5152	268.0544	268.1577
Total		56.25		579.22	1008.29		1083.31	2091.60
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00	0.00	0.00	0.00



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	10.2973 in	S _{top} =	215.57 in ³	y-bar =	10.2973 in	S _{top} =	215.57 in ³
I _x =	2091.60 in ⁴	S _{bott.} =	203.12 in ³	I _x =	2091.60 in ⁴	S _{bott.} =	203.12 in ³
C _{top} =	9.7027 in	A =	56.2500 in ²	C _{top} =	9.7027 in	A =	56.2500 in ²
C _{bottom} =	10.2973 in	r _x =	6.0979 in	C _{bottom} =	10.2973 in	r _x =	6.0979 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	2.9375	3.9932	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.9375	1.4063	0.0176	11.5625	200.5371	200.5547	
1 (Right)	Horizontal Leg	1.3594	22.0625	29.9912	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	24.0625	36.0938	0.0176	11.5625	200.5371	200.5547	
2 (Left)	Horizontal Leg	1.3594	2.9375	3.9932	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.9375	1.4063	0.0176	11.5625	200.5371	200.5547	
2 (Right)	Horizontal Leg	1.3594	22.0625	29.9912	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	24.0625	36.0938	0.0176	11.5625	200.5371	200.5547	
3 (Left)	Perforated Plate	3.0000	3.7500	11.2500	9.0000	8.7500	229.6875	238.6875	
3 (Right)	Perforated Plate	3.0000	21.2500	63.7500	9.0000	8.7500	229.6875	238.6875	
4	Plate	15.0000	0.3750	5.6250	0.7031	12.1250	2205.2344	2205.9375	
5	Plate	15.0000	24.6250	369.3750	0.7031	12.1250	2205.2344	2205.9375	
6	Cover Plate	8.8125	12.5000	110.1563	405.5586	0.0000	0.0000	405.5586	
Total		56.25		703.13	430.99		6169.20	6600.19	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.5000 in	S _{right} =	528.02 in ³	x-bar =	12.5000 in	S _{right} =	528.02 in ³
I _y =	6600.19 in ⁴	S _{left} =	528.02 in ³	I _y =	6600.19 in ⁴	S _{left} =	528.02 in ³
C _{right} =	12.5000 in	A =	56.2500 in ²	C _{right} =	12.5000 in	A =	56.2500 in ²
C _{left} =	12.5000 in	r _y =	10.8322 in	C _{left} =	12.5000 in	r _y =	10.8322 in



Made By KMW
Checked By ADK

Date 1/31/2012
Date 2/16/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.3750$ in
- $B_3 = b = 16.0000$ in



Member U80-L80

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	8.0000	102.4450	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	8.0000	199.8080	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		12.0000	8.0000	96.0000	256.0000	0.0000	0.0000	256.0000
Total			49.78		398.25	664.29		0.00	664.29
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.1875	16.0000	-3.0000	8.0000	-24.0000	-64.0000	0.0000	0.0000	-64.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-3.00		-24.00	-64.00		0.00	-64.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	8.0000	in	$S_{top} =$	83.04	in ³	y-bar =	8.0000	in	$S_{top} =$	75.04	in ³
$I_x =$	664.29	in ⁴	$S_{bott.} =$	83.04	in ³	$I_x =$	600.29	in ⁴	$S_{bott.} =$	75.04	in ³
$c_{top} =$	8.0000	in	A =	49.7816	in ²	$c_{top} =$	8.0000	in	A =	46.7816	in ²
$c_{bottom} =$	8.0000	in	$r_x =$	3.6529	in	$c_{bottom} =$	8.0000	in	$r_x =$	3.5821	in



Made By KMW
 Checked By ADK

Date 1/31/2012
 Date 2/16/2012

Job No. P402110046
 Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	12.8056	12.5000	160.0703	538.6056	0.0000	0.0000	538.6056	
2	Left Flange	12.4880	0.8210	10.2526	0.8280	11.6790	1703.3512	1704.1792	
	Right Flange	12.4880	24.1790	301.9474	0.8280	11.6790	1703.3512	1704.1792	
3	Left Plate	6.0000	0.1875	1.1250	0.0703	12.3125	909.5859	909.6563	
	Right Plate	6.0000	24.8125	148.8750	0.0703	12.3125	909.5859	909.6563	
Total		49.78		622.27	540.40		5225.87	5766.28	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	16.0000	0.1875	-3.0000	0.0938	-0.2813	-0.0088	13.2018	-522.8653	-522.8741
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-3.00		-0.28	-0.01		-522.87	-522.87

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.5000 in	S _{right} =	461.30 in ³	x-bar =	13.2956 in	S _{right} =	447.99 in ³
I _y =	5766.28 in ⁴	S _{left} =	461.30 in ³	I _y =	5243.40 in ⁴	S _{left} =	394.37 in ³
C _{right} =	12.5000 in	A =	49.7816 in ²	C _{right} =	11.7044 in	A =	46.7816 in ²
C _{left} =	12.5000 in	r _y =	10.7625 in	C _{left} =	13.2956 in	r _y =	10.5869 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 100

- $A_1 = t_w = 0.4700$ in
- $A_2 = t_f = 0.7670$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 12.0000$ in



Member U81-L81

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x, gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		10.5590	6.0000	63.3541	0.1944	0.0000	0.0000	0.1944
2	Flange Plates		18.4080	6.0000	110.4480	220.8960	0.0000	0.0000	220.8960
Total			28.97		173.80	221.09		0.00	221.09
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	6.0000	in	$S_{top} = 36.85$	in^3	y-bar =	6.0000	in	$S_{top} = 36.85$	in^3		
$I_x =$	221.09	in^4	$S_{bott.} = 36.85$	in^3	$I_x =$	221.09	in^4	$S_{bott.} = 36.85$	in^3		
$c_{top} =$	6.0000	in	A =	28.9670	in^2	$c_{top} =$	6.0000	in	A =	28.9670	in^2
$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in	$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	12.0000	126.7082	444.1134	0.0000	0.0000	444.1134
2	Left Flange		9.2040	0.3835	3.5297	0.4512	11.6165	1242.0160	1242.4673
	Right Flange		9.2040	23.6165	217.3663	0.4512	11.6165	1242.0160	1242.4673
Total			28.97		347.60	445.02		2484.03	2929.05
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.0000	in	S _{right} =	244.09	in ³	x-bar =	12.0000	in	S _{right} =	244.09	in ³
I _y =	2929.05	in ⁴	S _{left} =	244.09	in ³	I _y =	2929.05	in ⁴	S _{left} =	244.09	in ³
C _{right} =	12.0000	in	A =	28.9670	in ²	C _{right} =	12.0000	in	A =	28.9670	in ²
C _{left} =	12.0000	in	r _y =	10.0557	in	C _{left} =	12.0000	in	r _y =	10.0557	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 100

- $A_1 = t_w = 0.4700$ in
- $A_2 = t_f = 0.7670$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 12.0000$ in



Member U82-L82

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x, gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		10.5590	6.0000	63.3541	0.1944	0.0000	0.0000	0.1944
2	Flange Plates		18.4080	6.0000	110.4480	220.8960	0.0000	0.0000	220.8960
Total			28.97		173.80	221.09		0.00	221.09
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	6.0000	in	$S_{top} = 36.85$	in^3	y-bar =	6.0000	in	$S_{top} = 36.85$	in^3		
$I_x =$	221.09	in^4	$S_{bott.} = 36.85$	in^3	$I_x =$	221.09	in^4	$S_{bott.} = 36.85$	in^3		
$c_{top} =$	6.0000	in	A =	28.9670	in^2	$c_{top} =$	6.0000	in	A =	28.9670	in^2
$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in	$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	12.0000	126.7082	444.1134	0.0000	0.0000	444.1134
2	Left Flange		9.2040	0.3835	3.5297	0.4512	11.6165	1242.0160	1242.4673
	Right Flange		9.2040	23.6165	217.3663	0.4512	11.6165	1242.0160	1242.4673
Total			28.97		347.60	445.02		2484.03	2929.05
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.0000	in	S _{right} =	244.09	in ³	x-bar =	12.0000	in	S _{right} =	244.09	in ³
I _y =	2929.05	in ⁴	S _{left} =	244.09	in ³	I _y =	2929.05	in ⁴	S _{left} =	244.09	in ³
C _{right} =	12.0000	in	A =	28.9670	in ²	C _{right} =	12.0000	in	A =	28.9670	in ²
C _{left} =	12.0000	in	r _y =	10.0557	in	C _{left} =	12.0000	in	r _y =	10.0557	in



Made By KMW
Checked By ADK

Date 2/1/2012
Date 2/16/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.3750$ in
- $B_3 = b = 14.0000$ in



Member U83-L83

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		10.5000	7.0000	73.5000	171.5000	0.0000	0.0000	171.5000
Total			48.28		337.97	579.79		0.00	579.79
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.2500	14.0000	-3.5000	7.0000	-24.5000	-57.1667	0.0000	0.0000	-57.1667
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-3.50		-24.50	-57.17		0.00	-57.17

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	S _{top} =	82.83	in ³	y-bar =	7.0000	in	S _{top} =	74.66	in ³
I _x =	579.79	in ⁴	S _{bott.} =	82.83	in ³	I _x =	522.62	in ⁴	S _{bott.} =	74.66	in ³
c _{top} =	7.0000	in	A =	48.2816	in ²	c _{top} =	7.0000	in	A =	44.7816	in ²
c _{bottom} =	7.0000	in	r _x =	3.4653	in	c _{bottom} =	7.0000	in	r _x =	3.4162	in



Made By KMW
Checked By ADK

Date 2/1/2012
Date 2/16/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	12.8056	12.5000	160.0703	538.6056	0.0000	0.0000	538.6056	
2	Left Flange	12.4880	0.8210	10.2526	0.8280	11.6790	1703.3512	1704.1792	
	Right Flange	12.4880	24.1790	301.9474	0.8280	11.6790	1703.3512	1704.1792	
3	Left Plate	5.2500	0.1875	0.9844	0.0615	12.3125	795.8877	795.9492	
	Right Plate	5.2500	24.8125	130.2656	0.0615	12.3125	795.8877	795.9492	
Total		48.28		603.52	540.38		4998.48	5538.86	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	14.0000	0.2500	-3.5000	0.1250	-0.4375	-0.0182	13.3422	-623.0495	-623.0677
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-3.50		-0.44	-0.02		-623.05	-623.07

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.5000 in	S _{right} =	443.11 in ³	x-bar =	13.4672 in	S _{right} =	426.24 in ³
I _y =	5538.86 in ⁴	S _{left} =	443.11 in ³	I _y =	4915.79 in ⁴	S _{left} =	365.02 in ³
C _{right} =	12.5000 in	A =	48.2816 in ²	C _{right} =	11.5328 in	A =	44.7816 in ²
C _{left} =	12.5000 in	r _y =	10.7107 in	C _{left} =	13.4672 in	r _y =	10.4772 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 160

- $A_1 = t_w = 0.6650$ in
- $A_2 = t_f = 1.1240$ in
- $B_1 = d = 24.7140$ in
- $B_2 = b_f = 14.0950$ in

Cover Plate

- $A_3 = t = 0.4375$ in
- $B_3 = b = 16.0000$ in



Member U84-L84

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	8.0000	119.5191	0.5506	0.0000	0.0000	0.5506
2	Flange Plates		31.6856	8.0000	253.4845	524.5783	0.0000	0.0000	524.5783
3	Cover Plate		14.0000	8.0000	112.0000	298.6667	0.0000	0.0000	298.6667
Total			60.63		485.00	823.80		0.00	823.80
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	8.0000	in	S _{top} = 102.97 in ³	y-bar =	8.0000	in	S _{top} = 102.97 in ³
I _x =	823.80	in ⁴	S _{bott.} = 102.97 in ³	I _x =	823.80	in ⁴	S _{bott.} = 102.97 in ³
c _{top} =	8.0000	in	A = 60.6255 in ²	c _{top} =	8.0000	in	A = 60.6255 in ²
c _{bottom} =	8.0000	in	r _x = 3.6862 in	c _{bottom} =	8.0000	in	r _x = 3.6862 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	14.9399	12.7945	191.1484	628.3732	0.0000	0.0000	628.3732	
2	Left Flange	15.8428	0.9995	15.8349	1.6679	11.7950	2204.0796	2205.7476	
	Right Flange	15.8428	24.5895	389.5660	1.6679	11.7950	2204.0796	2205.7476	
3	Left Plate	7.0000	0.2188	1.5313	0.1117	12.5758	1107.0464	1107.1581	
	Right Plate	7.0000	25.3703	177.5918	0.1117	12.5758	1107.0464	1107.1581	
Total		60.63		775.67	631.93		6622.25	7254.18	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.7945	in	S _{right} = 566.98 in ³	x-bar =	12.7945	in	S _{right} = 566.98 in ³
I _y =	7254.18	in ⁴	S _{left} = 566.98 in ³	I _y =	7254.18	in ⁴	S _{left} = 566.98 in ³
C _{right} =	12.7945	in	A = 60.6255 in ²	C _{right} =	12.7945	in	A = 60.6255 in ²
C _{left} =	12.7945	in	r _y = 10.9387 in	C _{left} =	12.7945	in	r _y = 10.9387 in

South Truss

Member U85-L85



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.5000$ in

Perforated Plate:

$A_3 = t = 0.6875$ in
 $B_3 = l = 5.5000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 22.5000$ in

Left Web Plate:

$A_4 = h = 20.0000$ in
 $B_4 = t = 1.1250$ in

Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 1.1250$ in

Cover Plate:

$A_6 = t = 0.5625$ in
 $B_6 = l = 22.5000$ in



Member U85-L85

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.5000	16.2500	56.8750	0.0729	5.8810	121.0506	121.1235
	Vertical Leg	4.0000	18.0000	72.0000	5.3333	7.6310	232.9273	238.2606
2	Horizontal Leg	3.5000	3.7500	13.1250	0.0729	6.6190	153.3401	153.4130
	Vertical Leg	4.0000	2.0000	8.0000	5.3333	8.3690	280.1622	285.4955
3	Perforated Plate	7.5625	4.3438	32.8496	0.2979	6.0253	274.5483	274.8462
4	Plate	22.5000	10.0000	225.0000	750.0000	0.3690	3.0640	753.0640
5	Plate	22.5000	10.0000	225.0000	750.0000	0.3690	3.0640	753.0640
6	Cover Plate	12.6563	15.7188	198.9404	0.3337	5.3497	362.2166	362.5503
Total		80.22		831.79	1511.44		1430.37	2941.82
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	10.3690 in	S _{top} =	305.45 in ³	y-bar =	10.3690 in	S _{top} =	305.45 in ³
I _x =	2941.82 in ⁴	S _{bott.} =	283.71 in ³	I _x =	2941.82 in ⁴	S _{bott.} =	283.71 in ³
C _{top} =	9.6310 in	A =	80.2188 in ²	C _{top} =	9.6310 in	A =	80.2188 in ²
C _{bottom} =	10.3690 in	r _x =	6.0558 in	C _{bottom} =	10.3690 in	r _x =	6.0558 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.7500	3.3750	5.9063	1.7865	9.0000	141.7500	143.5365	
	Vertical Leg	2.0000	1.3750	2.7500	0.0417	11.0000	242.0000	242.0417	
1 (Right)	Horizontal Leg	1.7500	21.3750	37.4063	1.7865	9.0000	141.7500	143.5365	
	Vertical Leg	2.0000	23.3750	46.7500	0.0417	11.0000	242.0000	242.0417	
2 (Left)	Horizontal Leg	1.7500	3.3750	5.9063	1.7865	9.0000	141.7500	143.5365	
	Vertical Leg	2.0000	1.3750	2.7500	0.0417	11.0000	242.0000	242.0417	
2 (Right)	Horizontal Leg	1.7500	21.3750	37.4063	1.7865	9.0000	141.7500	143.5365	
	Vertical Leg	2.0000	23.3750	46.7500	0.0417	11.0000	242.0000	242.0417	
3 (Left)	Perforated Plate	3.7813	3.8750	14.6523	9.5319	8.5000	273.1953	282.7272	
3 (Right)	Perforated Plate	3.7813	20.8750	78.9336	9.5319	8.5000	273.1953	282.7272	
4	Plate	22.5000	0.5625	12.6563	2.3730	11.8125	3139.5410	3141.9141	
5	Plate	22.5000	24.1875	544.2188	2.3730	11.8125	3139.5410	3141.9141	
6	Cover Plate	12.6563	12.3750	156.6211	533.9355	0.0000	0.0000	533.9355	
Total		80.22		992.71	565.06		8360.47	8925.53	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3750 in	S _{right} =	721.25 in ³	x-bar =	12.3750 in	S _{right} =	721.25 in ³
I _y =	8925.53 in ⁴	S _{left} =	721.25 in ³	I _y =	8925.53 in ⁴	S _{left} =	721.25 in ³
C _{right} =	12.3750 in	A =	80.2188 in ²	C _{right} =	12.3750 in	A =	80.2188 in ²
C _{left} =	12.3750 in	r _y =	10.5482 in	C _{left} =	12.3750 in	r _y =	10.5482 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.5000$ in

Perforated Plate:

$A_3 = t = 0.6250$ in
 $B_3 = l = 5.5000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 22.5000$ in

Left Web Plate:

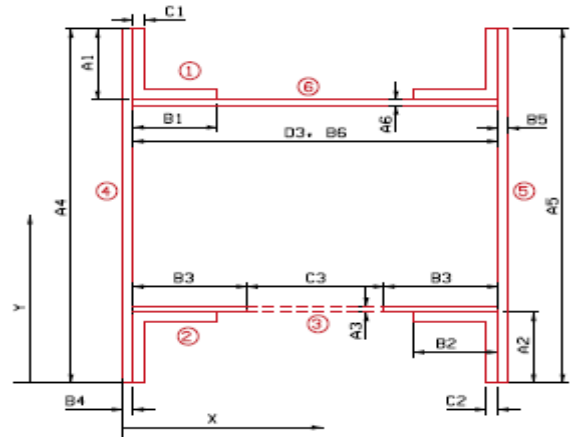
$A_4 = h = 20.0000$ in
 $B_4 = t = 1.1875$ in

Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 1.1875$ in

Cover Plate:

$A_6 = t = 0.5000$ in
 $B_6 = l = 22.5000$ in



Member U86-L86

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.5000	16.2500	56.8750	0.0729	5.9327	123.1874	123.2603
	Vertical Leg	4.0000	18.0000	72.0000	5.3333	7.6827	236.0928	241.4261
2	Horizontal Leg	3.5000	3.7500	13.1250	0.0729	6.5673	150.9551	151.0280
	Vertical Leg	4.0000	2.0000	8.0000	5.3333	8.3173	276.7129	282.0462
3	Perforated Plate	6.8750	4.3125	29.6484	0.2238	6.0048	247.8999	248.1237
4	Plate	23.7500	10.0000	237.5000	791.6667	0.3173	2.3918	794.0585
5	Plate	23.7500	10.0000	237.5000	791.6667	0.3173	2.3918	794.0585
6	Cover Plate	11.2500	15.7500	177.1875	0.2344	5.4327	332.0296	332.2640
Total		80.63		831.84	1594.60		1371.66	2966.27
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	10.3173 in	S _{top} =	306.35 in ³	y-bar =	10.3173 in	S _{top} =	306.35 in ³
I _x =	2966.27 in ⁴	S _{bott.} =	287.50 in ³	I _x =	2966.27 in ⁴	S _{bott.} =	287.50 in ³
C _{top} =	9.6827 in	A =	80.6250 in ²	C _{top} =	9.6827 in	A =	80.6250 in ²
C _{bottom} =	10.3173 in	r _x =	6.0655 in	C _{bottom} =	10.3173 in	r _x =	6.0655 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.7500	3.4375	6.0156	1.7865	9.0000	141.7500	143.5365	
	Vertical Leg	2.0000	1.4375	2.8750	0.0417	11.0000	242.0000	242.0417	
1 (Right)	Horizontal Leg	1.7500	21.4375	37.5156	1.7865	9.0000	141.7500	143.5365	
	Vertical Leg	2.0000	23.4375	46.8750	0.0417	11.0000	242.0000	242.0417	
2 (Left)	Horizontal Leg	1.7500	3.4375	6.0156	1.7865	9.0000	141.7500	143.5365	
	Vertical Leg	2.0000	1.4375	2.8750	0.0417	11.0000	242.0000	242.0417	
2 (Right)	Horizontal Leg	1.7500	21.4375	37.5156	1.7865	9.0000	141.7500	143.5365	
	Vertical Leg	2.0000	23.4375	46.8750	0.0417	11.0000	242.0000	242.0417	
3 (Left)	Perforated Plate	3.4375	3.9375	13.5352	8.6654	8.5000	248.3594	257.0247	
3 (Right)	Perforated Plate	3.4375	20.9375	71.9727	8.6654	8.5000	248.3594	257.0247	
4	Plate	23.7500	0.5938	14.1016	2.7909	11.8438	3331.5173	3334.3083	
5	Plate	23.7500	24.2813	576.6797	2.7909	11.8438	3331.5173	3334.3083	
6	Cover Plate	11.2500	12.4375	139.9219	474.6094	0.0000	0.0000	474.6094	
Total		80.63		1002.77	504.83		8694.75	9199.59	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.4375 in	S _{right} =	739.67 in ³	x-bar =	12.4375 in	S _{right} =	739.67 in ³
I _y =	9199.59 in ⁴	S _{left} =	739.67 in ³	I _y =	9199.59 in ⁴	S _{left} =	739.67 in ³
C _{right} =	12.4375 in	A =	80.6250 in ²	C _{right} =	12.4375 in	A =	80.6250 in ²
C _{left} =	12.4375 in	r _y =	10.6819 in	C _{left} =	12.4375 in	r _y =	10.6819 in



Made By KMW
Checked By ADK

Date 2/1/2012
Date 2/16/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.5000$ in

Perforated Plate:

$A_3 = t = 0.6875$ in
 $B_3 = l = 5.7500$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.0000$ in

Left Web Plate:

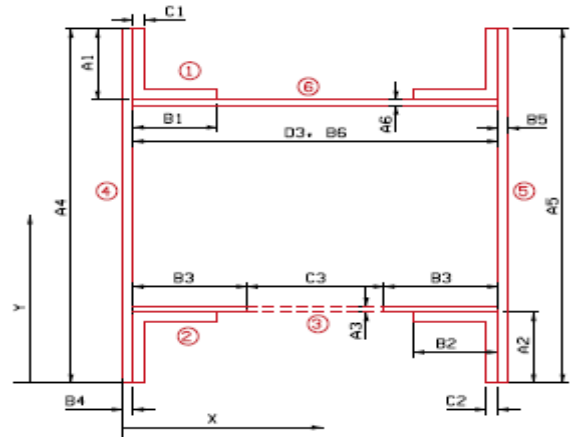
$A_4 = h = 22.0000$ in
 $B_4 = t = 0.9375$ in

Right Web Plate:

$A_5 = h = 22.0000$ in
 $B_5 = t = 0.9375$ in

Cover Plate:

$A_6 = t = 0.5625$ in
 $B_6 = l = 23.0000$ in



Member U87-L87

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Horizontal Leg	3.5000	18.2500	63.8750	0.0729	6.8051	162.0836	162.1565	
	Vertical Leg	4.0000	20.0000	80.0000	5.3333	8.5551	292.7600	298.0933	
2	Horizontal Leg	3.5000	3.7500	13.1250	0.0729	7.6949	207.2394	207.3123	
	Vertical Leg	4.0000	2.0000	8.0000	5.3333	9.4449	356.8234	362.1567	
3	Perforated Plate	7.9063	4.3438	34.3428	0.3114	7.1011	398.6815	398.9929	
4	Plate	20.6250	11.0000	226.8750	831.8750	0.4449	4.0822	835.9572	
5	Plate	20.6250	11.0000	226.8750	831.8750	0.4449	4.0822	835.9572	
6	Cover Plate	12.9375	17.7188	229.2363	0.3411	6.2739	509.2379	509.5790	
Total		77.09		882.33	1675.22		1934.99	3610.21	
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$	
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	
1	0.0625	22.0000	-1.3750	11.0000	-15.1250	-55.4583	0.4530	-0.2821	-55.7405
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				-1.38	-15.13	-55.46		-0.28	-55.74



Made By KMW
Checked By ADK

Date 2/1/2012
Date 2/16/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	11.4449 in	S _{top} =	342.03 in ³	y-bar =	11.4530 in	S _{top} =	337.01 in ³
I _x =	3610.21 in ⁴	S _{bott.} =	315.44 in ³	I _x =	3554.46 in ⁴	S _{bott.} =	310.35 in ³
C _{top} =	10.5551 in	A =	77.0938 in ²	C _{top} =	10.5470 in	A =	75.7188 in ²
C _{bottom} =	11.4449 in	r _x =	6.8432 in	C _{bottom} =	11.4530 in	r _x =	6.8515 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.7500	3.1875	5.5781	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	1.1875	2.3750	0.0417	11.2500	253.1250	253.1667	
1 (Right)	Horizontal Leg	1.7500	21.6875	37.9531	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	23.6875	47.3750	0.0417	11.2500	253.1250	253.1667	
2 (Left)	Horizontal Leg	1.7500	3.1875	5.5781	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	1.1875	2.3750	0.0417	11.2500	253.1250	253.1667	
2 (Right)	Horizontal Leg	1.7500	21.6875	37.9531	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	23.6875	47.3750	0.0417	11.2500	253.1250	253.1667	
3 (Left)	Perforated Plate	3.9531	3.8125	15.0713	10.8917	8.6250	294.0754	304.9671	
3 (Right)	Perforated Plate	3.9531	21.0625	83.2627	10.8917	8.6250	294.0754	304.9671	
4	Plate	20.6250	0.4688	9.6680	1.5106	11.9688	2954.5514	2956.0620	
5	Plate	20.6250	24.4063	503.3789	1.5106	11.9688	2954.5514	2956.0620	
6	Cover Plate	12.9375	12.4375	160.9102	570.3281	0.0000	0.0000	570.3281	
Total		77.09		958.85	602.45		8108.69	8711.14	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	22.0000	0.0625	-1.3750	0.0313	-0.0430	-0.0004	12.6315	-219.3892	-219.3896
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.38		-0.04	0.00		-219.39	-219.39

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.4375 in	S _{right} =	700.39 in ³	x-bar =	12.6628 in	S _{right} =	695.35 in ³
I _y =	8711.14 in ⁴	S _{left} =	700.39 in ³	I _y =	8491.75 in ⁴	S _{left} =	670.61 in ³
C _{right} =	12.4375 in	A =	77.0938 in ²	C _{right} =	12.2122 in	A =	75.7188 in ²
C _{left} =	12.4375 in	r _y =	10.6299 in	C _{left} =	12.6628 in	r _y =	10.5900 in

South Truss

Member U88-L88



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.5000$ in

Perforated Plate:

$A_3 = t = 0.6250$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

$A_4 = h = 24.0000$ in
 $B_4 = t = 0.6875$ in

Right Web Plate:

$A_5 = h = 24.0000$ in
 $B_5 = t = 0.6875$ in

Cover Plate:

$A_6 = t = 0.5000$ in
 $B_6 = l = 23.5000$ in



Member U88-L88

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.5000	20.2500	70.8750	0.0729	7.7533	210.3953	210.4682
	Vertical Leg	4.0000	22.0000	88.0000	5.3333	9.5033	361.2473	366.5806
2	Horizontal Leg	3.5000	3.7500	13.1250	0.0729	8.7467	267.7696	267.8425
	Vertical Leg	4.0000	2.0000	8.0000	5.3333	10.4967	440.7268	446.0601
3	Perforated Plate	7.5000	4.3125	32.3438	0.2441	8.1842	502.3643	502.6084
4	Plate	16.5000	12.0000	198.0000	792.0000	0.4967	4.0715	796.0715
5	Plate	16.5000	12.0000	198.0000	792.0000	0.4967	4.0715	796.0715
6	Cover Plate	11.7500	19.7500	232.0625	0.2448	7.2533	618.1637	618.4085
Total		67.25		840.41	1595.30		2408.81	4004.11
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	12.4967 in	S _{top} =	348.09 in ³	y-bar =	12.4967 in	S _{top} =	348.09 in ³
I _x =	4004.11 in ⁴	S _{bott.} =	320.41 in ³	I _x =	4004.11 in ⁴	S _{bott.} =	320.41 in ³
C _{top} =	11.5033 in	A =	67.2500 in ²	C _{top} =	11.5033 in	A =	67.2500 in ²
C _{bottom} =	12.4967 in	r _x =	7.7163 in	C _{bottom} =	12.4967 in	r _x =	7.7163 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.7500	2.9375	5.1406	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	0.9375	1.8750	0.0417	11.5000	264.5000	264.5417	
1 (Right)	Horizontal Leg	1.7500	21.9375	38.3906	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	23.9375	47.8750	0.0417	11.5000	264.5000	264.5417	
2 (Left)	Horizontal Leg	1.7500	2.9375	5.1406	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	0.9375	1.8750	0.0417	11.5000	264.5000	264.5417	
2 (Right)	Horizontal Leg	1.7500	21.9375	38.3906	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	23.9375	47.8750	0.0417	11.5000	264.5000	264.5417	
3 (Left)	Perforated Plate	3.7500	3.6875	13.8281	11.2500	8.7500	287.1094	298.3594	
3 (Right)	Perforated Plate	3.7500	21.1875	79.4531	11.2500	8.7500	287.1094	298.3594	
4	Plate	16.5000	0.3438	5.6719	0.6499	12.0938	2413.2700	2413.9199	
5	Plate	16.5000	24.5313	404.7656	0.6499	12.0938	2413.2700	2413.9199	
6	Cover Plate	11.7500	12.4375	146.1406	540.7448	0.0000	0.0000	540.7448	
Total		67.25		836.42	571.86		7090.51	7662.37	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.4375 in	S _{right} =	616.07 in ³	x-bar =	12.4375 in	S _{right} =	616.07 in ³
I _y =	7662.37 in ⁴	S _{left} =	616.07 in ³	I _y =	7662.37 in ⁴	S _{left} =	616.07 in ³
C _{right} =	12.4375 in	A =	67.2500 in ²	C _{right} =	12.4375 in	A =	67.2500 in ²
C _{left} =	12.4375 in	r _y =	10.6742 in	C _{left} =	12.4375 in	r _y =	10.6742 in



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 5.7500$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.0000$ in

Left Web Plate:

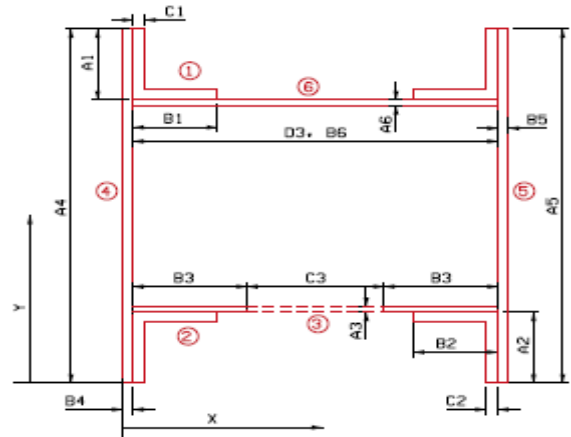
$A_4 = h = 26.0000$ in
 $B_4 = t = 0.8125$ in

Right Web Plate:

$A_5 = h = 26.0000$ in
 $B_5 = t = 0.8125$ in

Cover Plate:

$A_6 = t = 0.3750$ in
 $B_6 = l = 23.0000$ in



Member U89-L89

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	22.1875	60.3223	0.0319	8.8100	211.0176	211.0494
	Vertical Leg	3.0000	24.0000	72.0000	4.0000	10.6225	338.5109	342.5109
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	9.5650	248.7376	248.7695
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	11.3775	388.3442	392.3442
3	Perforated Plate	5.7500	4.2500	24.4375	0.1198	9.1275	479.0424	479.1622
4	Plate	21.1250	13.0000	274.6250	1190.0417	0.3775	3.0108	1193.0525
5	Plate	21.1250	13.0000	274.6250	1190.0417	0.3775	3.0108	1193.0525
6	Cover Plate	8.6250	21.8125	188.1328	0.1011	8.4350	613.6584	613.7595
Total		68.06		910.51	2388.37		2285.33	4673.70
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	13.3775 in	S _{top} =	370.27 in ³	y-bar =	13.3775 in	S _{top} =	370.27 in ³
I _x =	4673.70 in ⁴	S _{bott.} =	349.37 in ³	I _x =	4673.70 in ⁴	S _{bott.} =	349.37 in ³
C _{top} =	12.6225 in	A =	68.0625 in ²	C _{top} =	12.6225 in	A =	68.0625 in ²
C _{bottom} =	13.3775 in	r _x =	8.2866 in	C _{bottom} =	13.3775 in	r _x =	8.2866 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	3.0000	4.0781	1.4886	9.3125	117.8886	119.3772	
	Vertical Leg	1.5000	1.0000	1.5000	0.0176	11.3125	191.9590	191.9766	
1 (Right)	Horizontal Leg	1.3594	21.6250	29.3965	1.4886	9.3125	117.8886	119.3772	
	Vertical Leg	1.5000	23.6250	35.4375	0.0176	11.3125	191.9590	191.9766	
2 (Left)	Horizontal Leg	1.3594	3.0000	4.0781	1.4886	9.3125	117.8886	119.3772	
	Vertical Leg	1.5000	1.0000	1.5000	0.0176	11.3125	191.9590	191.9766	
2 (Right)	Horizontal Leg	1.3594	21.6250	29.3965	1.4886	9.3125	117.8886	119.3772	
	Vertical Leg	1.5000	23.6250	35.4375	0.0176	11.3125	191.9590	191.9766	
3 (Left)	Perforated Plate	2.8750	3.6875	10.6016	7.9212	8.6250	213.8730	221.7943	
3 (Right)	Perforated Plate	2.8750	20.9375	60.1953	7.9212	8.6250	213.8730	221.7943	
4	Plate	21.1250	0.4063	8.5820	1.1622	11.9063	2994.6544	2995.8166	
5	Plate	21.1250	24.2188	511.6211	1.1622	11.9063	2994.6544	2995.8166	
6	Cover Plate	8.6250	12.3125	106.1953	380.2188	0.0000	0.0000	380.2188	
Total		68.06		838.02	404.41		7656.45	8060.86	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3125 in	S _{right} =	654.69 in ³	x-bar =	12.3125 in	S _{right} =	654.69 in ³
I _y =	8060.86 in ⁴	S _{left} =	654.69 in ³	I _y =	8060.86 in ⁴	S _{left} =	654.69 in ³
C _{right} =	12.3125 in	A =	68.0625 in ²	C _{right} =	12.3125 in	A =	68.0625 in ²
C _{left} =	12.3125 in	r _y =	10.8827 in	C _{left} =	12.3125 in	r _y =	10.8827 in



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_t = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_t = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 5.7500$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.0000$ in

Left Web Plate:

$A_4 = h = 26.0000$ in
 $B_4 = t = 1.0000$ in

Right Web Plate:

$A_5 = h = 26.0000$ in
 $B_5 = t = 1.0000$ in

Cover Plate:

$A_6 = t = 0.3750$ in
 $B_6 = l = 23.0000$ in



Member U90-L90

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	22.1875	60.3223	0.0319	8.8573	213.2897	213.3216
	Vertical Leg	3.0000	24.0000	72.0000	4.0000	10.6698	341.5326	345.5326
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	9.5177	246.2834	246.3153
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	11.3302	385.1217	389.1217
3	Perforated Plate	5.7500	4.2500	24.4375	0.1198	9.0802	474.0899	474.2097
4	Plate	26.0000	13.0000	338.0000	1464.6667	0.3302	2.8352	1467.5019
5	Plate	26.0000	13.0000	338.0000	1464.6667	0.3302	2.8352	1467.5019
6	Cover Plate	8.6250	21.8125	188.1328	0.1011	8.4823	620.5606	620.6617
Total		77.81		1037.26	2937.62		2286.55	5224.17
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	13.3302 in	S _{top} =	412.33 in ³	y-bar =	13.3302 in	S _{top} =	412.33 in ³
I _x =	5224.17 in ⁴	S _{bott.} =	391.90 in ³	I _x =	5224.17 in ⁴	S _{bott.} =	391.90 in ³
C _{top} =	12.6698 in	A =	77.8125 in ²	C _{top} =	12.6698 in	A =	77.8125 in ²
C _{bottom} =	13.3302 in	r _x =	8.1938 in	C _{bottom} =	13.3302 in	r _x =	8.1938 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	3.1875	4.3330	1.4886	9.3125	117.8886	119.3772	
	Vertical Leg	1.5000	1.1875	1.7813	0.0176	11.3125	191.9590	191.9766	
1 (Right)	Horizontal Leg	1.3594	21.8125	29.6514	1.4886	9.3125	117.8886	119.3772	
	Vertical Leg	1.5000	23.8125	35.7188	0.0176	11.3125	191.9590	191.9766	
2 (Left)	Horizontal Leg	1.3594	3.1875	4.3330	1.4886	9.3125	117.8886	119.3772	
	Vertical Leg	1.5000	1.1875	1.7813	0.0176	11.3125	191.9590	191.9766	
2 (Right)	Horizontal Leg	1.3594	21.8125	29.6514	1.4886	9.3125	117.8886	119.3772	
	Vertical Leg	1.5000	23.8125	35.7188	0.0176	11.3125	191.9590	191.9766	
3 (Left)	Perforated Plate	2.8750	3.8750	11.1406	7.9212	8.6250	213.8730	221.7943	
3 (Right)	Perforated Plate	2.8750	21.1250	60.7344	7.9212	8.6250	213.8730	221.7943	
4	Plate	26.0000	0.5000	13.0000	2.1667	12.0000	3744.0000	3746.1667	
5	Plate	26.0000	24.5000	637.0000	2.1667	12.0000	3744.0000	3746.1667	
6	Cover Plate	8.6250	12.5000	107.8125	380.2188	0.0000	0.0000	380.2188	
Total		77.81		972.66	406.42		9155.14	9561.56	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.5000 in	S _{right} =	764.92 in ³	x-bar =	12.5000 in	S _{right} =	764.92 in ³
I _y =	9561.56 in ⁴	S _{left} =	764.92 in ³	I _y =	9561.56 in ⁴	S _{left} =	764.92 in ³
C _{right} =	12.5000 in	A =	77.8125 in ²	C _{right} =	12.5000 in	A =	77.8125 in ²
C _{left} =	12.5000 in	r _y =	11.0851 in	C _{left} =	12.5000 in	r _y =	11.0851 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

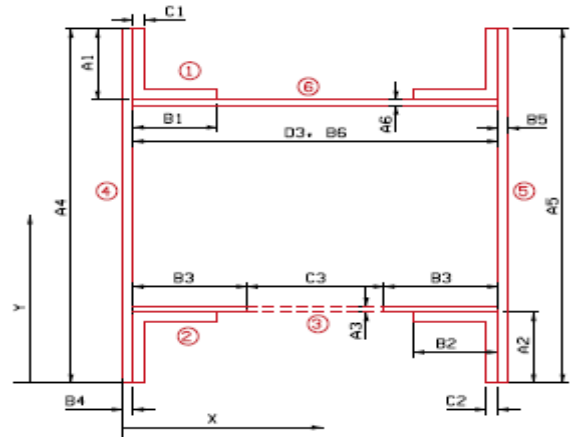
$A_4 = h = 20.0000$ in
 $B_4 = t = 0.3750$ in

Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 0.3750$ in

Cover Plate:

$A_6 = t = 0.3750$ in
 $B_6 = l = 23.5000$ in



Member U91-L91

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	16.1875	44.0098	0.0319	5.7821	90.8952	90.9270
	Vertical Leg	3.0000	18.0000	54.0000	4.0000	7.5946	173.0340	177.0340
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	6.5929	118.1740	118.2059
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	8.4054	211.9521	215.9521
3	Perforated Plate	6.0000	4.2500	25.5000	0.1250	6.1554	227.3335	227.4585
4	Plate	7.5000	10.0000	75.0000	250.0000	0.4054	1.2326	251.2326
5	Plate	7.5000	10.0000	75.0000	250.0000	0.4054	1.2326	251.2326
6	Cover Plate	8.8125	15.8125	139.3477	0.1033	5.4071	257.6489	257.7522
Total		41.25		429.22	508.29		1081.50	1589.79
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	10.4054 in	S _{top} =	165.70 in ³	y-bar =	10.4054 in	S _{top} =	165.70 in ³
I _x =	1589.79 in ⁴	S _{bott.} =	152.79 in ³	I _x =	1589.79 in ⁴	S _{bott.} =	152.79 in ³
C _{top} =	9.5946 in	A =	41.2500 in ²	C _{top} =	9.5946 in	A =	41.2500 in ²
C _{bottom} =	10.4054 in	r _x =	6.2081 in	C _{bottom} =	10.4054 in	r _x =	6.2081 in

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1 (Left)	Horizontal Leg		1.3594	2.5625	3.4834	1.4886	9.5625	124.3032	125.7917
	Vertical Leg		1.5000	0.5625	0.8438	0.0176	11.5625	200.5371	200.5547
1 (Right)	Horizontal Leg		1.3594	21.6875	29.4814	1.4886	9.5625	124.3032	125.7917
	Vertical Leg		1.5000	23.6875	35.5313	0.0176	11.5625	200.5371	200.5547
2 (Left)	Horizontal Leg		1.3594	2.5625	3.4834	1.4886	9.5625	124.3032	125.7917
	Vertical Leg		1.5000	0.5625	0.8438	0.0176	11.5625	200.5371	200.5547
2 (Right)	Horizontal Leg		1.3594	21.6875	29.4814	1.4886	9.5625	124.3032	125.7917
	Vertical Leg		1.5000	23.6875	35.5313	0.0176	11.5625	200.5371	200.5547
3 (Left)	Perforated Plate		3.0000	3.3750	10.1250	9.0000	8.7500	229.6875	238.6875
3 (Right)	Perforated Plate		3.0000	20.8750	62.6250	9.0000	8.7500	229.6875	238.6875
4	Plate		7.5000	0.1875	1.4063	0.0879	11.9375	1068.7793	1068.8672
5	Plate		7.5000	24.0625	180.4688	0.0879	11.9375	1068.7793	1068.8672
6	Cover Plate		8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586
Total			41.25		500.16	429.76		3896.29	4326.05
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	356.79 in ³	x-bar =	12.1250 in	S _{right} =	356.79 in ³
I _y =	4326.05 in ⁴	S _{left} =	356.79 in ³	I _y =	4326.05 in ⁴	S _{left} =	356.79 in ³
C _{right} =	12.1250 in	A =	41.2500 in ²	C _{right} =	12.1250 in	A =	41.2500 in ²
C _{left} =	12.1250 in	r _y =	10.2408 in	C _{left} =	12.1250 in	r _y =	10.2408 in

South Truss

Member U92-L92



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

$A_4 = h = 20.0000$ in
 $B_4 = t = 0.4375$ in

Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 0.4375$ in

Cover Plate:

$A_6 = t = 0.3750$ in
 $B_6 = l = 23.5000$ in



Member U92-L92

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	16.1875	44.0098	0.0319	5.8053	91.6250	91.6568
	Vertical Leg	3.0000	18.0000	54.0000	4.0000	7.6178	174.0912	178.0912
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	6.5697	117.3450	117.3769
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	8.3822	210.7854	214.7854
3	Perforated Plate	6.0000	4.2500	25.5000	0.1250	6.1322	225.6256	225.7506
4	Plate	8.7500	10.0000	87.5000	291.6667	0.3822	1.2784	292.9451
5	Plate	8.7500	10.0000	87.5000	291.6667	0.3822	1.2784	292.9451
6	Cover Plate	8.8125	15.8125	139.3477	0.1033	5.4303	259.8613	259.9646
Total		43.75		454.22	591.63		1081.89	1673.52
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	10.3822 in	S _{top} =	174.00 in ³	y-bar =	10.3822 in	S _{top} =	174.00 in ³
I _x =	1673.52 in ⁴	S _{bott.} =	161.19 in ³	I _x =	1673.52 in ⁴	S _{bott.} =	161.19 in ³
C _{top} =	9.6178 in	A =	43.7500 in ²	C _{top} =	9.6178 in	A =	43.7500 in ²
C _{bottom} =	10.3822 in	r _x =	6.1848 in	C _{bottom} =	10.3822 in	r _x =	6.1848 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	2.6250	3.5684	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.6250	0.9375	0.0176	11.5625	200.5371	200.5547	
1 (Right)	Horizontal Leg	1.3594	21.7500	29.5664	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.7500	35.6250	0.0176	11.5625	200.5371	200.5547	
2 (Left)	Horizontal Leg	1.3594	2.6250	3.5684	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.6250	0.9375	0.0176	11.5625	200.5371	200.5547	
2 (Right)	Horizontal Leg	1.3594	21.7500	29.5664	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.7500	35.6250	0.0176	11.5625	200.5371	200.5547	
3 (Left)	Perforated Plate	3.0000	3.4375	10.3125	9.0000	8.7500	229.6875	238.6875	
3 (Right)	Perforated Plate	3.0000	20.9375	62.8125	9.0000	8.7500	229.6875	238.6875	
4	Plate	8.7500	0.2188	1.9141	0.1396	11.9688	1253.4460	1253.5856	
5	Plate	8.7500	24.1563	211.3672	0.1396	11.9688	1253.4460	1253.5856	
6	Cover Plate	8.8125	12.1875	107.4023	405.5586	0.0000	0.0000	405.5586	
Total		43.75		533.20	429.86		4265.63	4695.49	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1875 in	S _{right} =	385.27 in ³	x-bar =	12.1875 in	S _{right} =	385.27 in ³
I _y =	4695.49 in ⁴	S _{left} =	385.27 in ³	I _y =	4695.49 in ⁴	S _{left} =	385.27 in ³
C _{right} =	12.1875 in	A =	43.7500 in ²	C _{right} =	12.1875 in	A =	43.7500 in ²
C _{left} =	12.1875 in	r _y =	10.3598 in	C _{left} =	12.1875 in	r _y =	10.3598 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

$A_4 = h = 20.0000$ in
 $B_4 = t = 0.5625$ in

Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 0.5625$ in

Cover Plate:

$A_6 = t = 0.3750$ in
 $B_6 = l = 23.5000$ in



Member U93-L93

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	16.1875	44.0098	0.0319	5.8445	92.8666	92.8985
	Vertical Leg	3.0000	18.0000	54.0000	4.0000	7.6570	175.8876	179.8876
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	6.5305	115.9487	115.9806
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	8.3430	208.8184	212.8184
3	Perforated Plate	6.0000	4.2500	25.5000	0.1250	6.0930	222.7500	222.8750
4	Plate	11.2500	10.0000	112.5000	375.0000	0.3430	1.3238	376.3238
5	Plate	11.2500	10.0000	112.5000	375.0000	0.3430	1.3238	376.3238
6	Cover Plate	8.8125	15.8125	139.3477	0.1033	5.4695	263.6269	263.7302
Total		48.75		504.22	758.29		1082.55	1840.84
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	10.3430 in	S _{top} =	190.62 in ³	y-bar =	10.3430 in	S _{top} =	190.62 in ³
I _x =	1840.84 in ⁴	S _{bott.} =	177.98 in ³	I _x =	1840.84 in ⁴	S _{bott.} =	177.98 in ³
C _{top} =	9.6570 in	A =	48.7500 in ²	C _{top} =	9.6570 in	A =	48.7500 in ²
C _{bottom} =	10.3430 in	r _x =	6.1450 in	C _{bottom} =	10.3430 in	r _x =	6.1450 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	2.7500	3.7383	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.7500	1.1250	0.0176	11.5625	200.5371	200.5547	
1 (Right)	Horizontal Leg	1.3594	21.8750	29.7363	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.8750	35.8125	0.0176	11.5625	200.5371	200.5547	
2 (Left)	Horizontal Leg	1.3594	2.7500	3.7383	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.7500	1.1250	0.0176	11.5625	200.5371	200.5547	
2 (Right)	Horizontal Leg	1.3594	21.8750	29.7363	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.8750	35.8125	0.0176	11.5625	200.5371	200.5547	
3 (Left)	Perforated Plate	3.0000	3.5625	10.6875	9.0000	8.7500	229.6875	238.6875	
3 (Right)	Perforated Plate	3.0000	21.0625	63.1875	9.0000	8.7500	229.6875	238.6875	
4	Plate	11.2500	0.2813	3.1641	0.2966	12.0313	1628.4485	1628.7451	
5	Plate	11.2500	24.3438	273.8672	0.2966	12.0313	1628.4485	1628.7451	
6	Cover Plate	8.8125	12.3125	108.5039	405.5586	0.0000	0.0000	405.5586	
Total		48.75		600.23	430.18		5015.63	5445.81	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3125 in	S _{right} =	442.30 in ³	x-bar =	12.3125 in	S _{right} =	442.30 in ³
I _y =	5445.81 in ⁴	S _{left} =	442.30 in ³	I _y =	5445.81 in ⁴	S _{left} =	442.30 in ³
C _{right} =	12.3125 in	A =	48.7500 in ²	C _{right} =	12.3125 in	A =	48.7500 in ²
C _{left} =	12.3125 in	r _y =	10.5692 in	C _{left} =	12.3125 in	r _y =	10.5692 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 160

- $A_1 = t_w = 0.6650$ in
- $A_2 = t_f = 1.1240$ in
- $B_1 = d = 24.7140$ in
- $B_2 = b_f = 14.0950$ in

Cover Plate

- $A_3 = t = 0.6250$ in
- $B_3 = b = 14.0000$ in



Member U94-L94

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	7.0475	105.2889	0.5506	0.0000	0.0000	0.5506
2	Flange Plates		31.6856	7.0475	223.3040	524.5783	0.0000	0.0000	524.5783
3	Cover Plate		17.5000	7.0475	123.3313	285.8333	0.0000	0.0000	285.8333
Total			64.13		451.92	810.96		0.00	810.96
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0475	in	S _{top} =	115.07	in ³	y-bar =	7.0475	in	S _{top} =	115.07	in ³
I _x =	810.96	in ⁴	S _{bott.} =	115.07	in ³	I _x =	810.96	in ⁴	S _{bott.} =	115.07	in ³
c _{top} =	7.0475	in	A =	64.1255	in ²	c _{top} =	7.0475	in	A =	64.1255	in ²
c _{bottom} =	7.0475	in	r _x =	3.5562	in	c _{bottom} =	7.0475	in	r _x =	3.5562	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	14.9399	12.9820	193.9497	628.3732	0.0000	0.0000	628.3732	
2	Left Flange	15.8428	1.1870	18.8054	1.6679	11.7950	2204.0796	2205.7476	
	Right Flange	15.8428	24.7770	392.5366	1.6679	11.7950	2204.0796	2205.7476	
3	Left Plate	8.7500	0.3125	2.7344	0.2848	12.6695	1404.5170	1404.8018	
	Right Plate	8.7500	25.6515	224.4506	0.2848	12.6695	1404.5170	1404.8018	
Total		64.13		832.48	632.28		7217.19	7849.47	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.9820	in	S _{right} = 604.64 in ³	x-bar =	12.9820	in	S _{right} = 604.64 in ³
I _y =	7849.47	in ⁴	S _{left} = 604.64 in ³	I _y =	7849.47	in ⁴	S _{left} = 604.64 in ³
C _{right} =	12.9820	in	A = 64.1255 in ²	C _{right} =	12.9820	in	A = 64.1255 in ²
C _{left} =	12.9820	in	r _y = 11.0638 in	C _{left} =	12.9820	in	r _y = 11.0638 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 160

- $A_1 = t_w = 0.6650$ in
- $A_2 = t_f = 1.1240$ in
- $B_1 = d = 24.7140$ in
- $B_2 = b_f = 14.0950$ in

Cover Plate

- $A_3 = t = 0.5625$ in
- $B_3 = b = 14.0000$ in



Member U95-L95

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	7.0475	105.2889	0.5506	0.0000	0.0000	0.5506
2	Flange Plates		31.6856	7.0475	223.3040	524.5783	0.0000	0.0000	524.5783
3	Cover Plate		15.7500	7.0475	110.9981	257.2500	0.0000	0.0000	257.2500
Total			62.38		439.59	782.38		0.00	782.38
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0475	in	S _{top} =	111.02	in ³	y-bar =	7.0475	in	S _{top} =	111.02	in ³
I _x =	782.38	in ⁴	S _{bott.} =	111.02	in ³	I _x =	782.38	in ⁴	S _{bott.} =	111.02	in ³
c _{top} =	7.0475	in	A =	62.3755	in ²	c _{top} =	7.0475	in	A =	62.3755	in ²
c _{bottom} =	7.0475	in	r _x =	3.5416	in	c _{bottom} =	7.0475	in	r _x =	3.5416	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	12.9195	193.0159	628.3732	0.0000	0.0000	628.3732
2	Left Flange		15.8428	1.1245	17.8152	1.6679	11.7950	2204.0796	2205.7476
	Right Flange		15.8428	24.7145	391.5464	1.6679	11.7950	2204.0796	2205.7476
3	Left Plate		7.8750	0.2813	2.2148	0.2076	12.6383	1257.8372	1258.0449
	Right Plate		7.8750	25.5578	201.2673	0.2076	12.6383	1257.8372	1258.0449
Total			62.38		805.86	632.12		6923.83	7555.96
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.9195	in	S _{right} = 584.85 in ³	x-bar =	12.9195	in	S _{right} = 584.85 in ³
I _y =	7555.96	n ⁴	S _{left} = 584.85 in ³	I _y =	7555.96	n ⁴	S _{left} = 584.85 in ³
C _{right} =	12.9195	in	A = 62.3755 in ²	C _{right} =	12.9195	in	A = 62.3755 in ²
C _{left} =	12.9195	in	r _y = 11.0062 in	C _{left} =	12.9195	in	r _y = 11.0062 in



Made By NRF
Checked By SFH

Date 1/26/2012
Date 1/30/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_l = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_l = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 6.0000$ in

$C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

$A_4 = h = 20.0000$ in
 $B_4 = t = 0.6875$ in

Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 0.6875$ in

Cover Plate:

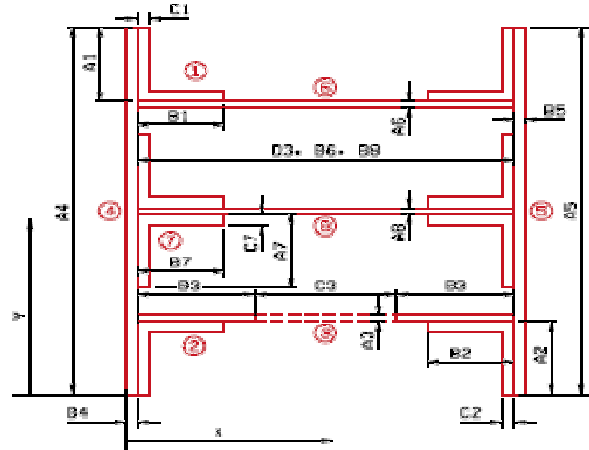
$A_6 = t = 0.3750$ in
 $B_6 = l = 23.5000$ in

Middle Angles:

$A_7 = l_h = 4.0000$ in
 $B_7 = l_w = 4.0000$ in
 $C_7 = t_l = 0.6250$ in

Middle Plate:

$A_8 = t = 0.7500$ in
 $B_8 = l = 23.5000$ in



Member U96-L96

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x, gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	16.1875	44.0098	0.0319	6.0013	97.9176	97.9494
	Vertical Leg	3.0000	18.0000	54.0000	4.0000	7.8138	183.1666	187.1666
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	6.3737	110.4465	110.4783
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	8.1862	201.0414	205.0414
3	Perforated Plate	6.0000	4.2500	25.5000	0.1250	5.9362	211.4305	211.5555
4	Plate	13.7500	10.0000	137.5000	458.3333	0.1862	0.4767	458.8100
5	Plate	13.7500	10.0000	137.5000	458.3333	0.1862	0.4767	458.8100
6	Cover Plate	8.8125	15.8125	139.3477	0.1033	5.6263	278.9624	279.0657
7 (Bottom)	Horizontal Leg	4.2188	9.3125	39.2871	0.1373	0.8737	3.2204	3.3577
	Vertical Leg	5.0000	7.6250	38.1250	6.6667	2.5612	32.7986	39.4653
7 (Top)	Horizontal Leg	4.2188	10.6875	45.0879	0.1373	0.5013	1.0602	1.1975
	Vertical Leg	5.0000	12.3750	61.8750	6.6667	2.1888	23.9543	30.6210
8	Middle Plate	17.6250	10.0000	176.2500	0.8262	0.1862	0.6110	1.4372
Total		89.81		914.85	939.39		1145.56	2084.96



Made By NRF
Checked By SFH

Date 1/26/2012
Date 1/30/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1 (Left)	Horizontal Leg	1.3594	2.8750	3.9082	1.4886	9.5625	124.3032	125.7917
	Vertical Leg	1.5000	0.8750	1.3125	0.0176	11.5625	200.5371	200.5547
1 (Right)	Horizontal Leg	1.3594	22.0000	29.9063	1.4886	9.5625	124.3032	125.7917
	Vertical Leg	1.5000	24.0000	36.0000	0.0176	11.5625	200.5371	200.5547
2 (Left)	Horizontal Leg	1.3594	2.8750	3.9082	1.4886	9.5625	124.3032	125.7917
	Vertical Leg	1.5000	0.8750	1.3125	0.0176	11.5625	200.5371	200.5547
2 (Right)	Horizontal Leg	1.3594	22.0000	29.9063	1.4886	9.5625	124.3032	125.7917
	Vertical Leg	1.5000	24.0000	36.0000	0.0176	11.5625	200.5371	200.5547
3 (Left)	Perforated Plate	3.0000	3.6875	11.0625	9.0000	8.7500	229.6875	238.6875
3 (Right)	Perforated Plate	3.0000	21.1875	63.5625	9.0000	8.7500	229.6875	238.6875
4	Plate	13.7500	0.3438	4.7266	0.5416	12.0938	2011.0583	2011.5999
5	Plate	13.7500	24.5313	337.3047	0.5416	12.0938	2011.0583	2011.5999
6	Cover Plate	8.8125	12.4375	109.6055	405.5586	0.0000	0.0000	405.5586
7 (Left)	Horizontal Leg	4.2188	3.0000	12.6563	4.0045	9.4375	375.7489	379.7534
	Vertical Leg	5.0000	1.0000	5.0000	0.1628	11.4375	654.0820	654.2448
7 (Right)	Horizontal Leg	4.2188	21.8750	92.2852	4.0045	9.4375	375.7489	379.7534
	Vertical Leg	5.0000	23.8750	119.3750	0.1628	11.4375	654.0820	654.2448
8	Middle Plate	17.6250	12.4375	219.2109	811.1172	0.0000	0.0000	811.1172
Total		89.81		1117.04	1250.12		7840.51	9090.63

X-Axis As-Built Section Properties				Y-Axis As-Built Section Properties			
y-bar =	10.1862	in	S _{top} = 212.45 in ³	x-bar =	12.4375	in	S _{right} = 730.91 in ³
I _x =	2084.96	in ⁴	S _{bottom} = 204.68 in ³	I _y =	9090.63	in ⁴	S _{left} = 730.91 in ³
c _{top} =	9.8138	in	A = 89.8125 in ²	c _{right} =	12.4375	in	A = 89.8125 in ²
c _{bottom} =	10.1862	in	r _x = 4.8181 in	c _{left} =	12.4375	in	r _y = 10.0607 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

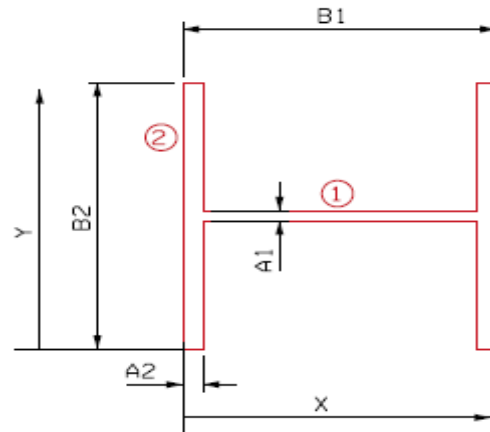
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 120

- $A_1 = t_w = 0.5590$ in
- $A_2 = t_f = 0.9220$ in
- $B_1 = d = 24.3100$ in
- $B_2 = b_f = 12.0890$ in



Member U98-L98

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		12.5585	6.0445	75.9098	0.3270	0.0000	0.0000	0.3270
2	Flange Plates		22.2921	6.0445	134.7447	271.4881	0.0000	0.0000	271.4881
Total			34.85		210.65	271.82		0.00	271.82
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0445	in	$S_{top} =$	44.97	in ³	y-bar =	6.0445	in	$S_{top} =$	44.97	in ³
$I_x =$	271.82	in ⁴	$S_{bott.} =$	44.97	in ³	$I_x =$	271.82	in ⁴	$S_{bott.} =$	44.97	in ³
$c_{top} =$	6.0445	in	A =	34.8506	in ²	$c_{top} =$	6.0445	in	A =	34.8506	in ²
$c_{bottom} =$	6.0445	in	$r_x =$	2.7927	in	$c_{bottom} =$	6.0445	in	$r_x =$	2.7927	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.5585	12.1550	152.6485	528.2115	0.0000	0.0000	528.2115
2	Left Flange		11.1461	0.4610	5.1383	0.7896	11.6940	1524.2194	1525.0090
	Right Flange		11.1461	23.8490	265.8223	0.7896	11.6940	1524.2194	1525.0090
Total			34.85		423.61	529.79		3048.44	3578.23
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.1550	in	S _{right} =	294.38	in ³	x-bar =	12.1550	in	S _{right} =	294.38	in ³
I _y =	3578.23	in ⁴	S _{left} =	294.38	in ³	I _y =	3578.23	in ⁴	S _{left} =	294.38	in ³
C _{right} =	12.1550	in	A =	34.8506	in ²	C _{right} =	12.1550	in	A =	34.8506	in ²
C _{left} =	12.1550	in	r _y =	10.1328	in	C _{left} =	12.1550	in	r _y =	10.1328	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

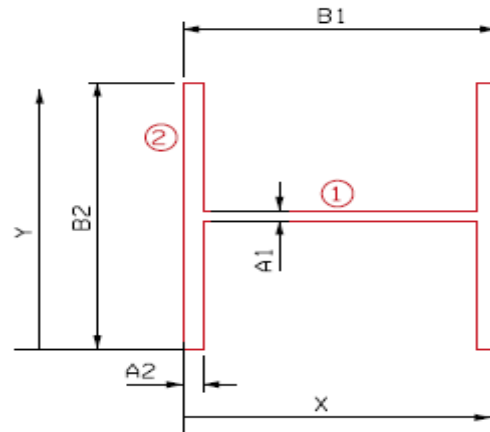
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 150

- $A_1 = t_w = 0.6330$ in
- $A_2 = t_f = 1.0480$ in
- $B_1 = d = 24.5620$ in
- $B_2 = b_f = 14.0630$ in



Member U97-L97

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x, gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		14.2210	7.0315	99.9948	0.4748	0.0000	0.0000	0.4748
2	Flange Plates		29.4760	7.0315	207.2608	485.7848	0.0000	0.0000	485.7848
Total			43.70		307.26	486.26		0.00	486.26
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x, loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	7.0315	in	$S_{top} = 69.15$	in^3	y-bar =	7.0315	in	$S_{top} = 69.15$	in^3		
$I_x =$	486.26	in^4	$S_{bott.} = 69.15$	in^3	$I_x =$	486.26	in^4	$S_{bott.} = 69.15$	in^3		
$c_{top} =$	7.0315	in	A =	43.6970	in^2	$c_{top} =$	7.0315	in	A =	43.6970	in^2
$c_{bottom} =$	7.0315	in	$r_x =$	3.3359	in	$c_{bottom} =$	7.0315	in	$r_x =$	3.3359	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y, gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1	Web Plate	14.2210	12.2810	174.6478	598.1357	0.0000	0.0000	598.1357	
2	Left Flange	14.7380	0.5240	7.7227	1.3489	11.7570	2037.1936	2038.5425	
	Right Flange	14.7380	24.0380	354.2726	1.3489	11.7570	2037.1936	2038.5425	
Total		43.70		536.64	600.83		4074.39	4675.22	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.2810	in	S _{right} = 380.69 in ³	x-bar =	12.2810	in	S _{right} = 380.69 in ³
I _y =	4675.22	in ⁴	S _{left} = 380.69 in ³	I _y =	4675.22	in ⁴	S _{left} = 380.69 in ³
C _{right} =	12.2810	in	A = 43.6970 in ²	C _{right} =	12.2810	in	A = 43.6970 in ²
C _{left} =	12.2810	in	r _y = 10.3437 in	C _{left} =	12.2810	in	r _y = 10.3437 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

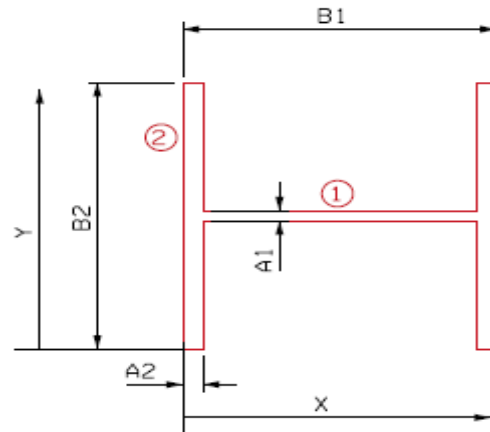
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 94

- $A_1 = t_w = 0.5160$ in
- $A_2 = t_f = 0.8720$ in
- $B_1 = d = 24.2900$ in
- $B_2 = b_f = 9.0610$ in



Member U99-L99

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		11.6337	4.5305	52.7066	0.2581	0.0000	0.0000	0.2581
2	Flange Plates		15.8024	4.5305	71.5927	108.1169	0.0000	0.0000	108.1169
Total			27.44		124.30	108.38		0.00	108.38
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	4.5305	in	$S_{top} = 23.92$	in^3	y-bar =	4.5305	in	$S_{top} = 23.92$	in^3		
$I_x =$	108.38	in^4	$S_{bott.} = 23.92$	in^3	$I_x =$	108.38	in^4	$S_{bott.} = 23.92$	in^3		
$c_{top} =$	4.5305	in	A =	27.4361	in^2	$c_{top} =$	4.5305	in	A =	27.4361	in^2
$c_{bottom} =$	4.5305	in	$r_x =$	1.9875	in	$c_{bottom} =$	4.5305	in	$r_x =$	1.9875	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		11.6337	12.1450	141.2917	492.8071	0.0000	0.0000	492.8071
2	Left Flange		7.9012	0.4360	3.4449	0.5007	11.7090	1083.2588	1083.7595
	Right Flange		7.9012	23.8540	188.4750	0.5007	11.7090	1083.2588	1083.7595
Total			27.44		333.21	493.81		2166.52	2660.33
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.1450	in	S _{right} =	219.05	in ³	x-bar =	12.1450	in	S _{right} =	219.05	in ³
I _y =	2660.33	in ⁴	S _{left} =	219.05	in ³	I _y =	2660.33	in ⁴	S _{left} =	219.05	in ³
C _{right} =	12.1450	in	A =	27.4361	in ²	C _{right} =	12.1450	in	A =	27.4361	in ²
C _{left} =	12.1450	in	r _y =	9.8470	in	C _{left} =	12.1450	in	r _y =	9.8470	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

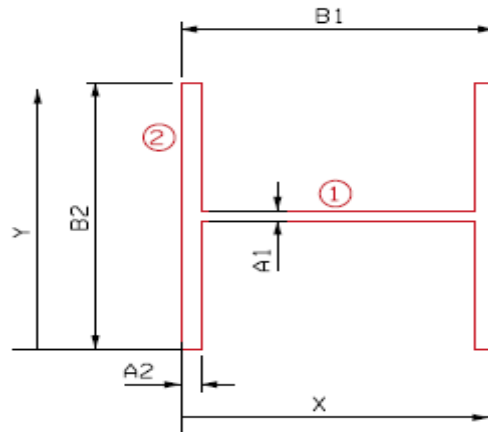
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 80

- $A_1 = t_w = 0.4530$ in
- $A_2 = t_f = 0.7400$ in
- $B_1 = d = 24.1200$ in
- $B_2 = b_f = 9.0410$ in



Member U100-L100

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		10.2559	4.5205	46.3619	0.1754	0.0000	0.0000	0.1754
2	Flange Plates		13.3807	4.5205	60.4874	91.1444	0.0000	0.0000	91.1444
Total			23.64		106.85	91.32		0.00	91.32
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	4.5205	in	$S_{top} = 20.20$	in^3	y-bar =	4.5205	in	$S_{top} = 20.20$	in^3		
$I_x =$	91.32	in^4	$S_{bott.} = 20.20$	in^3	$I_x =$	91.32	in^4	$S_{bott.} = 20.20$	in^3		
$c_{top} =$	4.5205	in	A =	23.6366	in^2	$c_{top} =$	4.5205	in	A =	23.6366	in^2
$c_{bottom} =$	4.5205	in	$r_x =$	1.9656	in	$c_{bottom} =$	4.5205	in	$r_x =$	1.9656	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.2559	12.0600	123.6864	438.0727	0.0000	0.0000	438.0727
2	Left Flange		6.6903	0.3700	2.4754	0.3053	11.6900	914.2758	914.5811
	Right Flange		6.6903	23.7500	158.8956	0.3053	11.6900	914.2758	914.5811
Total			23.64		285.06	438.68		1828.55	2267.23
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.0600	in	S _{right} =	188.00	in ³	x-bar =	12.0600	in	S _{right} =	188.00	in ³
I _y =	2267.23	in ⁴	S _{left} =	188.00	in ³	I _y =	2267.23	in ⁴	S _{left} =	188.00	in ³
C _{right} =	12.0600	in	A =	23.6366	in ²	C _{right} =	12.0600	in	A =	23.6366	in ²
C _{left} =	12.0600	in	r _y =	9.7939	in	C _{left} =	12.0600	in	r _y =	9.7939	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

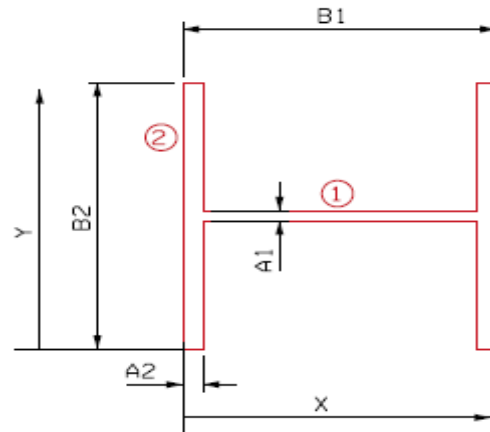
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 94

- $A_1 = t_w = 0.5160$ in
- $A_2 = t_f = 0.8720$ in
- $B_1 = d = 24.2900$ in
- $B_2 = b_f = 9.0610$ in



Member U101-L101

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		11.6337	4.5305	52.7066	0.2581	0.0000	0.0000	0.2581
2	Flange Plates		15.8024	4.5305	71.5927	108.1169	0.0000	0.0000	108.1169
Total			27.44		124.30	108.38		0.00	108.38
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	4.5305	in	$S_{top} = 23.92$ in ³	y-bar =	4.5305	in	$S_{top} = 23.92$ in ³
$I_x =$	108.38	in ⁴	$S_{bott.} = 23.92$ in ³	$I_x =$	108.38	in ⁴	$S_{bott.} = 23.92$ in ³
$c_{top} =$	4.5305	in	$A = 27.4361$ in ²	$c_{top} =$	4.5305	in	$A = 27.4361$ in ²
$c_{bottom} =$	4.5305	in	$r_x = 1.9875$ in	$c_{bottom} =$	4.5305	in	$r_x = 1.9875$ in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		11.6337	12.1450	141.2917	492.8071	0.0000	0.0000	492.8071
2	Left Flange		7.9012	0.4360	3.4449	0.5007	11.7090	1083.2588	1083.7595
	Right Flange		7.9012	23.8540	188.4750	0.5007	11.7090	1083.2588	1083.7595
Total			27.44		333.21	493.81		2166.52	2660.33
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.1450	in	S _{right} =	219.05	in ³	x-bar =	12.1450	in	S _{right} =	219.05	in ³
I _y =	2660.33	in ⁴	S _{left} =	219.05	in ³	I _y =	2660.33	in ⁴	S _{left} =	219.05	in ³
C _{right} =	12.1450	in	A =	27.4361	in ²	C _{right} =	12.1450	in	A =	27.4361	in ²
C _{left} =	12.1450	in	r _y =	9.8470	in	C _{left} =	12.1450	in	r _y =	9.8470	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 120

- $A_1 = t_w = 0.5590$ in
- $A_2 = t_f = 0.9220$ in
- $B_1 = d = 24.3100$ in
- $B_2 = b_f = 12.0890$ in



Member U102-L102

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		12.5585	6.0445	75.9098	0.3270	0.0000	0.0000	0.3270
2	Flange Plates		22.2921	6.0445	134.7447	271.4881	0.0000	0.0000	271.4881
Total			34.85		210.65	271.82		0.00	271.82
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0445	in	S _{top} =	44.97	in ³	y-bar =	6.0445	in	S _{top} =	44.97	in ³
I _x =	271.82	in ⁴	S _{bott.} =	44.97	in ³	I _x =	271.82	in ⁴	S _{bott.} =	44.97	in ³
c _{top} =	6.0445	in	A =	34.8506	in ²	c _{top} =	6.0445	in	A =	34.8506	in ²
c _{bottom} =	6.0445	in	r _x =	2.7927	in	c _{bottom} =	6.0445	in	r _x =	2.7927	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.5585	12.1550	152.6485	528.2115	0.0000	0.0000	528.2115
2	Left Flange		11.1461	0.4610	5.1383	0.7896	11.6940	1524.2194	1525.0090
	Right Flange		11.1461	23.8490	265.8223	0.7896	11.6940	1524.2194	1525.0090
Total			34.85		423.61	529.79		3048.44	3578.23
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.1550	in	S _{right} =	294.38	in ³	x-bar =	12.1550	in	S _{right} =	294.38	in ³
I _y =	3578.23	in ⁴	S _{left} =	294.38	in ³	I _y =	3578.23	in ⁴	S _{left} =	294.38	in ³
C _{right} =	12.1550	in	A =	34.8506	in ²	C _{right} =	12.1550	in	A =	34.8506	in ²
C _{left} =	12.1550	in	r _y =	10.1328	in	C _{left} =	12.1550	in	r _y =	10.1328	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 150

- $A_1 = t_w = 0.6330$ in
- $A_2 = t_f = 1.0480$ in
- $B_1 = d = 24.5620$ in
- $B_2 = b_f = 14.0630$ in



Member U103-L103

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		14.2210	7.0315	99.9948	0.4748	0.0000	0.0000	0.4748
2	Flange Plates		29.4760	7.0315	207.2608	485.7848	0.0000	0.0000	485.7848
Total			43.70		307.26	486.26		0.00	486.26
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	7.0315	in	$S_{top} = 69.15$	in^3	y-bar =	7.0315	in	$S_{top} = 69.15$	in^3		
$I_x =$	486.26	in^4	$S_{bott.} = 69.15$	in^3	$I_x =$	486.26	in^4	$S_{bott.} = 69.15$	in^3		
$c_{top} =$	7.0315	in	A =	43.6970	in^2	$c_{top} =$	7.0315	in	A =	43.6970	in^2
$c_{bottom} =$	7.0315	in	$r_x =$	3.3359	in	$c_{bottom} =$	7.0315	in	$r_x =$	3.3359	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.2210	12.2810	174.6478	598.1357	0.0000	0.0000	598.1357
2	Left Flange		14.7380	0.5240	7.7227	1.3489	11.7570	2037.1936	2038.5425
	Right Flange		14.7380	24.0380	354.2726	1.3489	11.7570	2037.1936	2038.5425
Total			43.70		536.64	600.83		4074.39	4675.22
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties				
x-bar =	12.2810	in	S _{right} =	380.69 in ³	x-bar =	12.2810	in	S _{right} =	380.69 in ³
I _y =	4675.22	in ⁴	S _{left} =	380.69 in ³	I _y =	4675.22	in ⁴	S _{left} =	380.69 in ³
C _{right} =	12.2810	in	A =	43.6970 in ²	C _{right} =	12.2810	in	A =	43.6970 in ²
C _{left} =	12.2810	in	r _y =	10.3437 in	C _{left} =	12.2810	in	r _y =	10.3437 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 5.2500$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 22.0000$ in

Left Web Plate:

$A_4 = h = 20.0000$ in
 $B_4 = t = 0.7500$ in

Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 0.7500$ in

Cover Plate:

$A_6 = t = 0.3750$ in
 $B_6 = l = 22.0000$ in



Member U104-L104

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	16.1875	44.0098	0.0319	5.8641	93.4921	93.5240
	Vertical Leg	3.0000	18.0000	54.0000	4.0000	7.6766	176.7915	180.7915
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	6.5109	115.2520	115.2839
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	8.3234	207.8359	211.8359
3	Perforated Plate	5.2500	4.2500	22.3125	0.1094	6.0734	193.6511	193.7605
4	Plate	15.0000	10.0000	150.0000	500.0000	0.3234	1.5686	501.5686
5	Plate	15.0000	10.0000	150.0000	500.0000	0.3234	1.5686	501.5686
6	Cover Plate	8.2500	15.8125	130.4531	0.0967	5.4891	248.5762	248.6729
Total		54.94		567.14	1008.27		1038.74	2047.01
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	10.3234 in	S _{top} =	211.54 in ³	y-bar =	10.3234 in	S _{top} =	211.54 in ³
I _x =	2047.01 in ⁴	S _{bott.} =	198.29 in ³	I _x =	2047.01 in ⁴	S _{bott.} =	198.29 in ³
C _{top} =	9.6766 in	A =	54.9375 in ²	C _{top} =	9.6766 in	A =	54.9375 in ²
C _{bottom} =	10.3234 in	r _x =	6.1041 in	C _{bottom} =	10.3234 in	r _x =	6.1041 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	2.9375	3.9932	1.4886	8.8125	105.5693	107.0579	
	Vertical Leg	1.5000	0.9375	1.4063	0.0176	10.8125	175.3652	175.3828	
1 (Right)	Horizontal Leg	1.3594	20.5625	27.9521	1.4886	8.8125	105.5693	107.0579	
	Vertical Leg	1.5000	22.5625	33.8438	0.0176	10.8125	175.3652	175.3828	
2 (Left)	Horizontal Leg	1.3594	2.9375	3.9932	1.4886	8.8125	105.5693	107.0579	
	Vertical Leg	1.5000	0.9375	1.4063	0.0176	10.8125	175.3652	175.3828	
2 (Right)	Horizontal Leg	1.3594	20.5625	27.9521	1.4886	8.8125	105.5693	107.0579	
	Vertical Leg	1.5000	22.5625	33.8438	0.0176	10.8125	175.3652	175.3828	
3 (Left)	Perforated Plate	2.6250	3.3750	8.8594	6.0293	8.3750	184.1191	190.1484	
3 (Right)	Perforated Plate	2.6250	20.1250	52.8281	6.0293	8.3750	184.1191	190.1484	
4	Plate	15.0000	0.3750	5.6250	0.7031	11.3750	1940.8594	1941.5625	
5	Plate	15.0000	23.1250	346.8750	0.7031	11.3750	1940.8594	1941.5625	
6	Cover Plate	8.2500	11.7500	96.9375	332.7500	0.0000	0.0000	332.7500	
Total		54.94		645.52	352.24		5373.70	5725.93	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	11.7500 in	S _{right} =	487.31 in ³	x-bar =	11.7500 in	S _{right} =	487.31 in ³
I _y =	5725.93 in ⁴	S _{left} =	487.31 in ³	I _y =	5725.93 in ⁴	S _{left} =	487.31 in ³
C _{right} =	11.7500 in	A =	54.9375 in ²	C _{right} =	11.7500 in	A =	54.9375 in ²
C _{left} =	11.7500 in	r _y =	10.2091 in	C _{left} =	11.7500 in	r _y =	10.2091 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.7500$ in
- $B_3 = b = 14.0000$ in



Member U105-L105

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		21.0000	7.0000	147.0000	343.0000	0.0000	0.0000	343.0000
Total			58.78		411.47	751.29		0.00	751.29
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	7.0000	in	S _{top} = 107.33 in ³	y-bar =	7.0000	in	S _{top} = 107.33 in ³
I _x =	751.29	in ⁴	S _{bott.} = 107.33 in ³	I _x =	751.29	in ⁴	S _{bott.} = 107.33 in ³
c _{top} =	7.0000	in	A = 58.7816 in ²	c _{top} =	7.0000	in	A = 58.7816 in ²
c _{bottom} =	7.0000	in	r _x = 3.5751 in	c _{bottom} =	7.0000	in	r _x = 3.5751 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.8750	164.8724	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	1.1960	14.9356	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	24.5540	306.6304	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		10.5000	0.3750	3.9375	0.4922	12.5000	1640.6250	1641.1172
	Right Plate		10.5000	25.3750	266.4375	0.4922	12.5000	1640.6250	1641.1172
Total			58.78		756.81	541.25		6687.95	7229.20
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.8750	in	S _{right} = 561.49 in ³	x-bar =	12.8750	in	S _{right} = 561.49 in ³
I _y =	7229.20	n ⁴	S _{left} = 561.49 in ³	I _y =	7229.20	n ⁴	S _{left} = 561.49 in ³
C _{right} =	12.8750	in	A = 58.7816 in ²	C _{right} =	12.8750	in	A = 58.7816 in ²
C _{left} =	12.8750	in	r _y = 11.0898 in	C _{left} =	12.8750	in	r _y = 11.0898 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.8125$ in
- $B_3 = b = 14.0000$ in



Member U106-L106

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		22.7500	7.0000	159.2500	371.5833	0.0000	0.0000	371.5833
Total			60.53		423.72	779.87		0.00	779.87
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	7.0000	in	$S_{top} = 111.41$	in^3	y-bar =	7.0000	in	$S_{top} = 111.41$	in^3		
$I_x =$	779.87	in^4	$S_{bott.} = 111.41$	in^3	$I_x =$	779.87	in^4	$S_{bott.} = 111.41$	in^3		
$c_{top} =$	7.0000	in	A =	60.5316	in^2	$c_{top} =$	7.0000	in	A =	60.5316	in^2
$c_{bottom} =$	7.0000	in	$r_x =$	3.5894	in	$c_{bottom} =$	7.0000	in	$r_x =$	3.5894	in



Made By SFH
 Checked By NRF

Date 1/24/2012
 Date 1/26/2012

Job No. P402110046
 Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.9375	165.6727	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	1.2585	15.7161	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	24.6165	307.4109	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		11.3750	0.4063	4.6211	0.6258	12.5313	1786.2416	1786.8674
	Right Plate		11.3750	25.4688	289.7070	0.6258	12.5313	1786.2416	1786.8674
Total			60.53		783.13	541.51		6979.19	7520.70
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.9375	in	S _{right} =	581.31	in ³	x-bar =	12.9375	in	S _{right} =	581.31	in ³
I _y =	7520.70	n ⁴	S _{left} =	581.31	in ³	I _y =	7520.70	n ⁴	S _{left} =	581.31	in ³
C _{right} =	12.9375	in	A =	60.5316	in ²	C _{right} =	12.9375	in	A =	60.5316	in ²
C _{left} =	12.9375	in	r _y =	11.1465	in	C _{left} =	12.9375	in	r _y =	11.1465	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.5000$ in

Perforated Plate:

$A_3 = t = 0.6250$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

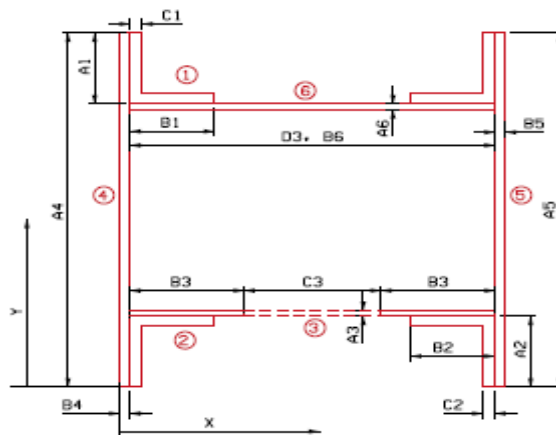
$A_4 = h = 20.0000$ in
 $B_4 = t = 0.3750$ in

Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 0.3750$ in

Cover Plate:

$A_6 = t = 0.5000$ in
 $B_6 = l = 23.5000$ in



Member U107-L107

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.5000	16.2500	56.8750	0.0729	5.7443	115.4890	115.5619
	Vertical Leg	4.0000	18.0000	72.0000	5.3333	7.4943	224.6575	229.9908
2	Horizontal Leg	3.5000	3.7500	13.1250	0.0729	6.7557	159.7387	159.8116
	Vertical Leg	4.0000	2.0000	8.0000	5.3333	8.5057	289.3885	294.7218
3	Perforated Plate	7.5000	4.3125	32.3438	0.2441	6.1932	287.6689	287.9131
4	Plate	7.5000	10.0000	75.0000	250.0000	0.5057	1.9181	251.9181
5	Plate	7.5000	10.0000	75.0000	250.0000	0.5057	1.9181	251.9181
6	Cover Plate	11.7500	15.7500	185.0625	0.2448	5.2443	323.1552	323.4000
Total		49.25		517.41	511.30		1403.93	1915.24
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	10.5057 in	S _{top} =	201.72 in ³	y-bar =	10.5057 in	S _{top} =	201.72 in ³
I _x =	1915.24 in ⁴	S _{bott.} =	182.30 in ³	I _x =	1915.24 in ⁴	S _{bott.} =	182.30 in ³
C _{top} =	9.4943 in	A =	49.2500 in ²	C _{top} =	9.4943 in	A =	49.2500 in ²
C _{bottom} =	10.5057 in	r _x =	6.2360 in	C _{bottom} =	10.5057 in	r _x =	6.2360 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.7500	2.6250	4.5938	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	0.6250	1.2500	0.0417	11.5000	264.5000	264.5417	
1 (Right)	Horizontal Leg	1.7500	21.6250	37.8438	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	23.6250	47.2500	0.0417	11.5000	264.5000	264.5417	
2 (Left)	Horizontal Leg	1.7500	2.6250	4.5938	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	0.6250	1.2500	0.0417	11.5000	264.5000	264.5417	
2 (Right)	Horizontal Leg	1.7500	21.6250	37.8438	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	23.6250	47.2500	0.0417	11.5000	264.5000	264.5417	
3 (Left)	Perforated Plate	3.7500	3.3750	12.6563	11.2500	8.7500	287.1094	298.3594	
3 (Right)	Perforated Plate	3.7500	20.8750	78.2813	11.2500	8.7500	287.1094	298.3594	
4	Plate	7.5000	0.1875	1.4063	0.0879	11.9375	1068.7793	1068.8672	
5	Plate	7.5000	24.0625	180.4688	0.0879	11.9375	1068.7793	1068.8672	
6	Cover Plate	11.7500	12.1250	142.4688	540.7448	0.0000	0.0000	540.7448	
Total		49.25		597.16	570.73		4401.53	4972.26	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	410.08 in ³	x-bar =	12.1250 in	S _{right} =	410.08 in ³
I _y =	4972.26 in ⁴	S _{left} =	410.08 in ³	I _y =	4972.26 in ⁴	S _{left} =	410.08 in ³
C _{right} =	12.1250 in	A =	49.2500 in ²	C _{right} =	12.1250 in	A =	49.2500 in ²
C _{left} =	12.1250 in	r _y =	10.0479 in	C _{left} =	12.1250 in	r _y =	10.0479 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_t = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_t = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

$A_4 = h = 20.0000$ in
 $B_4 = t = 0.3750$ in

Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 0.3750$ in

Cover Plate:

$A_6 = t = 0.3750$ in
 $B_6 = l = 23.5000$ in



Member U108-L108

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	16.1875	44.0098	0.0319	5.7821	90.8952	90.9270
	Vertical Leg	3.0000	18.0000	54.0000	4.0000	7.5946	173.0340	177.0340
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	6.5929	118.1740	118.2059
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	8.4054	211.9521	215.9521
3	Perforated Plate	6.0000	4.2500	25.5000	0.1250	6.1554	227.3335	227.4585
4	Plate	7.5000	10.0000	75.0000	250.0000	0.4054	1.2326	251.2326
5	Plate	7.5000	10.0000	75.0000	250.0000	0.4054	1.2326	251.2326
6	Cover Plate	8.8125	15.8125	139.3477	0.1033	5.4071	257.6489	257.7522
Total		41.25		429.22	508.29		1081.50	1589.79
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	10.4054 in	S _{top} =	165.70 in ³	y-bar =	10.4054 in	S _{top} =	165.70 in ³
I _x =	1589.79 in ⁴	S _{bott.} =	152.79 in ³	I _x =	1589.79 in ⁴	S _{bott.} =	152.79 in ³
C _{top} =	9.5946 in	A =	41.2500 in ²	C _{top} =	9.5946 in	A =	41.2500 in ²
C _{bottom} =	10.4054 in	r _x =	6.2081 in	C _{bottom} =	10.4054 in	r _x =	6.2081 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	2.5625	3.4834	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.5625	0.8438	0.0176	11.5625	200.5371	200.5547	
1 (Right)	Horizontal Leg	1.3594	21.6875	29.4814	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.6875	35.5313	0.0176	11.5625	200.5371	200.5547	
2 (Left)	Horizontal Leg	1.3594	2.5625	3.4834	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.5625	0.8438	0.0176	11.5625	200.5371	200.5547	
2 (Right)	Horizontal Leg	1.3594	21.6875	29.4814	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.6875	35.5313	0.0176	11.5625	200.5371	200.5547	
3 (Left)	Perforated Plate	3.0000	3.3750	10.1250	9.0000	8.7500	229.6875	238.6875	
3 (Right)	Perforated Plate	3.0000	20.8750	62.6250	9.0000	8.7500	229.6875	238.6875	
4	Plate	7.5000	0.1875	1.4063	0.0879	11.9375	1068.7793	1068.8672	
5	Plate	7.5000	24.0625	180.4688	0.0879	11.9375	1068.7793	1068.8672	
6	Cover Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
Total		41.25		500.16	429.76		3896.29	4326.05	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	356.79 in ³	x-bar =	12.1250 in	S _{right} =	356.79 in ³
I _y =	4326.05 in ⁴	S _{left} =	356.79 in ³	I _y =	4326.05 in ⁴	S _{left} =	356.79 in ³
C _{right} =	12.1250 in	A =	41.2500 in ²	C _{right} =	12.1250 in	A =	41.2500 in ²
C _{left} =	12.1250 in	r _y =	10.2408 in	C _{left} =	12.1250 in	r _y =	10.2408 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_t = 0.3750$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_t = 0.3750$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

$A_4 = h = 22.0000$ in
 $B_4 = t = 0.3750$ in

Right Web Plate:

$A_5 = h = 22.0000$ in
 $B_5 = t = 0.3750$ in

Cover Plate:

$A_6 = t = 0.3750$ in
 $B_6 = l = 23.5000$ in



Member U109-L109

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	2.7188	18.1875	49.4473	0.0319	6.7305	123.1597	123.1916
	Vertical Leg	3.0000	20.0000	60.0000	4.0000	8.5430	218.9505	222.9505
2	Horizontal Leg	2.7188	3.8125	10.3652	0.0319	7.6445	158.8778	158.9097
	Vertical Leg	3.0000	2.0000	6.0000	4.0000	9.4570	268.3024	272.3024
3	Perforated Plate	6.0000	4.2500	25.5000	0.1250	7.2070	311.6419	311.7669
4	Plate	8.2500	11.0000	90.7500	332.7500	0.4570	1.7227	334.4727
5	Plate	8.2500	11.0000	90.7500	332.7500	0.4570	1.7227	334.4727
6	Cover Plate	8.8125	17.8125	156.9727	0.1033	6.3555	355.9620	356.0653
Total		42.75		489.79	673.79		1440.34	2114.13
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	11.4570 in	S _{top} =	200.52 in ³	y-bar =	11.4570 in	S _{top} =	200.52 in ³
I _x =	2114.13 in ⁴	S _{bott.} =	184.53 in ³	I _x =	2114.13 in ⁴	S _{bott.} =	184.53 in ³
C _{top} =	10.5430 in	A =	42.7500 in ²	C _{top} =	10.5430 in	A =	42.7500 in ²
C _{bottom} =	11.4570 in	r _x =	7.0323 in	C _{bottom} =	11.4570 in	r _x =	7.0323 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.3594	2.5625	3.4834	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.5625	0.8438	0.0176	11.5625	200.5371	200.5547	
1 (Right)	Horizontal Leg	1.3594	21.6875	29.4814	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.6875	35.5313	0.0176	11.5625	200.5371	200.5547	
2 (Left)	Horizontal Leg	1.3594	2.5625	3.4834	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	0.5625	0.8438	0.0176	11.5625	200.5371	200.5547	
2 (Right)	Horizontal Leg	1.3594	21.6875	29.4814	1.4886	9.5625	124.3032	125.7917	
	Vertical Leg	1.5000	23.6875	35.5313	0.0176	11.5625	200.5371	200.5547	
3 (Left)	Perforated Plate	3.0000	3.3750	10.1250	9.0000	8.7500	229.6875	238.6875	
3 (Right)	Perforated Plate	3.0000	20.8750	62.6250	9.0000	8.7500	229.6875	238.6875	
4	Plate	8.2500	0.1875	1.5469	0.0967	11.9375	1175.6572	1175.7539	
5	Plate	8.2500	24.0625	198.5156	0.0967	11.9375	1175.6572	1175.7539	
6	Cover Plate	8.8125	12.1250	106.8516	405.5586	0.0000	0.0000	405.5586	
Total		42.75		518.34	429.78		4110.05	4539.83	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.1250 in	S _{right} =	374.42 in ³	x-bar =	12.1250 in	S _{right} =	374.42 in ³
I _y =	4539.83 in ⁴	S _{left} =	374.42 in ³	I _y =	4539.83 in ⁴	S _{left} =	374.42 in ³
C _{right} =	12.1250 in	A =	42.7500 in ²	C _{right} =	12.1250 in	A =	42.7500 in ²
C _{left} =	12.1250 in	r _y =	10.3051 in	C _{left} =	12.1250 in	r _y =	10.3051 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.5000$ in

Bottom Angles:

$A_2 = l_h =$ in
 $B_2 = l_w =$ in
 $C_2 = t_f =$ in

Perforated Plate:

$A_3 = t = 0.6250$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

$A_4 = h = 26.0000$ in
 $B_4 = t = 0.5625$ in

Right Web Plate:

$A_5 = h = 26.0000$ in
 $B_5 = t = 0.5625$ in

Cover Plate:

$A_6 = t = 0.5000$ in
 $B_6 = l = 23.5000$ in



Member U110-L110

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.5000	22.2500	77.8750	0.0729	7.7494	210.1885	210.2614
	Vertical Leg	4.0000	24.0000	96.0000	5.3333	9.4994	360.9576	366.2909
2	Horizontal Leg	0.0000	0.0000	0.0000	0.0000	14.5006	0.0000	0.0000
	Vertical Leg	0.0000	0.0000	0.0000	0.0000	14.5006	0.0000	0.0000
3	Perforated Plate	7.5000	0.3125	2.3438	0.2441	14.1881	1509.7574	1510.0016
4	Plate	14.6250	13.0000	190.1250	823.8750	1.5006	32.9307	856.8057
5	Plate	14.6250	13.0000	190.1250	823.8750	1.5006	32.9307	856.8057
6	Cover Plate	11.7500	21.7500	255.5625	0.2448	7.2494	617.5143	617.7591
Total		56.00		812.03	1653.65		2764.28	4417.92
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	14.5006 in	S _{top} =	384.19 in ³	y-bar =	14.5006 in	S _{top} =	384.19 in ³
I _x =	4417.92 in ⁴	S _{bott.} =	304.67 in ³	I _x =	4417.92 in ⁴	S _{bott.} =	304.67 in ³
C _{top} =	11.4994 in	A =	56.0000 in ²	C _{top} =	11.4994 in	A =	56.0000 in ²
C _{bottom} =	14.5006 in	r _x =	8.8821 in	C _{bottom} =	14.5006 in	r _x =	8.8821 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.7500	2.8125	4.9219	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	0.8125	1.6250	0.0417	11.5000	264.5000	264.5417	
1 (Right)	Horizontal Leg	1.7500	21.8125	38.1719	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	23.8125	47.6250	0.0417	11.5000	264.5000	264.5417	
2 (Left)	Horizontal Leg	0.0000	0.5625	0.0000	0.0000	11.7500	0.0000	0.0000	
	Vertical Leg	0.0000	0.5625	0.0000	0.0000	11.7500	0.0000	0.0000	
2 (Right)	Horizontal Leg	0.0000	24.0625	0.0000	0.0000	11.7500	0.0000	0.0000	
	Vertical Leg	0.0000	24.0625	0.0000	0.0000	11.7500	0.0000	0.0000	
3 (Left)	Perforated Plate	3.7500	3.5625	13.3594	11.2500	8.7500	287.1094	298.3594	
3 (Right)	Perforated Plate	3.7500	21.0625	78.9844	11.2500	8.7500	287.1094	298.3594	
4	Plate	14.6250	0.2813	4.1133	0.3856	12.0313	2116.9830	2117.3687	
5	Plate	14.6250	24.3438	356.0273	0.3856	12.0313	2116.9830	2117.3687	
6	Cover Plate	11.7500	12.3125	144.6719	540.7448	0.0000	0.0000	540.7448	
Total		56.00		689.50	567.67		5653.06	6220.73	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3125 in	S _{right} =	505.24 in ³	x-bar =	12.3125 in	S _{right} =	505.24 in ³
I _y =	6220.73 in ⁴	S _{left} =	505.24 in ³	I _y =	6220.73 in ⁴	S _{left} =	505.24 in ³
C _{right} =	12.3125 in	A =	56.0000 in ²	C _{right} =	12.3125 in	A =	56.0000 in ²
C _{left} =	12.3125 in	r _y =	10.5397 in	C _{left} =	12.3125 in	r _y =	10.5397 in

South Truss

Member U111-L111



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_t = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_t = 0.5000$ in

Perforated Plate:

$A_3 = t = 0.6250$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

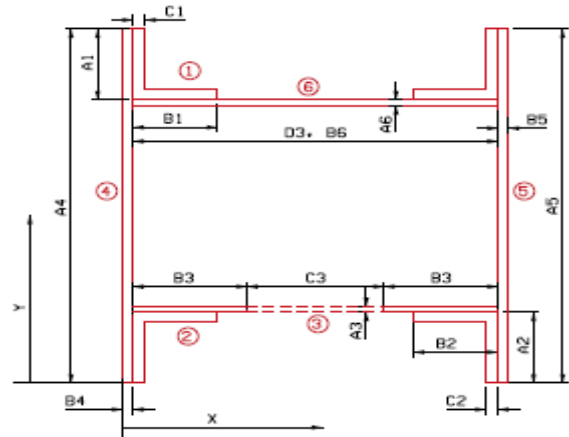
$A_4 = h = 24.0000$ in
 $B_4 = t = 0.6250$ in

Right Web Plate:

$A_5 = h = 24.0000$ in
 $B_5 = t = 0.6250$ in

Cover Plate:

$A_6 = t = 0.5000$ in
 $B_6 = l = 23.5000$ in



Member U111-L111

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.5000	20.2500	70.8750	0.0729	7.7301	209.1383	209.2112
	Vertical Leg	4.0000	22.0000	88.0000	5.3333	9.4801	359.4860	364.8194
2	Horizontal Leg	3.5000	3.7500	13.1250	0.0729	8.7699	269.1916	269.2645
	Vertical Leg	4.0000	2.0000	8.0000	5.3333	10.5199	442.6767	448.0100
3	Perforated Plate	7.5000	4.3125	32.3438	0.2441	8.2074	505.2157	505.4599
4	Plate	15.0000	12.0000	180.0000	720.0000	0.5199	4.0551	724.0551
5	Plate	15.0000	12.0000	180.0000	720.0000	0.5199	4.0551	724.0551
6	Cover Plate	11.7500	19.7500	232.0625	0.2448	7.2301	614.2165	614.4613
Total		64.25		804.41	1451.30		2408.03	3859.34
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	12.5199 in	S _{top} =	336.18 in ³	y-bar =	12.5199 in	S _{top} =	336.18 in ³
I _x =	3859.34 in ⁴	S _{bott.} =	308.26 in ³	I _x =	3859.34 in ⁴	S _{bott.} =	308.26 in ³
C _{top} =	11.4801 in	A =	64.2500 in ²	C _{top} =	11.4801 in	A =	64.2500 in ²
C _{bottom} =	12.5199 in	r _x =	7.7503 in	C _{bottom} =	12.5199 in	r _x =	7.7503 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.7500	2.8750	5.0313	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	0.8750	1.7500	0.0417	11.5000	264.5000	264.5417	
1 (Right)	Horizontal Leg	1.7500	21.8750	38.2813	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	23.8750	47.7500	0.0417	11.5000	264.5000	264.5417	
2 (Left)	Horizontal Leg	1.7500	2.8750	5.0313	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	0.8750	1.7500	0.0417	11.5000	264.5000	264.5417	
2 (Right)	Horizontal Leg	1.7500	21.8750	38.2813	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	23.8750	47.7500	0.0417	11.5000	264.5000	264.5417	
3 (Left)	Perforated Plate	3.7500	3.6250	13.5938	11.2500	8.7500	287.1094	298.3594	
3 (Right)	Perforated Plate	3.7500	21.1250	79.2188	11.2500	8.7500	287.1094	298.3594	
4	Plate	15.0000	0.3125	4.6875	0.4883	12.0625	2182.5586	2183.0469	
5	Plate	15.0000	24.4375	366.5625	0.4883	12.0625	2182.5586	2183.0469	
6	Cover Plate	11.7500	12.3750	145.4063	540.7448	0.0000	0.0000	540.7448	
Total		64.25		795.09	571.53		6629.09	7200.62	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3750 in	S _{right} =	581.87 in ³	x-bar =	12.3750 in	S _{right} =	581.87 in ³
I _y =	7200.62 in ⁴	S _{left} =	581.87 in ³	I _y =	7200.62 in ⁴	S _{left} =	581.87 in ³
C _{right} =	12.3750 in	A =	64.2500 in ²	C _{right} =	12.3750 in	A =	64.2500 in ²
C _{left} =	12.3750 in	r _y =	10.5864 in	C _{left} =	12.3750 in	r _y =	10.5864 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.5000$ in

Perforated Plate:

$A_3 = t = 0.6250$ in
 $B_3 = l = 5.7500$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.0000$ in

Left Web Plate:

$A_4 = h = 22.0000$ in
 $B_4 = t = 0.8125$ in

Right Web Plate:

$A_5 = h = 22.0000$ in
 $B_5 = t = 0.8125$ in

Cover Plate:

$A_6 = t = 0.5000$ in
 $B_6 = l = 23.0000$ in



Member U112-L112

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.5000	18.2500	63.8750	0.0729	6.8243	162.9994	163.0723
	Vertical Leg	4.0000	20.0000	80.0000	5.3333	8.5743	294.0754	299.4088
2	Horizontal Leg	3.5000	3.7500	13.1250	0.0729	7.6757	206.2066	206.2795
	Vertical Leg	4.0000	2.0000	8.0000	5.3333	9.4257	355.3743	360.7076
3	Perforated Plate	7.1875	4.3125	30.9961	0.2340	7.1132	363.6690	363.9029
4	Plate	17.8750	11.0000	196.6250	720.9583	0.4257	3.2391	724.1974
5	Plate	17.8750	11.0000	196.6250	720.9583	0.4257	3.2391	724.1974
6	Cover Plate	11.5000	17.7500	204.1250	0.2396	6.3243	459.9649	460.2044
Total		69.44		793.37	1453.20		1848.77	3301.97
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00	0.00	0.00	0.00



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	11.4257 in	S _{top} =	312.26 in ³	y-bar =	11.4257 in	S _{top} =	312.26 in ³
I _x =	3301.97 in ⁴	S _{bott.} =	289.00 in ³	I _x =	3301.97 in ⁴	S _{bott.} =	289.00 in ³
C _{top} =	10.5743 in	A =	69.4375 in ²	C _{top} =	10.5743 in	A =	69.4375 in ²
C _{bottom} =	11.4257 in	r _x =	6.8959 in	C _{bottom} =	11.4257 in	r _x =	6.8959 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.7500	3.0625	5.3594	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	1.0625	2.1250	0.0417	11.2500	253.1250	253.1667	
1 (Right)	Horizontal Leg	1.7500	21.5625	37.7344	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	23.5625	47.1250	0.0417	11.2500	253.1250	253.1667	
2 (Left)	Horizontal Leg	1.7500	3.0625	5.3594	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	1.0625	2.1250	0.0417	11.2500	253.1250	253.1667	
2 (Right)	Horizontal Leg	1.7500	21.5625	37.7344	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	23.5625	47.1250	0.0417	11.2500	253.1250	253.1667	
3 (Left)	Perforated Plate	3.5938	3.6875	13.2520	9.9015	8.6250	267.3413	277.2428	
3 (Right)	Perforated Plate	3.5938	20.9375	75.2441	9.9015	8.6250	267.3413	277.2428	
4	Plate	17.8750	0.4063	7.2617	0.9834	11.9063	2533.9384	2534.9217	
5	Plate	17.8750	24.2188	432.9102	0.9834	11.9063	2533.9384	2534.9217	
6	Cover Plate	11.5000	12.3125	141.5938	506.9583	0.0000	0.0000	506.9583	
Total		69.44		854.95	536.04		7214.00	7750.04	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.3125 in	S _{right} =	629.44 in ³	x-bar =	12.3125 in	S _{right} =	629.44 in ³
I _y =	7750.04 in ⁴	S _{left} =	629.44 in ³	I _y =	7750.04 in ⁴	S _{left} =	629.44 in ³
C _{right} =	12.3125 in	A =	69.4375 in ²	C _{right} =	12.3125 in	A =	69.4375 in ²
C _{left} =	12.3125 in	r _y =	10.5646 in	C _{left} =	12.3125 in	r _y =	10.5646 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.5000$ in

Perforated Plate:

$A_3 = t = 0.6250$ in
 $B_3 = l = 5.7500$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.0000$ in

Left Web Plate:

$A_4 = h = 22.0000$ in
 $B_4 = t = 1.0000$ in

Right Web Plate:

$A_5 = h = 22.0000$ in
 $B_5 = t = 1.0000$ in

Cover Plate:

$A_6 = t = 0.5000$ in
 $B_6 = l = 23.0000$ in



Member U113-L113

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.5000	18.2500	63.8750	0.0729	6.8695	165.1660	165.2390
	Vertical Leg	4.0000	20.0000	80.0000	5.3333	8.6195	297.1845	302.5178
2	Horizontal Leg	3.5000	3.7500	13.1250	0.0729	7.6305	203.7848	203.8577
	Vertical Leg	4.0000	2.0000	8.0000	5.3333	9.3805	351.9737	357.3070
3	Perforated Plate	7.1875	4.3125	30.9961	0.2340	7.0680	359.0613	359.2952
4	Plate	22.0000	11.0000	242.0000	887.3333	0.3805	3.1848	890.5182
5	Plate	22.0000	11.0000	242.0000	887.3333	0.3805	3.1848	890.5182
6	Cover Plate	11.5000	17.7500	204.1250	0.2396	6.3695	466.5639	466.8035
Total		77.69		884.12	1785.95		1850.10	3636.06
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	11.3805 in	S _{top} =	342.39 in ³	y-bar =	11.3805 in	S _{top} =	342.39 in ³
I _x =	3636.06 in ⁴	S _{bott.} =	319.50 in ³	I _x =	3636.06 in ⁴	S _{bott.} =	319.50 in ³
C _{top} =	10.6195 in	A =	77.6875 in ²	C _{top} =	10.6195 in	A =	77.6875 in ²
C _{bottom} =	11.3805 in	r _x =	6.8413 in	C _{bottom} =	11.3805 in	r _x =	6.8413 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.7500	3.2500	5.6875	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	1.2500	2.5000	0.0417	11.2500	253.1250	253.1667	
1 (Right)	Horizontal Leg	1.7500	21.7500	38.0625	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	23.7500	47.5000	0.0417	11.2500	253.1250	253.1667	
2 (Left)	Horizontal Leg	1.7500	3.2500	5.6875	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	1.2500	2.5000	0.0417	11.2500	253.1250	253.1667	
2 (Right)	Horizontal Leg	1.7500	21.7500	38.0625	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	23.7500	47.5000	0.0417	11.2500	253.1250	253.1667	
3 (Left)	Perforated Plate	3.5938	3.8750	13.9258	9.9015	8.6250	267.3413	277.2428	
3 (Right)	Perforated Plate	3.5938	21.1250	75.9180	9.9015	8.6250	267.3413	277.2428	
4	Plate	22.0000	0.5000	11.0000	1.8333	12.0000	3168.0000	3169.8333	
5	Plate	22.0000	24.5000	539.0000	1.8333	12.0000	3168.0000	3169.8333	
6	Cover Plate	11.5000	12.5000	143.7500	506.9583	0.0000	0.0000	506.9583	
Total		77.69		971.09	537.74		8482.12	9019.86	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.5000 in	S _{right} =	721.59 in ³	x-bar =	12.5000 in	S _{right} =	721.59 in ³
I _y =	9019.86 in ⁴	S _{left} =	721.59 in ³	I _y =	9019.86 in ⁴	S _{left} =	721.59 in ³
C _{right} =	12.5000 in	A =	77.6875 in ²	C _{right} =	12.5000 in	A =	77.6875 in ²
C _{left} =	12.5000 in	r _y =	10.7752 in	C _{left} =	12.5000 in	r _y =	10.7752 in



Made By KMW
Checked By ADK

Date 2/2/2012
Date 2/16/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.6250$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.6250$ in

Perforated Plate:

$A_3 = t = 0.6250$ in
 $B_3 = l = 5.7500$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.0000$ in

Left Web Plate:

$A_4 = h = 22.0000$ in
 $B_4 = t = 1.0000$ in

Right Web Plate:

$A_5 = h = 22.0000$ in
 $B_5 = t = 1.0000$ in

Cover Plate:

$A_6 = t = 0.5000$ in
 $B_6 = l = 23.0000$ in



Member U114-L114

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	4.2188	18.3125	77.2559	0.1373	6.9481	203.6672	203.8045
	Vertical Leg	5.0000	20.0000	100.0000	6.6667	8.6356	372.8715	379.5382
2	Horizontal Leg	4.2188	3.6875	15.5566	0.1373	7.6769	248.6285	248.7658
	Vertical Leg	5.0000	2.0000	10.0000	6.6667	9.3644	438.4561	445.1227
3	Perforated Plate	7.1875	4.3125	30.9961	0.2340	7.0519	357.4251	357.6591
4	Plate	22.0000	11.0000	242.0000	887.3333	0.3644	2.9207	890.2540
5	Plate	22.0000	11.0000	242.0000	887.3333	0.3644	2.9207	890.2540
6	Cover Plate	11.5000	17.7500	204.1250	0.2396	6.3856	468.9288	469.1684
Total		81.13		921.93	1788.75		2095.82	3884.57
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in ⁴)	(in ⁴)
1	0.1875	6.0000	-1.1250	14.5000	-16.3125	-3.3750	3.1797	-11.3746
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				-1.13	-16.31	-3.38		-11.37
								-14.75



Made By KMW
Checked By ADK

Date 2/2/2012
Date 2/16/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	11.3644 in	S _{top} =	365.24 in ³	y-bar =	11.3203 in	S _{top} =	362.35 in ³
I _x =	3884.57 in ⁴	S _{bott.} =	341.82 in ³	I _x =	3869.82 in ⁴	S _{bott.} =	341.85 in ³
C _{top} =	10.6356 in	A =	81.1250 in ²	C _{top} =	10.6797 in	A =	80.0000 in ²
C _{bottom} =	11.3644 in	r _x =	6.9198 in	C _{bottom} =	11.3203 in	r _x =	6.9550 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.1094	3.3125	6.9873	2.0023	9.1875	178.0527	180.0549	
	Vertical Leg	2.5000	1.3125	3.2813	0.0814	11.1875	312.9004	312.9818	
1 (Right)	Horizontal Leg	2.1094	21.6875	45.7471	2.0023	9.1875	178.0527	180.0549	
	Vertical Leg	2.5000	23.6875	59.2188	0.0814	11.1875	312.9004	312.9818	
2 (Left)	Horizontal Leg	2.1094	3.3125	6.9873	2.0023	9.1875	178.0527	180.0549	
	Vertical Leg	2.5000	1.3125	3.2813	0.0814	11.1875	312.9004	312.9818	
2 (Right)	Horizontal Leg	2.1094	21.6875	45.7471	2.0023	9.1875	178.0527	180.0549	
	Vertical Leg	2.5000	23.6875	59.2188	0.0814	11.1875	312.9004	312.9818	
3 (Left)	Perforated Plate	3.5938	3.8750	13.9258	9.9015	8.6250	267.3413	277.2428	
3 (Right)	Perforated Plate	3.5938	21.1250	75.9180	9.9015	8.6250	267.3413	277.2428	
4	Plate	22.0000	0.5000	11.0000	1.8333	12.0000	3168.0000	3169.8333	
5	Plate	22.0000	24.5000	539.0000	1.8333	12.0000	3168.0000	3169.8333	
6	Cover Plate	11.5000	12.5000	143.7500	506.9583	0.0000	0.0000	506.9583	
Total		81.13		1014.06	538.76		8834.49	9373.26	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	6.0000	0.1875	-1.1250	0.9063	-1.0195	-0.0033	11.7568	-155.4998	-155.5031
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.13		-1.02	0.00		-155.50	-155.50

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.5000 in	S _{right} =	749.86 in ³	x-bar =	12.6630 in	S _{right} =	747.17 in ³
I _y =	9373.26 in ⁴	S _{left} =	749.86 in ³	I _y =	9217.75 in ⁴	S _{left} =	727.93 in ³
C _{right} =	12.5000 in	A =	81.1250 in ²	C _{right} =	12.3370 in	A =	80.0000 in ²
C _{left} =	12.5000 in	r _y =	10.7490 in	C _{left} =	12.6630 in	r _y =	10.7341 in

South Truss

Member U115-L115



Made By SFH
Checked By NRF

Date 1/25/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_t = 0.6250$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_t = 0.6250$ in

Perforated Plate:

$A_3 = t = 0.6250$ in
 $B_3 = l = 5.7500$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.0000$ in

Left Web Plate:

$A_4 = h = 22.0000$ in
 $B_4 = t = 1.0000$ in

Right Web Plate:

$A_5 = h = 22.0000$ in
 $B_5 = t = 1.0000$ in

Cover Plate:

$A_6 = t = 0.5000$ in
 $B_6 = l = 23.0000$ in



Member U115-L115

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	4.2188	18.3125	77.2559	0.1373	6.9481	203.6672	203.8045
	Vertical Leg	5.0000	20.0000	100.0000	6.6667	8.6356	372.8715	379.5382
2	Horizontal Leg	4.2188	3.6875	15.5566	0.1373	7.6769	248.6285	248.7658
	Vertical Leg	5.0000	2.0000	10.0000	6.6667	9.3644	438.4561	445.1227
3	Perforated Plate	7.1875	4.3125	30.9961	0.2340	7.0519	357.4251	357.6591
4	Plate	22.0000	11.0000	242.0000	887.3333	0.3644	2.9207	890.2540
5	Plate	22.0000	11.0000	242.0000	887.3333	0.3644	2.9207	890.2540
6	Cover Plate	11.5000	17.7500	204.1250	0.2396	6.3856	468.9288	469.1684
Total		81.13		921.93	1788.75		2095.82	3884.57
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00	0.00	0.00	0.00



Made By SFH
Checked By NRF

Date 1/25/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	11.3644 in	S _{top} =	365.24 in ³	y-bar =	11.3644 in	S _{top} =	365.24 in ³
I _x =	3884.57 in ⁴	S _{bott.} =	341.82 in ³	I _x =	3884.57 in ⁴	S _{bott.} =	341.82 in ³
C _{top} =	10.6356 in	A =	81.1250 in ²	C _{top} =	10.6356 in	A =	81.1250 in ²
C _{bottom} =	11.3644 in	r _x =	6.9198 in	C _{bottom} =	11.3644 in	r _x =	6.9198 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.1094	3.3125	6.9873	2.0023	9.1875	178.0527	180.0549	
	Vertical Leg	2.5000	1.3125	3.2813	0.0814	11.1875	312.9004	312.9818	
1 (Right)	Horizontal Leg	2.1094	21.6875	45.7471	2.0023	9.1875	178.0527	180.0549	
	Vertical Leg	2.5000	23.6875	59.2188	0.0814	11.1875	312.9004	312.9818	
2 (Left)	Horizontal Leg	2.1094	3.3125	6.9873	2.0023	9.1875	178.0527	180.0549	
	Vertical Leg	2.5000	1.3125	3.2813	0.0814	11.1875	312.9004	312.9818	
2 (Right)	Horizontal Leg	2.1094	21.6875	45.7471	2.0023	9.1875	178.0527	180.0549	
	Vertical Leg	2.5000	23.6875	59.2188	0.0814	11.1875	312.9004	312.9818	
3 (Left)	Perforated Plate	3.5938	3.8750	13.9258	9.9015	8.6250	267.3413	277.2428	
3 (Right)	Perforated Plate	3.5938	21.1250	75.9180	9.9015	8.6250	267.3413	277.2428	
4	Plate	22.0000	0.5000	11.0000	1.8333	12.0000	3168.0000	3169.8333	
5	Plate	22.0000	24.5000	539.0000	1.8333	12.0000	3168.0000	3169.8333	
6	Cover Plate	11.5000	12.5000	143.7500	506.9583	0.0000	0.0000	506.9583	
Total		81.13		1014.06	538.76		8834.49	9373.26	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.5000 in	S _{right} =	749.86 in ³	x-bar =	12.5000 in	S _{right} =	749.86 in ³
I _y =	9373.26 in ⁴	S _{left} =	749.86 in ³	I _y =	9373.26 in ⁴	S _{left} =	749.86 in ³
C _{right} =	12.5000 in	A =	81.1250 in ²	C _{right} =	12.5000 in	A =	81.1250 in ²
C _{left} =	12.5000 in	r _y =	10.7490 in	C _{left} =	12.5000 in	r _y =	10.7490 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 160

- $A_1 = t_w = 0.6650$ in
- $A_2 = t_f = 1.1240$ in
- $B_1 = d = 24.7140$ in
- $B_2 = b_f = 14.0950$ in

Cover Plate

- $A_3 = t = 0.5625$ in
- $B_3 = b = 16.0000$ in



Member U116-L116

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	8.0000	119.5191	0.5506	0.0000	0.0000	0.5506
2	Flange Plates		31.6856	8.0000	253.4845	524.5783	0.0000	0.0000	524.5783
3	Cover Plate		18.0000	8.0000	144.0000	384.0000	0.0000	0.0000	384.0000
Total			64.63		517.00	909.13		0.00	909.13
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	8.0000	in	$S_{top} = 113.64$	in ³	y-bar =	8.0000	in	$S_{top} = 113.64$	in ³		
$I_x =$	909.13	in ⁴	$S_{bott.} = 113.64$	in ³	$I_x =$	909.13	in ⁴	$S_{bott.} = 113.64$	in ³		
$c_{top} =$	8.0000	in	A =	64.6255	in ²	$c_{top} =$	8.0000	in	A =	64.6255	in ²
$c_{bottom} =$	8.0000	in	$r_x =$	3.7507	in	$c_{bottom} =$	8.0000	in	$r_x =$	3.7507	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		14.9399	12.9195	193.0159	628.3732	0.0000	0.0000	628.3732
2	Left Flange		15.8428	1.1245	17.8152	1.6679	11.7950	2204.0796	2205.7476
	Right Flange		15.8428	24.7145	391.5464	1.6679	11.7950	2204.0796	2205.7476
3	Left Plate		9.0000	0.2813	2.5313	0.2373	12.6383	1437.5283	1437.7656
	Right Plate		9.0000	25.5578	230.0198	0.2373	12.6383	1437.5283	1437.7656
Total			64.63		834.93	632.18		7283.22	7915.40
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.9195	in	S _{right} =	612.67	in ³	x-bar =	12.9195	in	S _{right} =	612.67	in ³
I _y =	7915.40	n ⁴	S _{left} =	612.67	in ³	I _y =	7915.40	n ⁴	S _{left} =	612.67	in ³
C _{right} =	12.9195	in	A =	64.6255	in ²	C _{right} =	12.9195	in	A =	64.6255	in ²
C _{left} =	12.9195	in	r _y =	11.0671	in	C _{left} =	12.9195	in	r _y =	11.0671	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in

Cover Plate

- $A_3 = t = 0.5625$ in
- $B_3 = b = 16.0000$ in



Member U117-L117

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	8.0000	102.4450	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	8.0000	199.8080	407.9413	0.0000	0.0000	407.9413
3	Cover Plate		18.0000	8.0000	144.0000	384.0000	0.0000	0.0000	384.0000
Total			55.78		446.25	792.29		0.00	792.29
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	8.0000	in	S _{top} =	99.04	in ³	y-bar =	8.0000	in	S _{top} =	99.04	in ³
I _x =	792.29	in ⁴	S _{bott.} =	99.04	in ³	I _x =	792.29	in ⁴	S _{bott.} =	99.04	in ³
c _{top} =	8.0000	in	A =	55.7816	in ²	c _{top} =	8.0000	in	A =	55.7816	in ²
c _{bottom} =	8.0000	in	r _x =	3.7687	in	c _{bottom} =	8.0000	in	r _x =	3.7687	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.6875	162.4713	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	1.0085	12.5941	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	24.3665	304.2889	0.8280	11.6790	1703.3512	1704.1792
3	Left Plate		9.0000	0.2813	2.5313	0.2373	12.4063	1385.2354	1385.4727
	Right Plate		9.0000	25.0938	225.8438	0.2373	12.4063	1385.2354	1385.4727
Total			55.78		707.73	540.74		6177.17	6717.91
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.6875	in	S _{right} = 529.49 in ³	x-bar =	12.6875	in	S _{right} = 529.49 in ³
I _y =	6717.91	n ⁴	S _{left} = 529.49 in ³	I _y =	6717.91	n ⁴	S _{left} = 529.49 in ³
C _{right} =	12.6875	in	A = 55.7816 in ²	C _{right} =	12.6875	in	A = 55.7816 in ²
C _{left} =	12.6875	in	r _y = 10.9742 in	C _{left} =	12.6875	in	r _y = 10.9742 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

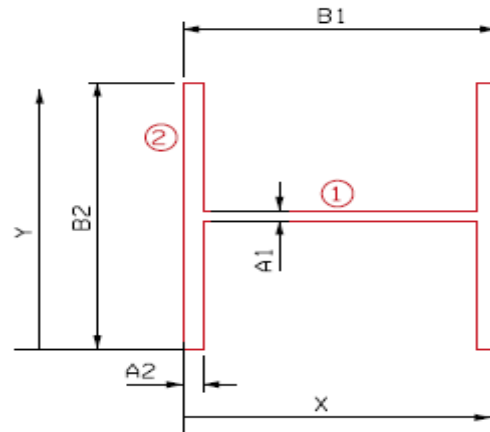
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 100

- $A_1 = t_w = 0.4700$ in
- $A_2 = t_f = 0.7670$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 12.0000$ in



Member U118-L118

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		10.5590	6.0000	63.3541	0.1944	0.0000	0.0000	0.1944
2	Flange Plates		18.4080	6.0000	110.4480	220.8960	0.0000	0.0000	220.8960
Total			28.97		173.80	221.09		0.00	221.09
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	6.0000	in	$S_{top} = 36.85$	in ³	y-bar =	6.0000	in	$S_{top} = 36.85$	in ³		
$I_x =$	221.09	in ⁴	$S_{bott.} = 36.85$	in ³	$I_x =$	221.09	in ⁴	$S_{bott.} = 36.85$	in ³		
$c_{top} =$	6.0000	in	A =	28.9670	in ²	$c_{top} =$	6.0000	in	A =	28.9670	in ²
$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in	$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	12.0000	126.7082	444.1134	0.0000	0.0000	444.1134
2	Left Flange		9.2040	0.3835	3.5297	0.4512	11.6165	1242.0160	1242.4673
	Right Flange		9.2040	23.6165	217.3663	0.4512	11.6165	1242.0160	1242.4673
Total			28.97		347.60	445.02		2484.03	2929.05
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.0000	in	S _{right} =	244.09	in ³	x-bar =	12.0000	in	S _{right} =	244.09	in ³
I _y =	2929.05	in ⁴	S _{left} =	244.09	in ³	I _y =	2929.05	in ⁴	S _{left} =	244.09	in ³
C _{right} =	12.0000	in	A =	28.9670	in ²	C _{right} =	12.0000	in	A =	28.9670	in ²
C _{left} =	12.0000	in	r _y =	10.0557	in	C _{left} =	12.0000	in	r _y =	10.0557	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 100

- $A_1 = t_w = 0.4700$ in
- $A_2 = t_f = 0.7670$ in
- $B_1 = d = 24.0000$ in
- $B_2 = b_f = 12.0000$ in



Member U119-L119

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		10.5590	6.0000	63.3541	0.1944	0.0000	0.0000	0.1944
2	Flange Plates		18.4080	6.0000	110.4480	220.8960	0.0000	0.0000	220.8960
Total			28.97		173.80	221.09		0.00	221.09
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	6.0000	in	$S_{top} = 36.85$	in^3	y-bar =	6.0000	in	$S_{top} = 36.85$	in^3		
$I_x =$	221.09	in^4	$S_{bott.} = 36.85$	in^3	$I_x =$	221.09	in^4	$S_{bott.} = 36.85$	in^3		
$c_{top} =$	6.0000	in	A =	28.9670	in^2	$c_{top} =$	6.0000	in	A =	28.9670	in^2
$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in	$c_{bottom} =$	6.0000	in	$r_x =$	2.7627	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.5590	12.0000	126.7082	444.1134	0.0000	0.0000	444.1134
2	Left Flange		9.2040	0.3835	3.5297	0.4512	11.6165	1242.0160	1242.4673
	Right Flange		9.2040	23.6165	217.3663	0.4512	11.6165	1242.0160	1242.4673
Total			28.97		347.60	445.02		2484.03	2929.05
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.0000	in	S _{right} =	244.09	in ³	x-bar =	12.0000	in	S _{right} =	244.09	in ³
I _y =	2929.05	in ⁴	S _{left} =	244.09	in ³	I _y =	2929.05	in ⁴	S _{left} =	244.09	in ³
C _{right} =	12.0000	in	A =	28.9670	in ²	C _{right} =	12.0000	in	A =	28.9670	in ²
C _{left} =	12.0000	in	r _y =	10.0557	in	C _{left} =	12.0000	in	r _y =	10.0557	in



Made By KMW
Checked By ADK

Date 2/2/2012
Date 2/16/2012

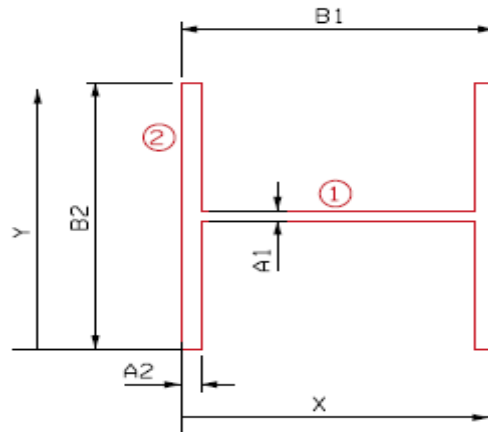
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 130

- $A_1 = t_w = 0.5700$ in
- $A_2 = t_f = 0.8920$ in
- $B_1 = d = 24.2500$ in
- $B_2 = b_f = 14.0000$ in



Member U120-L120

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		12.8056	7.0000	89.6393	0.3467	0.0000	0.0000	0.3467
2	Flange Plates		24.9760	7.0000	174.8320	407.9413	0.0000	0.0000	407.9413
Total			37.78		264.47	408.29		0.00	408.29
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0625	14.0000	-0.8750	7.0000	-6.1250	-14.2917	0.1037	-0.0094	-14.3011
2	0.1875	4.0000	-0.7500	2.0000	-1.5000	-1.0000	5.1037	-19.5359	-20.5359
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.63		-7.63	-15.29		-19.55	-34.84

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.0000	in	$S_{top} =$	58.33	in ³	y-bar =	7.1037	in	$S_{top} =$	54.15	in ³
$I_x =$	408.29	in ⁴	$S_{bott.} =$	58.33	in ³	$I_x =$	373.45	in ⁴	$S_{bott.} =$	52.57	in ³
$c_{top} =$	7.0000	in	A =	37.7816	in ²	$c_{top} =$	6.8963	in	A =	36.1566	in ²
$c_{bottom} =$	7.0000	in	$r_x =$	3.2873	in	$c_{bottom} =$	7.1037	in	$r_x =$	3.2138	in



Made By KMW
 Checked By ADK

Date 2/2/2012
 Date 2/16/2012

Job No. P402110046
 Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.8056	12.1250	155.2681	538.6056	0.0000	0.0000	538.6056
2	Left Flange		12.4880	0.4460	5.5696	0.8280	11.6790	1703.3512	1704.1792
	Right Flange		12.4880	23.8040	297.2644	0.8280	11.6790	1703.3512	1704.1792
Total			37.78		458.10	540.26		3406.70	3946.96
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	14.0000	0.0625	-0.8750	24.2188	-21.1914	-0.0003	12.6347	-139.6810	-139.6813
2	4.0000	0.1875	-0.7500	24.0938	-18.0703	-0.0022	12.5097	-117.3693	-117.3715
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.63		-39.26	0.00		-257.05	-257.05

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.1250	in	S _{right} =	325.52	in ³	x-bar =	11.5841	in	S _{right} =	291.33	in ³
I _y =	3946.96	in ⁴	S _{left} =	325.52	in ³	I _y =	3689.91	in ⁴	S _{left} =	318.53	in ³
c _{right} =	12.1250	in	A =	37.7816	in ²	c _{right} =	12.6659	in	A =	36.1566	in ²
c _{left} =	12.1250	in	r _y =	10.2210	in	c _{left} =	11.5841	in	r _y =	10.1022	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam CB24x 140

- $A_1 = t_w = 0.6010$ in
- $A_2 = t_f = 0.9700$ in
- $B_1 = d = 24.4060$ in
- $B_2 = b_f = 14.0310$ in



Member U121-L121

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		13.5021	7.0155	94.7237	0.4064	0.0000	0.0000	0.4064
2	Flange Plates		27.2201	7.0155	190.9629	446.5667	0.0000	0.0000	446.5667
Total			40.72		285.69	446.97		0.00	446.97
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	7.0155	in	$S_{top} = 63.71$	in ³	y-bar =	7.0155	in	$S_{top} = 63.71$	in ³		
$I_x =$	446.97	in ⁴	$S_{bott.} = 63.71$	in ³	$I_x =$	446.97	in ⁴	$S_{bott.} = 63.71$	in ³		
$c_{top} =$	7.0155	in	A =	40.7222	in ²	$c_{top} =$	7.0155	in	A =	40.7222	in ²
$c_{bottom} =$	7.0155	in	$r_x =$	3.3130	in	$c_{bottom} =$	7.0155	in	$r_x =$	3.3130	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		13.5021	12.2030	164.7657	567.8982	0.0000	0.0000	567.8982
2	Left Flange		13.6101	0.4850	6.6009	1.0671	11.7180	1868.8195	1869.8866
	Right Flange		13.6101	23.9210	325.5665	1.0671	11.7180	1868.8195	1869.8866
Total			40.72		496.93	570.03		3737.64	4307.67
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	12.2030	in	S _{right} =	353.00	in ³	x-bar =	12.2030	in	S _{right} =	353.00	in ³
I _y =	4307.67	in ⁴	S _{left} =	353.00	in ³	I _y =	4307.67	in ⁴	S _{left} =	353.00	in ³
C _{right} =	12.2030	in	A =	40.7222	in ²	C _{right} =	12.2030	in	A =	40.7222	in ²
C _{left} =	12.2030	in	r _y =	10.2850	in	C _{left} =	12.2030	in	r _y =	10.2850	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_t = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_t = 0.5000$ in

Perforated Plate:

$A_3 = t = 0.5000$ in
 $B_3 = l = 6.0000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.5000$ in

Left Web Plate:

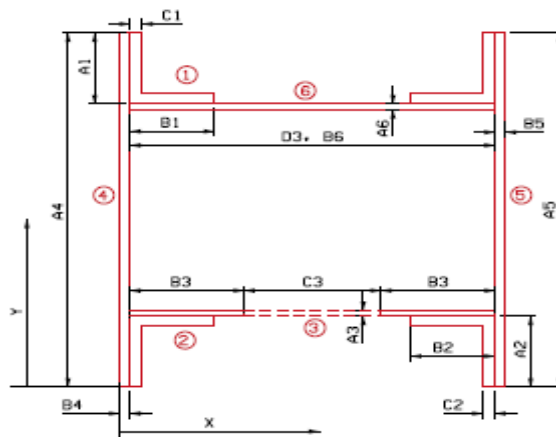
$A_4 = h = 20.0000$ in
 $B_4 = t = 0.6875$ in

Right Web Plate:

$A_5 = h = 20.0000$ in
 $B_5 = t = 0.6875$ in

Cover Plate:

$A_6 = t = 0.3750$ in
 $B_6 = l = 23.5000$ in



Member U122-L122

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.5000	16.2500	56.8750	0.0729	5.9582	124.2513	124.3243
	Vertical Leg	4.0000	18.0000	72.0000	5.3333	7.7082	237.6666	242.9999
2	Horizontal Leg	3.5000	3.7500	13.1250	0.0729	6.5418	149.7821	149.8550
	Vertical Leg	4.0000	2.0000	8.0000	5.3333	8.2918	275.0145	280.3478
3	Perforated Plate	6.0000	4.2500	25.5000	0.1250	6.0418	219.0187	219.1437
4	Plate	13.7500	10.0000	137.5000	458.3333	0.2918	1.1706	459.5039
5	Plate	13.7500	10.0000	137.5000	458.3333	0.2918	1.1706	459.5039
6	Cover Plate	8.8125	15.8125	139.3477	0.1033	5.5207	268.5904	268.6937
Total		57.31		589.85	927.71		1276.66	2204.37
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	10.2918 in	S _{top} =	227.06 in ³	y-bar =	10.2918 in	S _{top} =	227.06 in ³
I _x =	2204.37 in ⁴	S _{bott.} =	214.19 in ³	I _x =	2204.37 in ⁴	S _{bott.} =	214.19 in ³
C _{top} =	9.7082 in	A =	57.3125 in ²	C _{top} =	9.7082 in	A =	57.3125 in ²
C _{bottom} =	10.2918 in	r _x =	6.2018 in	C _{bottom} =	10.2918 in	r _x =	6.2018 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.7500	2.9375	5.1406	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	0.9375	1.8750	0.0417	11.5000	264.5000	264.5417	
1 (Right)	Horizontal Leg	1.7500	21.9375	38.3906	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	23.9375	47.8750	0.0417	11.5000	264.5000	264.5417	
2 (Left)	Horizontal Leg	1.7500	2.9375	5.1406	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	0.9375	1.8750	0.0417	11.5000	264.5000	264.5417	
2 (Right)	Horizontal Leg	1.7500	21.9375	38.3906	1.7865	9.5000	157.9375	159.7240	
	Vertical Leg	2.0000	23.9375	47.8750	0.0417	11.5000	264.5000	264.5417	
3 (Left)	Perforated Plate	3.0000	3.6875	11.0625	9.0000	8.7500	229.6875	238.6875	
3 (Right)	Perforated Plate	3.0000	21.1875	63.5625	9.0000	8.7500	229.6875	238.6875	
4	Plate	13.7500	0.3438	4.7266	0.5416	12.0938	2011.0583	2011.5999	
5	Plate	13.7500	24.5313	337.3047	0.5416	12.0938	2011.0583	2011.5999	
6	Cover Plate	8.8125	12.4375	109.6055	405.5586	0.0000	0.0000	405.5586	
Total		57.31		712.82	431.95		6171.24	6603.20	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.4375 in	S _{right} =	530.91 in ³	x-bar =	12.4375 in	S _{right} =	530.91 in ³
I _y =	6603.20 in ⁴	S _{left} =	530.91 in ³	I _y =	6603.20 in ⁴	S _{left} =	530.91 in ³
C _{right} =	12.4375 in	A =	57.3125 in ²	C _{right} =	12.4375 in	A =	57.3125 in ²
C _{left} =	12.4375 in	r _y =	10.7338 in	C _{left} =	12.4375 in	r _y =	10.7338 in



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.5000$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.5000$ in

Perforated Plate:

$A_3 = t = 0.6250$ in
 $B_3 = l = 5.7500$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.0000$ in

Left Web Plate:

$A_4 = h = 24.0000$ in
 $B_4 = t = 1.0000$ in

Right Web Plate:

$A_5 = h = 24.0000$ in
 $B_5 = t = 1.0000$ in

Cover Plate:

$A_6 = t = 0.5000$ in
 $B_6 = l = 23.0000$ in



Member U123-L123

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	3.5000	20.2500	70.8750	0.0729	7.8354	214.8749	214.9478
	Vertical Leg	4.0000	22.0000	88.0000	5.3333	9.5854	367.5163	372.8497
2	Horizontal Leg	3.5000	3.7500	13.1250	0.0729	8.6646	262.7661	262.8390
	Vertical Leg	4.0000	2.0000	8.0000	5.3333	10.4146	433.8591	439.1924
3	Perforated Plate	7.1875	4.3125	30.9961	0.2340	8.1021	471.8214	472.0553
4	Plate	24.0000	12.0000	288.0000	1152.0000	0.4146	4.1263	1156.1263
5	Plate	24.0000	12.0000	288.0000	1152.0000	0.4146	4.1263	1156.1263
6	Cover Plate	11.5000	19.7500	227.1250	0.2396	7.3354	618.7859	619.0255
Total		81.69		1014.12	2315.29		2377.88	4693.16
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	12.4146 in	S _{top} =	405.09 in ³	y-bar =	12.4146 in	S _{top} =	405.09 in ³
I _x =	4693.16 in ⁴	S _{bott.} =	378.03 in ³	I _x =	4693.16 in ⁴	S _{bott.} =	378.03 in ³
C _{top} =	11.5854 in	A =	81.6875 in ²	C _{top} =	11.5854 in	A =	81.6875 in ²
C _{bottom} =	12.4146 in	r _x =	7.5798 in	C _{bottom} =	12.4146 in	r _x =	7.5798 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	1.7500	3.2500	5.6875	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	1.2500	2.5000	0.0417	11.2500	253.1250	253.1667	
1 (Right)	Horizontal Leg	1.7500	21.7500	38.0625	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	23.7500	47.5000	0.0417	11.2500	253.1250	253.1667	
2 (Left)	Horizontal Leg	1.7500	3.2500	5.6875	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	1.2500	2.5000	0.0417	11.2500	253.1250	253.1667	
2 (Right)	Horizontal Leg	1.7500	21.7500	38.0625	1.7865	9.2500	149.7344	151.5208	
	Vertical Leg	2.0000	23.7500	47.5000	0.0417	11.2500	253.1250	253.1667	
3 (Left)	Perforated Plate	3.5938	3.8750	13.9258	9.9015	8.6250	267.3413	277.2428	
3 (Right)	Perforated Plate	3.5938	21.1250	75.9180	9.9015	8.6250	267.3413	277.2428	
4	Plate	24.0000	0.5000	12.0000	2.0000	12.0000	3456.0000	3458.0000	
5	Plate	24.0000	24.5000	588.0000	2.0000	12.0000	3456.0000	3458.0000	
6	Cover Plate	11.5000	12.5000	143.7500	506.9583	0.0000	0.0000	506.9583	
Total		81.69		1021.09	538.07		9058.12	9596.19	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.5000 in	S _{right} =	767.70 in ³	x-bar =	12.5000 in	S _{right} =	767.70 in ³
I _y =	9596.19 in ⁴	S _{left} =	767.70 in ³	I _y =	9596.19 in ⁴	S _{left} =	767.70 in ³
C _{right} =	12.5000 in	A =	81.6875 in ²	C _{right} =	12.5000 in	A =	81.6875 in ²
C _{left} =	12.5000 in	r _y =	10.8386 in	C _{left} =	12.5000 in	r _y =	10.8386 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.6250$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.6250$ in

Perforated Plate:

$A_3 = t = 0.6250$ in
 $B_3 = l = 5.7500$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.0000$ in

Left Web Plate:

$A_4 = h = 24.0000$ in
 $B_4 = t = 1.0000$ in

Right Web Plate:

$A_5 = h = 24.0000$ in
 $B_5 = t = 1.0000$ in

Cover Plate:

$A_6 = t = 0.5000$ in
 $B_6 = l = 23.0000$ in



Member U124-L124

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	4.2188	20.3125	85.6934	0.1373	7.9146	264.2664	264.4037
	Vertical Leg	5.0000	22.0000	110.0000	6.6667	9.6021	461.0018	467.6685
2	Horizontal Leg	4.2188	3.6875	15.5566	0.1373	8.7104	320.0809	320.2183
	Vertical Leg	5.0000	2.0000	10.0000	6.6667	10.3979	540.5814	547.2481
3	Perforated Plate	7.1875	4.3125	30.9961	0.2340	8.0854	469.8732	470.1072
4	Plate	24.0000	12.0000	288.0000	1152.0000	0.3979	3.7998	1155.7998
5	Plate	24.0000	12.0000	288.0000	1152.0000	0.3979	3.7998	1155.7998
6	Cover Plate	11.5000	19.7500	227.1250	0.2396	7.3521	621.6141	621.8537
Total		85.13		1055.37	2318.08		2685.02	5003.10
Section Losses		A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00	0.00	0.00	0.00



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	12.3979 in	S _{top} =	431.22 in ³	y-bar =	12.3979 in	S _{top} =	431.22 in ³
I _x =	5003.10 in ⁴	S _{bott.} =	403.54 in ³	I _x =	5003.10 in ⁴	S _{bott.} =	403.54 in ³
C _{top} =	11.6021 in	A =	85.1250 in ²	C _{top} =	11.6021 in	A =	85.1250 in ²
C _{bottom} =	12.3979 in	r _x =	7.6664 in	C _{bottom} =	12.3979 in	r _x =	7.6664 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.1094	3.3125	6.9873	2.0023	9.1875	178.0527	180.0549	
	Vertical Leg	2.5000	1.3125	3.2813	0.0814	11.1875	312.9004	312.9818	
1 (Right)	Horizontal Leg	2.1094	21.6875	45.7471	2.0023	9.1875	178.0527	180.0549	
	Vertical Leg	2.5000	23.6875	59.2188	0.0814	11.1875	312.9004	312.9818	
2 (Left)	Horizontal Leg	2.1094	3.3125	6.9873	2.0023	9.1875	178.0527	180.0549	
	Vertical Leg	2.5000	1.3125	3.2813	0.0814	11.1875	312.9004	312.9818	
2 (Right)	Horizontal Leg	2.1094	21.6875	45.7471	2.0023	9.1875	178.0527	180.0549	
	Vertical Leg	2.5000	23.6875	59.2188	0.0814	11.1875	312.9004	312.9818	
3 (Left)	Perforated Plate	3.5938	3.8750	13.9258	9.9015	8.6250	267.3413	277.2428	
3 (Right)	Perforated Plate	3.5938	21.1250	75.9180	9.9015	8.6250	267.3413	277.2428	
4	Plate	24.0000	0.5000	12.0000	2.0000	12.0000	3456.0000	3458.0000	
5	Plate	24.0000	24.5000	588.0000	2.0000	12.0000	3456.0000	3458.0000	
6	Cover Plate	11.5000	12.5000	143.7500	506.9583	0.0000	0.0000	506.9583	
Total		85.13		1064.06	539.10		9410.49	9949.59	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.5000 in	S _{right} =	795.97 in ³	x-bar =	12.5000 in	S _{right} =	795.97 in ³
I _y =	9949.59 in ⁴	S _{left} =	795.97 in ³	I _y =	9949.59 in ⁴	S _{left} =	795.97 in ³
C _{right} =	12.5000 in	A =	85.1250 in ²	C _{right} =	12.5000 in	A =	85.1250 in ²
C _{left} =	12.5000 in	r _y =	10.8112 in	C _{left} =	12.5000 in	r _y =	10.8112 in



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.6250$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.6250$ in

Perforated Plate:

$A_3 = t = 0.6250$ in
 $B_3 = l = 5.7500$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 23.0000$ in

Left Web Plate:

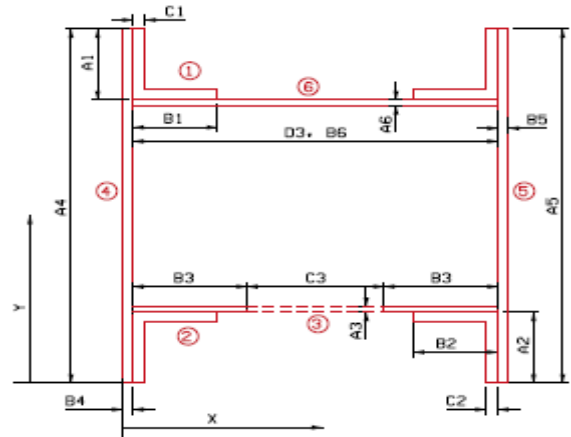
$A_4 = h = 26.0000$ in
 $B_4 = t = 1.0000$ in

Right Web Plate:

$A_5 = h = 26.0000$ in
 $B_5 = t = 1.0000$ in

Cover Plate:

$A_6 = t = 0.5000$ in
 $B_6 = l = 23.0000$ in



Member U125-L125

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	4.2188	22.3125	94.1309	0.1373	8.8841	332.9722	333.1095
	Vertical Leg	5.0000	24.0000	120.0000	6.6667	10.5716	558.7907	565.4574
2	Horizontal Leg	4.2188	3.6875	15.5566	0.1373	9.7409	400.2989	400.4362
	Vertical Leg	5.0000	2.0000	10.0000	6.6667	11.4284	653.0448	659.7114
3	Perforated Plate	7.1875	4.3125	30.9961	0.2340	9.1159	597.2822	597.5162
4	Plate	26.0000	13.0000	338.0000	1464.6667	0.4284	4.7723	1469.4390
5	Plate	26.0000	13.0000	338.0000	1464.6667	0.4284	4.7723	1469.4390
6	Cover Plate	11.5000	21.7500	250.1250	0.2396	8.3216	796.3586	796.5981
Total		89.13		1196.81	2943.41		3348.29	6291.71
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.00		0.00	0.00		0.00	0.00



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	13.4284 in	S _{top} =	500.47 in ³	y-bar =	13.4284 in	S _{top} =	500.47 in ³
I _x =	6291.71 in ⁴	S _{bott.} =	468.54 in ³	I _x =	6291.71 in ⁴	S _{bott.} =	468.54 in ³
C _{top} =	12.5716 in	A =	89.1250 in ²	C _{top} =	12.5716 in	A =	89.1250 in ²
C _{bottom} =	13.4284 in	r _x =	8.4020 in	C _{bottom} =	13.4284 in	r _x =	8.4020 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.1094	3.3125	6.9873	2.0023	9.1875	178.0527	180.0549	
	Vertical Leg	2.5000	1.3125	3.2813	0.0814	11.1875	312.9004	312.9818	
1 (Right)	Horizontal Leg	2.1094	21.6875	45.7471	2.0023	9.1875	178.0527	180.0549	
	Vertical Leg	2.5000	23.6875	59.2188	0.0814	11.1875	312.9004	312.9818	
2 (Left)	Horizontal Leg	2.1094	3.3125	6.9873	2.0023	9.1875	178.0527	180.0549	
	Vertical Leg	2.5000	1.3125	3.2813	0.0814	11.1875	312.9004	312.9818	
2 (Right)	Horizontal Leg	2.1094	21.6875	45.7471	2.0023	9.1875	178.0527	180.0549	
	Vertical Leg	2.5000	23.6875	59.2188	0.0814	11.1875	312.9004	312.9818	
3 (Left)	Perforated Plate	3.5938	3.8750	13.9258	9.9015	8.6250	267.3413	277.2428	
3 (Right)	Perforated Plate	3.5938	21.1250	75.9180	9.9015	8.6250	267.3413	277.2428	
4	Plate	26.0000	0.5000	13.0000	2.1667	12.0000	3744.0000	3746.1667	
5	Plate	26.0000	24.5000	637.0000	2.1667	12.0000	3744.0000	3746.1667	
6	Cover Plate	11.5000	12.5000	143.7500	506.9583	0.0000	0.0000	506.9583	
Total		89.13		1114.06	539.43		9986.49	10525.92	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.5000 in	S _{right} =	842.07 in ³	x-bar =	12.5000 in	S _{right} =	842.07 in ³
I _y =	10525.92 in ⁴	S _{left} =	842.07 in ³	I _y =	10525.92 in ⁴	S _{left} =	842.07 in ³
C _{right} =	12.5000 in	A =	89.1250 in ²	C _{right} =	12.5000 in	A =	89.1250 in ²
C _{left} =	12.5000 in	r _y =	10.8675 in	C _{left} =	12.5000 in	r _y =	10.8675 in



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Top Angles:

$A_1 = l_h = 4.0000$ in
 $B_1 = l_w = 4.0000$ in
 $C_1 = t_f = 0.6250$ in

Bottom Angles:

$A_2 = l_h = 4.0000$ in
 $B_2 = l_w = 4.0000$ in
 $C_2 = t_f = 0.6250$ in

Perforated Plate:

$A_3 = t = 0.6250$ in
 $B_3 = l = 5.5000$ in
 $C_3 = l = 11.5000$ in
 $D_3 = l = 22.5000$ in

Left Web Plate:

$A_4 = h = 26.0000$ in
 $B_4 = t = 1.3750$ in

Right Web Plate:

$A_5 = h = 26.0000$ in
 $B_5 = t = 1.3750$ in

Cover Plate:

$A_6 = t = 0.5000$ in
 $B_6 = l = 22.5000$ in



Member U126-L126

X-Axis Section Properties:

Gross Section (without Losses)		A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Horizontal Leg	4.2188	22.3125	94.1309	0.1373	8.9543	338.2552	338.3925
	Vertical Leg	5.0000	24.0000	120.0000	6.6667	10.6418	566.2366	572.9033
2	Horizontal Leg	4.2188	3.6875	15.5566	0.1373	9.6707	394.5500	394.6873
	Vertical Leg	5.0000	2.0000	10.0000	6.6667	11.3582	645.0466	651.7133
3	Perforated Plate	6.8750	4.3125	29.6484	0.2238	9.0457	562.5481	562.7719
4	Plate	35.7500	13.0000	464.7500	2013.9167	0.3582	4.5877	2018.5043
5	Plate	35.7500	13.0000	464.7500	2013.9167	0.3582	4.5877	2018.5043
6	Cover Plate	11.2500	21.7500	244.6875	0.2344	8.3918	792.2458	792.4802
Total		108.06		1443.52	4041.90		3308.06	7349.96
Section Losses		A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total				0.00	0.00		0.00	0.00



Made By SFH
Checked By NRF

Date 1/23/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	13.3582 in	S _{top} =	581.40 in ³	y-bar =	13.3582 in	S _{top} =	581.40 in ³
I _x =	7349.96 in ⁴	S _{bott.} =	550.22 in ³	I _x =	7349.96 in ⁴	S _{bott.} =	550.22 in ³
C _{top} =	12.6418 in	A =	108.0625 in ²	C _{top} =	12.6418 in	A =	108.0625 in ²
C _{bottom} =	13.3582 in	r _x =	8.2472 in	C _{bottom} =	13.3582 in	r _x =	8.2472 in

Y-Axis Section Properties:

Gross Section (without Losses)		A	x	Ax	I _o	d	Ad ²	I _{y,gross}	
Element	Description	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)	
1 (Left)	Horizontal Leg	2.1094	3.6875	7.7783	2.0023	8.9375	168.4946	170.4968	
	Vertical Leg	2.5000	1.6875	4.2188	0.0814	10.9375	299.0723	299.1536	
1 (Right)	Horizontal Leg	2.1094	21.5625	45.4834	2.0023	8.9375	168.4946	170.4968	
	Vertical Leg	2.5000	23.5625	58.9063	0.0814	10.9375	299.0723	299.1536	
2 (Left)	Horizontal Leg	2.1094	3.6875	7.7783	2.0023	8.9375	168.4946	170.4968	
	Vertical Leg	2.5000	1.6875	4.2188	0.0814	10.9375	299.0723	299.1536	
2 (Right)	Horizontal Leg	2.1094	21.5625	45.4834	2.0023	8.9375	168.4946	170.4968	
	Vertical Leg	2.5000	23.5625	58.9063	0.0814	10.9375	299.0723	299.1536	
3 (Left)	Perforated Plate	3.4375	4.1250	14.1797	8.6654	8.5000	248.3594	257.0247	
3 (Right)	Perforated Plate	3.4375	21.1250	72.6172	8.6654	8.5000	248.3594	257.0247	
4	Plate	35.7500	0.6875	24.5781	5.6325	11.9375	5094.5146	5100.1471	
5	Plate	35.7500	24.5625	878.1094	5.6325	11.9375	5094.5146	5100.1471	
6	Cover Plate	11.2500	12.6250	142.0313	474.6094	0.0000	0.0000	474.6094	
Total		108.06		1364.29	511.54		12556.02	13067.56	
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	12.6250 in	S _{right} =	1035.05 in ³	x-bar =	12.6250 in	S _{right} =	1035.05 in ³
I _y =	13067.56 in ⁴	S _{left} =	1035.05 in ³	I _y =	13067.56 in ⁴	S _{left} =	1035.05 in ³
C _{right} =	12.6250 in	A =	108.0625 in ²	C _{right} =	12.6250 in	A =	108.0625 in ²
C _{left} =	12.6250 in	r _y =	10.9966 in	C _{left} =	12.6250 in	r _y =	10.9966 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

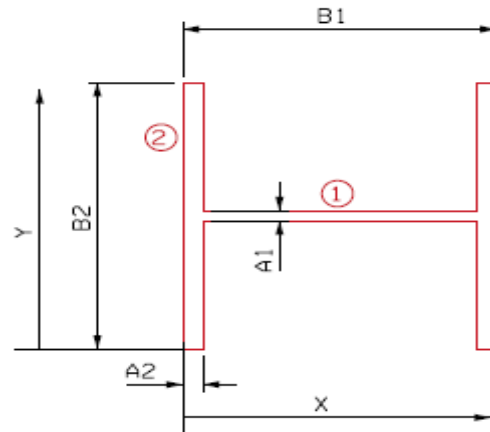
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam WF14x 219

- $A_1 = t_w = 1.0050$ in
- $A_2 = t_f = 1.6230$ in
- $B_1 = d = 15.8700$ in
- $B_2 = b_f = 15.8250$ in



Member U127-L127

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		12.6871	7.9125	100.3868	1.0679	0.0000	0.0000	1.0679
2	Flange Plates		51.3680	7.9125	406.4489	1072.0090	0.0000	0.0000	1072.0090
Total			64.06		506.84	1073.08		0.00	1073.08
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	7.9125	in	S _{top} = 135.62 in ³	y-bar =	7.9125	in	S _{top} = 135.62 in ³
I _x =	1073.08	in ⁴	S _{bottom} = 135.62 in ³	I _x =	1073.08	in ⁴	S _{bottom} = 135.62 in ³
c _{top} =	7.9125	in	A = 64.0551 in ²	c _{top} =	7.9125	in	A = 64.0551 in ²
c _{bottom} =	7.9125	in	r _x = 4.0930 in	c _{bottom} =	7.9125	in	r _x = 4.0930 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		12.6871	7.9350	100.6723	168.4906	0.0000	0.0000	168.4906
2	Left Flange		25.6840	0.8115	20.8425	5.6379	7.1235	1303.3141	1308.9520
	Right Flange		25.6840	15.0585	386.7621	5.6379	7.1235	1303.3141	1308.9520
Total			64.06		508.28	179.77		2606.63	2786.39
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties				
x-bar =	7.9350	in	S _{right} =	351.15 in ³	x-bar =	7.9350	in	S _{right} =	351.15 in ³
I _y =	2786.39	in ⁴	S _{left} =	351.15 in ³	I _y =	2786.39	in ⁴	S _{left} =	351.15 in ³
c _{right} =	7.9350	in	A =	64.0551 in ²	c _{right} =	7.9350	in	A =	64.0551 in ²
c _{left} =	7.9350	in	r _y =	6.5955 in	c _{left} =	7.9350	in	r _y =	6.5955 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

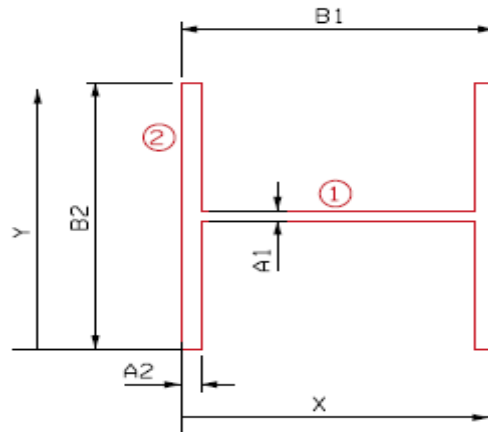
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam WF14x 176

- $A_1 = t_w = 0.8200$ in
- $A_2 = t_f = 1.3130$ in
- $B_1 = d = 15.2500$ in
- $B_2 = b_f = 15.6400$ in



Member U128-L128

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		10.3517	7.8200	80.9501	0.5800	0.0000	0.0000	0.5800
2	Flange Plates		41.0706	7.8200	321.1724	837.1894	0.0000	0.0000	837.1894
Total			51.42		402.12	837.77		0.00	837.77
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	7.8200	in	$S_{top} = 107.13$	in ³	y-bar =	7.8200	in	$S_{top} = 107.13$	in ³		
$I_x =$	837.77	in ⁴	$S_{bott.} = 107.13$	in ³	$I_x =$	837.77	in ⁴	$S_{bott.} = 107.13$	in ³		
$c_{top} =$	7.8200	in	A =	51.4223	in ²	$c_{top} =$	7.8200	in	A =	51.4223	in ²
$c_{bottom} =$	7.8200	in	$r_x =$	4.0363	in	$c_{bottom} =$	7.8200	in	$r_x =$	4.0363	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		10.3517	7.6250	78.9316	137.4749	0.0000	0.0000	137.4749
2	Left Flange		20.5353	0.6565	13.4814	2.9502	6.9685	997.1950	1000.1452
	Right Flange		20.5353	14.5935	299.6822	2.9502	6.9685	997.1950	1000.1452
Total			51.42		392.10	143.38		1994.39	2137.77
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	7.6250	in	S _{right} =	280.36	in ³	x-bar =	7.6250	in	S _{right} =	280.36	in ³
I _y =	2137.77	in ⁴	S _{left} =	280.36	in ³	I _y =	2137.77	in ⁴	S _{left} =	280.36	in ³
C _{right} =	7.6250	in	A =	51.4223	in ²	C _{right} =	7.6250	in	A =	51.4223	in ²
C _{left} =	7.6250	in	r _y =	6.4477	in	C _{left} =	7.6250	in	r _y =	6.4477	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam WF14x 136

- $A_1 = t_w = 0.6600$ in
- $A_2 = t_f = 1.0630$ in
- $B_1 = d = 14.7500$ in
- $B_2 = b_f = 14.7400$ in



Member U129-L129

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		8.3318	7.3700	61.4057	0.3024	0.0000	0.0000	0.3024
2	Flange Plates		31.3372	7.3700	230.9555	567.3806	0.0000	0.0000	567.3806
Total			39.67		292.36	567.68		0.00	567.68
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	7.3700	in	$S_{top} = 77.03$	in^3	y-bar =	7.3700	in	$S_{top} = 77.03$	in^3		
$I_x =$	567.68	in^4	$S_{bott.} = 77.03$	in^3	$I_x =$	567.68	in^4	$S_{bott.} = 77.03$	in^3		
$c_{top} =$	7.3700	in	A =	39.6691	in^2	$c_{top} =$	7.3700	in	A =	39.6691	in^2
$c_{bottom} =$	7.3700	in	$r_x =$	3.7829	in	$c_{bottom} =$	7.3700	in	$r_x =$	3.7829	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		8.3318	7.3750	61.4473	110.6506	0.0000	0.0000	110.6506
2	Left Flange		15.6686	0.5315	8.3279	1.4754	6.8435	733.8162	735.2916
	Right Flange		15.6686	14.2185	222.7843	1.4754	6.8435	733.8162	735.2916
Total			39.67		292.56	113.60		1467.63	1581.23
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	7.3750	in	S _{right} =	214.40	in ³	x-bar =	7.3750	in	S _{right} =	214.40	in ³
I _y =	1581.23	in ⁴	S _{left} =	214.40	in ³	I _y =	1581.23	in ⁴	S _{left} =	214.40	in ³
C _{right} =	7.3750	in	A =	39.6691	in ²	C _{right} =	7.3750	in	A =	39.6691	in ²
C _{left} =	7.3750	in	r _y =	6.3135	in	C _{left} =	7.3750	in	r _y =	6.3135	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam WF14x 95

- $A_1 = t_w = 0.4650$ in
- $A_2 = t_f = 0.7480$ in
- $B_1 = d = 14.1200$ in
- $B_2 = b_f = 14.5450$ in



Member U130-L130

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		5.8702	7.2725	42.6907	0.1058	0.0000	0.0000	0.1058
2	Flange Plates		21.7593	7.2725	158.2447	383.6114	0.0000	0.0000	383.6114
Total			27.63		200.94	383.72		0.00	383.72
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	7.2725	in	$S_{top} =$	52.76	in ³	y-bar =	7.2725	in	$S_{top} =$	52.76	in ³
$I_x =$	383.72	in ⁴	$S_{bott.} =$	52.76	in ³	$I_x =$	383.72	in ⁴	$S_{bott.} =$	52.76	in ³
$C_{top} =$	7.2725	in	A =	27.6295	in ²	$C_{top} =$	7.2725	in	A =	27.6295	in ²
$C_{bottom} =$	7.2725	in	$r_x =$	3.7267	in	$C_{bottom} =$	7.2725	in	$r_x =$	3.7267	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		5.8702	7.0600	41.4433	77.9584	0.0000	0.0000	77.9584
2	Left Flange		10.8797	0.3740	4.0690	0.5073	6.6860	486.3490	486.8563
	Right Flange		10.8797	13.7460	149.5518	0.5073	6.6860	486.3490	486.8563
Total			27.63		195.06	78.97		972.70	1051.67
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	7.0600	in	S _{right} =	148.96	in ³	x-bar =	7.0600	in	S _{right} =	148.96	in ³
I _y =	1051.67	in ⁴	S _{left} =	148.96	in ³	I _y =	1051.67	in ⁴	S _{left} =	148.96	in ³
C _{right} =	7.0600	in	A =	27.6295	in ²	C _{right} =	7.0600	in	A =	27.6295	in ²
C _{left} =	7.0600	in	r _y =	6.1696	in	C _{left} =	7.0600	in	r _y =	6.1696	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

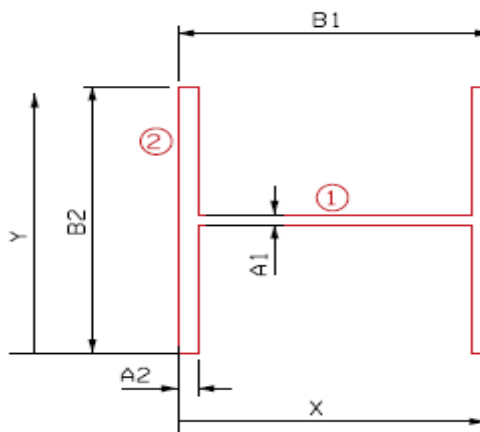
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam WF14x 84

- $A_1 = t_w = 0.4510$ in
- $A_2 = t_f = 0.7780$ in
- $B_1 = d = 14.1800$ in
- $B_2 = b_f = 12.0230$ in



Member U131-L131

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		5.6934	6.0115	34.2260	0.0965	0.0000	0.0000	0.0965
2	Flange Plates		18.7078	6.0115	112.4619	225.3548	0.0000	0.0000	225.3548
Total			24.40		146.69	225.45		0.00	225.45
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
y-bar =	6.0115	in	$S_{top} =$	37.50	in ³	y-bar =	6.0115	in	$S_{top} =$	37.50	in ³
$I_x =$	225.45	in ⁴	$S_{bott.} =$	37.50	in ³	$I_x =$	225.45	in ⁴	$S_{bott.} =$	37.50	in ³
$c_{top} =$	6.0115	in	A =	24.4012	in ²	$c_{top} =$	6.0115	in	A =	24.4012	in ²
$c_{bottom} =$	6.0115	in	$r_x =$	3.0396	in	$c_{bottom} =$	6.0115	in	$r_x =$	3.0396	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		5.6934	7.0900	40.3664	75.6112	0.0000	0.0000	75.6112
2	Left Flange		9.3539	0.3890	3.6387	0.4718	6.7010	420.0217	420.4935
	Right Flange		9.3539	13.7910	128.9996	0.4718	6.7010	420.0217	420.4935
Total			24.40		173.00	76.55		840.04	916.60
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	7.0900	in	S _{right} =	129.28	in ³	x-bar =	7.0900	in	S _{right} =	129.28	in ³
I _y =	916.60	in ⁴	S _{left} =	129.28	in ³	I _y =	916.60	in ⁴	S _{left} =	129.28	in ³
C _{right} =	7.0900	in	A =	24.4012	in ²	C _{right} =	7.0900	in	A =	24.4012	in ²
C _{left} =	7.0900	in	r _y =	6.1289	in	C _{left} =	7.0900	in	r _y =	6.1289	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

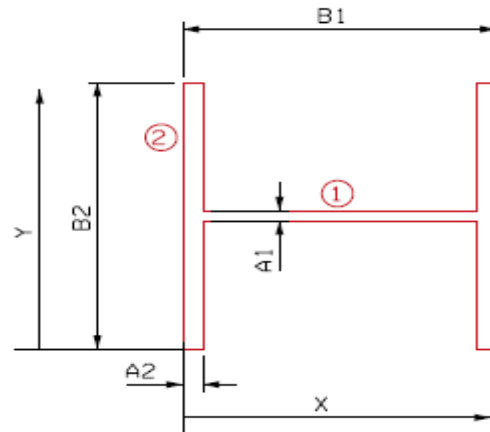
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam WF14x 87

- $A_1 = t_w = 0.4200$ in
- $A_2 = t_f = 0.6880$ in
- $B_1 = d = 14.0000$ in
- $B_2 = b_f = 14.5000$ in



Member U132-L132

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		5.3021	7.2500	38.4401	0.0779	0.0000	0.0000	0.0779
2	Flange Plates		19.9520	7.2500	144.6520	349.5757	0.0000	0.0000	349.5757
Total			25.25		183.09	349.65		0.00	349.65
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	7.2500	in	S _{top} = 48.23 in ³	y-bar =	7.2500	in	S _{top} = 48.23 in ³
I _x =	349.65	in ⁴	S _{bottom} = 48.23 in ³	I _x =	349.65	in ⁴	S _{bottom} = 48.23 in ³
c _{top} =	7.2500	in	A = 25.2541 in ²	c _{top} =	7.2500	in	A = 25.2541 in ²
c _{bottom} =	7.2500	in	r _x = 3.7209 in	c _{bottom} =	7.2500	in	r _x = 3.7209 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y, gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		5.3021	7.0000	37.1146	70.4140	0.0000	0.0000	70.4140
2	Left Flange		9.9760	0.3440	3.4317	0.3935	6.6560	441.9601	442.3536
	Right Flange		9.9760	13.6560	136.2323	0.3935	6.6560	441.9601	442.3536
Total			25.25		176.78	71.20		883.92	955.12
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y, loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	7.0000	in	S _{right} =	136.45	in ³	x-bar =	7.0000	in	S _{right} =	136.45	in ³
I _y =	955.12	in ⁴	S _{left} =	136.45	in ³	I _y =	955.12	in ⁴	S _{left} =	136.45	in ³
C _{right} =	7.0000	in	A =	25.2541	in ²	C _{right} =	7.0000	in	A =	25.2541	in ²
C _{left} =	7.0000	in	r _y =	6.1498	in	C _{left} =	7.0000	in	r _y =	6.1498	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam WF14x 127

- $A_1 = t_w = 0.6100$ in
- $A_2 = t_f = 0.9980$ in
- $B_1 = d = 14.6200$ in
- $B_2 = b_f = 14.6900$ in



Member U133-L133

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		7.7006	7.3450	56.5612	0.2388	0.0000	0.0000	0.2388
2	Flange Plates		29.3212	7.3450	215.3645	527.2841	0.0000	0.0000	527.2841
Total			37.02		271.93	527.52		0.00	527.52
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	7.3450	in	$S_{top} = 71.82$ in ³	y-bar =	7.3450	in	$S_{top} = 71.82$ in ³
$I_x =$	527.52	in ⁴	$S_{bott.} = 71.82$ in ³	$I_x =$	527.52	in ⁴	$S_{bott.} = 71.82$ in ³
$c_{top} =$	7.3450	in	$A = 37.0219$ in ²	$c_{top} =$	7.3450	in	$A = 37.0219$ in ²
$c_{bottom} =$	7.3450	in	$r_x = 3.7748$ in	$c_{bottom} =$	7.3450	in	$r_x = 3.7748$ in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		7.7006	7.3100	56.2917	102.2679	0.0000	0.0000	102.2679
2	Left Flange		14.6606	0.4990	7.3156	1.2168	6.8110	680.1021	681.3189
	Right Flange		14.6606	14.1210	207.0226	1.2168	6.8110	680.1021	681.3189
Total			37.02		270.63	104.70		1360.20	1464.91
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties					As-Inspected Section Properties						
x-bar =	7.3100	in	S _{right} =	200.40	in ³	x-bar =	7.3100	in	S _{right} =	200.40	in ³
I _y =	1464.91	in ⁴	S _{left} =	200.40	in ³	I _y =	1464.91	in ⁴	S _{left} =	200.40	in ³
C _{right} =	7.3100	in	A =	37.0219	in ²	C _{right} =	7.3100	in	A =	37.0219	in ²
C _{left} =	7.3100	in	r _y =	6.2904	in	C _{left} =	7.3100	in	r _y =	6.2904	in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam WF14x 158

- $A_1 = t_w = 0.7300$ in
- $A_2 = t_f = 1.1880$ in
- $B_1 = d = 15.0000$ in
- $B_2 = b_f = 15.5500$ in



Member U134-L134

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I _o	d	Ad ²	I _{x,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		9.2155	7.7750	71.6507	0.4092	0.0000	0.0000	0.4092
2	Flange Plates		36.9468	7.7750	287.2614	744.4857	0.0000	0.0000	744.4857
Total			46.16		358.91	744.89		0.00	744.89
Section Losses			A	y	Ay	I _o	d	Ad ²	I _{x,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
y-bar =	7.7750	in	S _{top} = 95.81 in ³	y-bar =	7.7750	in	S _{top} = 95.81 in ³
I _x =	744.89	in ⁴	S _{bott.} = 95.81 in ³	I _x =	744.89	in ⁴	S _{bott.} = 95.81 in ³
c _{top} =	7.7750	in	A = 46.1623 in ²	c _{top} =	7.7750	in	A = 46.1623 in ²
c _{bottom} =	7.7750	in	r _x = 4.0170 in	c _{bottom} =	7.7750	in	r _x = 4.0170 in



Made By SFH
Checked By NRF

Date 1/24/2012
Date 1/26/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		9.2155	7.5000	69.1164	122.3862	0.0000	0.0000	122.3862
2	Left Flange		18.4734	0.5940	10.9732	2.1727	6.9060	881.0488	883.2215
	Right Flange		18.4734	14.4060	266.1278	2.1727	6.9060	881.0488	883.2215
Total			46.16		346.22	126.73		1762.10	1888.83
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			0.00		0.00	0.00		0.00	0.00

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	7.5000	in	S _{right} = 251.84 in ³	x-bar =	7.5000	in	S _{right} = 251.84 in ³
I _y =	1888.83	in ⁴	S _{left} = 251.84 in ³	I _y =	1888.83	in ⁴	S _{left} = 251.84 in ³
C _{right} =	7.5000	in	A = 46.1623 in ²	C _{right} =	7.5000	in	A = 46.1623 in ²
C _{left} =	7.5000	in	r _y = 6.3966 in	C _{left} =	7.5000	in	r _y = 6.3966 in



Made By KMW
Checked By ADK

Date 2/2/2012
Date 2/16/2012

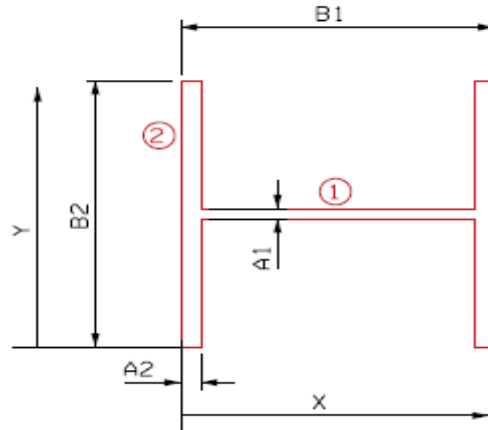
Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Element Dimensions (without Section Losses):

Rolled Beam **WF14x 193**

- $A_1 = t_w = 0.8900$ in
- $A_2 = t_f = 1.4380$ in
- $B_1 = d = 15.5000$ in
- $B_2 = b_f = 15.7100$ in



Member U135-L135

X-Axis Section Properties:

Gross Section (without Losses)			A	y	Ay	I_o	d	Ad^2	$I_{x,gross}$
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web plate		11.2354	7.8550	88.2538	0.7416	0.0000	0.0000	0.7416
2	Flange Plates		45.1820	7.8550	354.9043	929.2577	0.0000	0.0000	929.2577
Total			56.42		443.16	930.00		0.00	930.00
Section Losses			A	y	Ay	I_o	d	Ad^2	$I_{x,loss}$
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	0.0625	15.7100	-0.9819	7.8550	-7.7126	-20.1942	0.0708	-0.0049	-20.1992
2	0.1250	8.0000	-1.0000	11.7100	-11.7100	-5.3333	3.9258	-15.4120	-20.7454
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.98		-19.42	-25.53		-15.42	-40.94

As-Built Section Properties				As-Inspected Section Properties							
y-bar =	7.8550	in	$S_{top} = 118.40$	in^3	y-bar =	7.7842	in	$S_{top} = 112.17$	in^3		
$I_x =$	930.00	in^4	$S_{bott.} = 118.40$	in^3	$I_x =$	889.05	in^4	$S_{bott.} = 114.21$	in^3		
$c_{top} =$	7.8550	in	A =	56.4173	in^2	$c_{top} =$	7.9258	in	A =	54.4354	in^2
$c_{bottom} =$	7.8550	in	$r_x =$	4.0601	in	$c_{bottom} =$	7.7842	in	$r_x =$	4.0413	in



Made By KMW
Checked By ADK

Date 2/2/2012
Date 2/16/2012

Job No. P402110046
Sheet No. _____

Calculations For: **CUY-2-1441**

Y-Axis Section Properties:

Gross Section (without Losses)			A	x	Ax	I _o	d	Ad ²	I _{y,gross}
Element	Description		(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	Web Plate		11.2354	7.7500	87.0740	149.2106	0.0000	0.0000	149.2106
2	Left Flange		22.5910	0.7190	16.2429	3.8929	7.0310	1116.7842	1120.6771
	Right Flange		22.5910	14.7810	333.9173	3.8929	7.0310	1116.7842	1120.6771
Total			56.42		437.23	157.00		2233.57	2390.56
Section Losses			A	x	Ax	I _o	d	Ad ²	I _{y,loss}
Loss #	b (in)	h (in)	(in ²)	(in)	(in ³)	(in ⁴)	(in)	(in ⁴)	(in ⁴)
1	15.7100	0.0625	-0.9819	0.0313	-0.0307	-0.0003	7.7168	-58.4690	-58.4693
2	8.0000	0.1250	-1.0000	15.4375	-15.4375	-0.0013	7.6895	-59.1283	-59.1297
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			-1.98		-15.47	0.00		-117.60	-117.60

As-Built Section Properties				As-Inspected Section Properties			
x-bar =	7.7500	in	S _{right} = 308.46 in ³	x-bar =	7.7480	in	S _{right} = 293.21 in ³
I _y =	2390.56	in ⁴	S _{left} = 308.46 in ³	I _y =	2272.97	in ⁴	S _{left} = 293.36 in ³
C _{right} =	7.7500	in	A = 56.4173 in ²	C _{right} =	7.7520	in	A = 54.4354 in ²
C _{left} =	7.7500	in	r _y = 6.5094 in	C _{left} =	7.7480	in	r _y = 6.4618 in