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Date 6/8/2023
Date 8/16/2023
Date _____

Job: P402180012
CUY-77-11.11
SFN 1806271/2

Bridge No. CUY-77-11.119/11.126 Estimated Quantity Calculations

Item: 202 Ext.: 11203 Unit: LS

Item Description: PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

Member Location : GENERAL

STRUCTURE REMOVED = <u>LS</u>	
GENERAL	LS
TOTAL	LS



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Job: P402180012
CUY-77-11.11
SFN 1806271/2

Bridge No. CUY-77-11.119/11.126 Estimated Quantity Calculations

Item: 503 Ext.: 11101 Unit: LS

Item Description: COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (TEMPORARY WALLS)

Member Location : GENERAL

TEMPORARY WALLS = <u>LS</u>	
GENERAL	LS
TOTAL	LS



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Job: P402180012
 CUY-77-11.11
 SFN 1806271/2

Bridge No. CUY-77-11.119/11.126 Estimated Quantity Calculations

Item: 503 Ext.: 21300 Unit: LS

Item Description: UNCLASSIFIED EXCAVATION

Member Location : GENERAL

Right Rear Bridge	Width (ft)	Length (ft)	Height (ft)	Volume (CY)		
	10.00	53.76	11.60	230.97	231	CY
Right Forward Bridge						
	10.00	53.76	12.20	242.92	243	CY
Right Total				473.89		
Left Rear Bridge	Width (ft)	Length (ft)	Height (ft)	Volume (ft ³)		
	10.00	55.60	11.60	238.89	239	CY
Left Forward Bridge						
	10.00	55.60	12.20	251.25	252	CY
Left Total				490.14		
<p>Note: Paid for as a Lump Sum Item but quantified for cost estimation purposes.</p>						



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CUY-77-11.11
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Bridge No. CUY-77-11.119/11.126 Estimated Quantity Calculations

Item: 507 Ext.: 00400 Unit: FT

Item Description: STEEL PILES, MISC.: SOLDIER PILES W24X103

Member Location : ABUTMENTS

Left Bridge					
LOCATION		PILE NO.	QUANTITY	LENGTH PER PILE (FT)	TOTAL LENGTH (FT)
Left Rear Abut		WDS-23	1	34.2	
Left Rear Abut		WDS-24	1	32.6	
Left Rear Abut		WDS-25	1	31.1	
Left Rear Abut		WDS-26	1	29.6	
Left Rear Abut		WDS-27	1	28.0	
Left Rear Abut		WDS-28	1	27.6	
Left Rear Abut		WDS-29	1	27.7	210.8
Left Forw Abut		WDS-33	1	32.2	
Left Forw Abut		WDS-34	1	29.3	
Left Forw Abut		WDS-35	1	26.4	87.9
211 FT					
Right Bridge					
LOCATION		PILE NO.	QUANTITY	LENGTH PER PILE (FT)	TOTAL LENGTH (FT)
Right Rear Abut		WDS-1	1	32.0	
Right Rear Abut		WDS-2	1	32.3	
Right Rear Abut		WDS-3	1	35.5	
Right Rear Abut		WDS-4	1	38.8	
					138.6
139 FT					
LEFT REAR ABUTMENT					211 FT
LEFT FORWARD ABUTMENT					88 FT
RIGHT REAR ABUTMENT					139 FT
RIGHT FORWARD ABUTMENT					 FT
TOTAL					438 FT



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Bridge No. CUY-77-11.119/11.126 Estimated Quantity Calculations

Item: 507 Ext.: 00400 Unit: FT

Item Description: STEEL PILES, MISC.: SOLDIER PILES W24X162

Member Location : ABUTMENTS

Left Bridge						
LOCATION		PILE NO.	QUANTITY	LENGTH PER PILE (FT)	TOTAL LENGTH (FT)	
Right Bridge						138 FT
LOCATION		PILE NO.	QUANTITY	LENGTH PER PILE (FT)	TOTAL LENGTH (FT)	
Right Forw Abut		WDS-8	1	30.3		
Right Forw Abut		WDS-9	1	32.9		
Right Forw Abut		WDS-10	1	35.5		
Right Forw Abut		WDS-11	1	39.3		
Right Forw Abut					138.0	
LEFT REAR ABUTMENT					FT	
LEFT FORWARD ABUTMENT					FT	
RIGHT REAR ABUTMENT					FT	
RIGHT FORWARD ABUTMENT					138 FT	
TOTAL					138 FT	



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Bridge No. CUY-77-11.119/11.126 Estimated Quantity Calculations

Item: 507 Ext.: 00400 Unit: FT

Item Description: STEEL PILES, MISC.: SOLDIER PILES W30X235

Member Location : ABUTMENTS

Left Bridge						141 FT
LOCATION		PILE NO.	QUANTITY	LENGTH PER PILE (FT)	TOTAL LENGTH (FT)	
Left Forw Abut		WDS-30	1	49.7		
Left Forw Abut		WDS-31	1	46.9		
Left Forw Abut		WDS-32	1	44.1		
Left Forw Abut					140.7	
Right Bridge						
LOCATION		PILE NO.	QUANTITY	LENGTH PER PILE (FT)	TOTAL LENGTH (FT)	
LEFT REAR ABUTMENT						FT
LEFT FORWARD ABUTMENT					141	FT
RIGHT REAR ABUTMENT						FT
RIGHT FORWARD ABUTMENT						FT
TOTAL					141	FT



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Bridge No. CUY-77-11.119/11.126 Estimated Quantity Calculations

Item: 507 Ext.: 00400 Unit: FT

Item Description: STEEL PILES, MISC.: SOLDIER PILES W30X292

Member Location : ABUTMENTS

Left Bridge						282 FT
LOCATION		PILE NO.	QUANTITY	LENGTH PER PILE (FT)	TOTAL LENGTH (FT)	
Left Rear Abut		WDS-17	1	50.1		
Left Rear Abut		WDS-18	1	48.9		
Left Rear Abut		WDS-19	1	47.6		
Left Rear Abut		WDS-20		46.3		
Left Rear Abut		WDS-21		45.0		
Left Rear Abut		WDS-22		43.7	281.6	
Right Bridge						
LOCATION		PILE NO.	QUANTITY	LENGTH PER PILE (FT)	TOTAL LENGTH (FT)	
LEFT REAR ABUTMENT					282	FT
LEFT FORWARD ABUTMENT						FT
RIGHT REAR ABUTMENT						FT
RIGHT FORWARD ABUTMENT						FT
TOTAL					282	FT



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Bridge No. CUY-77-11.119/11.126 Estimated Quantity Calculations

Item: 507 Ext.: 00400 Unit: FT

Item Description: STEEL PILES, MISC.: SOLDIER PILES W33X263

Member Location : ABUTMENTS

Left Bridge						
LOCATION		PILE NO.	QUANTITY	LENGTH PER PILE (FT)	TOTAL LENGTH (FT)	
Right Bridge						105 FT
LOCATION		PILE NO.	QUANTITY	LENGTH PER PILE (FT)	TOTAL LENGTH (FT)	
Right Forw Abut		WDS-12	1	51.2		
Right Forw Abut		WDS-13	1	53.8		
					105.0	
LEFT REAR ABUTMENT						FT
LEFT FORWARD ABUTMENT						FT
RIGHT REAR ABUTMENT						FT
RIGHT FORWARD ABUTMENT					105	FT
TOTAL					105	FT



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Bridge No. CUY-77-11.119/11.126 Estimated Quantity Calculations

Item: 507 Ext.: 00400 Unit: FT

Item Description: STEEL PILES, MISC.: SOLDIER PILES W36X330

Member Location : ABUTMENTS

Left Bridge						163 FT
LOCATION		PILE NO.	QUANTITY	LENGTH PER PILE (FT)	TOTAL LENGTH (FT)	
Left Rear Abut		WDS-14	1	55.2		
Left Rear Abut		WDS-15	1	54.3		
Left Rear Abut		WDS-16	1	53.3		
					162.8	
Right Bridge						160 FT
LOCATION		PILE NO.	QUANTITY	LENGTH PER PILE (FT)	TOTAL LENGTH (FT)	
Right Rear Abut		WDS-5	1	50.0		
Right Rear Abut		WDS-6	1	52.9		
Right Rear Abut		WDS-7	1	56.2		
Right Rear Abut					159.1	
LEFT REAR ABUTMENT					163	FT
LEFT FORWARD ABUTMENT						FT
RIGHT REAR ABUTMENT					160	FT
RIGHT FORWARD ABUTMENT						FT
TOTAL					323	FT



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Bridge No. CUY-77-11.119/11.126 Estimated Quantity Calculations

Item: 509 Ext.: 10000 Unit: LB

Item Description: EPOXY COATED STEEL REINFORCEMENT

Member Location : ABUTMENTS

Location	WEIGHT ABUT (lb)	WEIGHT WW (lb)	WEIGHT TOTAL (lb)
LEFT REAR ABUTMENT	42810	11660	54470
LEFT FORWARD ABUTMENT	42487	3307	45794
RIGHT REAR ABUTMENT	53299	4371	57670
RIGHT FORWARD ABUTMENT	51634	4111	55745

LEFT REAR ABUTMENT	54470	LB
LEFT FORWARD ABUTMENT	45794	LB
RIGHT REAR ABUTMENT	57670	LB
RIGHT FORWARD ABUTMENT	55745	LB
TOTAL	213679	LB



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Bridge No. CUY-77-11.119/11.126 Estimated Quantity Calculations

Item: 511 Ext.: 45603 Unit: CY

Item Description: CLASS QC4 MASS CONCRETE, SUBSTRUCTURE WITH QC/QA, AS PER PLAN

Member Location : ABUTMENTS

Right Rear Bridge	Width (ft)	Length (ft)	Height (ft)	Volume (ft ³)		
Abutment	8.00	51.76	5.09	2106.30		
Bump-outs	3.32	10.00	5.09	169.05		
Left Rear Bridge			Sum	2275.35	85	CY
Abutment	8.00	53.60	5.28	2265.67		
Bump-outs	3.34	10.00	5.28	176.30		
			Sum	2441.97	91	CY
Rear Abutment Total				4717.33	175	CY
Right Forward Bridge	Width (ft)	Length (ft)	Height (ft)	Volume (ft ³)		
Abutment	8.00	51.76	5.09	2106.30		
Bump-outs	3.32	10.00	5.09	169.05		
Left Forward Bridge			Sum	2275.35	85	CY
Abutment	8.00	53.60	5.36	2298.55		
Bump-outs	3.34	10.00	5.36	178.86		
			Sum	2477.41	92	CY
Forward Abutment Total				4752.76	177	CY
LEFT REAR ABUTMENT					91	CY
LEFT FORWARD ABUTMENT					92	CY
RIGHT REAR ABUTMENT					85	CY
RIGHT FORWARD ABUTMENT					85	CY
TOTAL					353	CY



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Bridge No. CUY-77-11.119/11.126 Estimated Quantity Calculations

Item: 511 Ext.: 46013 Unit: CY

Item Description: CLASS QC1 CONCRETE WITH QC/QA, RETAINING/WINGWALL NOT INCLUDING FOOTING, AS PER PLAN

Member Location : ABUTMENTS

Location	Width (ft)	Length (ft)	Height (ft)	Volume (ft ³)		
Right Rear Abutment Facing	1.00	53.09	17.64	936.57		
Right Rear Wingwall Below Recta.	1.00	43.00	8.73	375.18		
Right Rear Wingwall Trapizoid	35.00	1.00	16.40	295.20		
Right Rear Wingwall aesthetic cap	0.17	43.00	0.50	3.58		
Left Rear Abutment Facing	1.00	52.27	18.88	986.87		
Left Rear Wingwall Below Recta.	1.00	110.00	7.46	821.15		
Left Rear Wingwall Trapizoid	93.75	1.00	19.30	914.34		
Left Rear Wingwall aesthetic cap	0.17	110.00	0.50	9.17		
Right Rear Abutment Total				1610.53	60	CY
Left Rear Abutment Total				2731.53	102	CY
Location	Width (ft)	Length (ft)	Height (ft)	Volume (ft ³)		
Right Forw Abutment Facing	1.00	50.43	14.41	726.65		
Right Forw Wingwall Below Recta.	1.00	40.00	7.27	291.00		
Right Forw Wingwall Trapizoid	40.00	1.00	16.40	336.20		
Right Forw Wingwall aesthetic cap	0.17	40.00	0.50	3.33		
Left Forw Abutment Facing	1.00	54.94	15.93	875.15		
Left Forw Wingwall Below Recta.	1.00	34.00	6.92	235.11		
Left Forw Wingwall Trapizoid	34.00	1.00	16.10	281.75		
Left Forw Wingwall aesthetic cap	0.17	34.00	0.50	2.83		
Right Forward Abutment Total				1357.19	51	CY
Left Forward Abutment Total				1394.85	52	CY
LEFT REAR ABUTMENT					102	CY
LEFT FORWARD ABUTMENT					52	CY
RIGHT REAR ABUTMENT					60	CY
RIGHT FORWARD ABUTMENT					51	CY
TOTAL					265	CY



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Bridge No. CUY-77-11.119/11.126 Estimated Quantity Calculations

Item: 511 Ext.: 50213 Unit: CY

Item Description: CLASS QC1 CONCRETE WITH QC/QA, SUBSTRUCTURE, AS PER PLAN

Member Location : ABUTMENTS

Right Rear Abutment	Width (ft)	Length (ft)	Height (ft)	Volume (ft ³)		
Backwall	1.75	50.43	4.89	431.82		
Backwall curbs	1.75	11.31	4.07	80.62		
Bump-outs	3.323	10.00	4.89	162.63		
Towers	6.25	4.00	16.66	416.50		
Cap on top of tower	4.50	6.25	0.79	22.27		
Girder seats	6.50	6.25	1.32	107.25		
Left Rear Abutment			Sum=	1221.09	46	CY
Backwall	1.75	54.94	4.93	473.65		
Backwall curbs	1.75	15.83	3.97	110.09		
Bump-outs	3.323	10.00	4.93	163.73		
Towers	6.25	4.00	16.47	411.75		
Cap on top of tower	4.50	6.25	0.79	22.27		
Girder seats	6.50	6.25	1.32	107.25		
Right Forward Abutment			Sum=	1288.75	48	CY
Backwall	1.75	53.09	4.97	462.09		
Backwall curbs	1.75	11.31	4.07	80.62		
Bump-outs	3.323	10.00	4.97	165.28		
Towers	6.25	4.00	17.46	436.50		
Cap on top of tower	4.50	6.25	0.79	22.27		
Girder seats	6.50	6.25	1.40	114.16		
Left Forward Abutment			Sum=	1280.92	48	CY
Backwall	1.75	50.43	4.89	431.82		
Backwall curbs	1.75	11.31	4.07	80.62		
Bump-outs	3.323	10.00	4.89	162.63		
Towers	6.25	4.00	17.28	432.00		
Cap on top of tower	4.50	6.25	0.79	22.27		
Girder seats	6.50	6.25	1.40	114.16		
			Sum=	1243.49	47	CY
LEFT REAR ABUTMENT					48	CY
LEFT FORWARD ABUTMENT					47	CY
RIGHT REAR ABUTMENT					46	CY
RIGHT FORWARD ABUTMENT					48	CY
TOTAL					189	CY



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Bridge No. CUY-77-11.119/11.126 Estimated Quantity Calculations

Item: 511 Ext.: 71200 Unit: SF

Item Description: CONCRETE, MISC.: MOLDED BRICK SURFACE

Member Location : ABUTMENTS

Right Rear Abut.	Width (ft)	Length (ft)	Height (ft)	Surface (ft ²)		
Abutment Tower-Rear Abut.	4.00	6.25	39.44	808.52		
Minus sides-Rear Abut.	4.00	6.25	-24.34	-401.61		
Minus back-Rear Abut.	4.00	0.00	-6.40	-25.60		
Sum =				381.31	382	SF
Left Rear Abut.	Width (ft)	Length (ft)	Height (ft)	Surface (ft ²)		
Abutment Tower-Rear Abut.	4.00	6.25	40.68	833.94		
Minus sides-Rear Abut.	4.00	6.25	-24.98	-412.17		
Minus back-Rear Abut.	4.00	0.00	-7.21	-28.84		
Sum =				392.93	393	SF
Right Forward Abut.	Width (ft)	Length (ft)	Height (ft)	Surface (ft ²)		
Abutment Tower-Forward Abut.	4.00	6.25	36.26	743.33		
Minus sides-Rear Abut.	4.00	6.25	-22.91	-378.01		
Minus back-Rear Abut.	4.00	0.00	-4.65	-18.60		
Sum =				346.72	347	SF
Left Forward Abut.	Width (ft)	Length (ft)	Height (ft)	Surface (ft ²)		
Abutment Tower-Forward Abut.	4.00	6.25	37.78	774.49		
Minus sides-Rear Abut.	4.00	6.25	-21.73	-358.55		
Minus back-Rear Abut.	4.00	0.00	-7.56	-30.24		
Sum =				385.70	386	SF
LEFT REAR ABUTMENT					393	SF
LEFT FORWARD ABUTMENT					386	SF
RIGHT REAR ABUTMENT					382	SF
RIGHT FORWARD ABUTMENT					347	SF
TOTAL					1508	SF



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Bridge No. CUY-77-11.119/11.126 Estimated Quantity Calculations

Item: 511 Ext.: 71200 Unit: SF

Item Description: CONCRETE, MISC.: STAINING CONCRETE SURFACES

Member Location : ABUTMENTS

Right Rear Abut.	Width (ft)	Length (ft)	Height (ft)	Surface (ft ²)		
Abutment Tower-Rear Abut.	4.00	6.25	39.44	808.52		
Minus sides-Rear Abut.	4.00	6.25	-24.34	-401.61		
Minus back-Rear Abut.	4.00	0.00	-6.40	-25.60		
Sum =				381.31	382	SF
Left Rear Abut.	Width (ft)	Length (ft)	Height (ft)	Surface (ft ²)		
Abutment Tower-Rear Abut.	4.00	6.25	40.68	833.94		
Minus sides-Rear Abut.	4.00	6.25	-24.98	-412.17		
Minus back-Rear Abut.	4.00	0.00	-7.21	-28.84		
Sum =				392.93	393	SF
Right Forward Abut.	Width (ft)	Length (ft)	Height (ft)	Surface (ft ²)		
Abutment Tower-Forward Abut.	4.00	6.25	36.26	743.33		
Minus sides-Rear Abut.	4.00	6.25	-22.91	-378.01		
Minus back-Rear Abut.	4.00	0.00	-4.65	-18.60		
Sum =				346.72	347	SF
Left Forward Abut.	Width (ft)	Length (ft)	Height (ft)	Surface (ft ²)		
Abutment Tower-Forward Abut.	4.00	6.25	37.78	774.49		
Minus sides-Rear Abut.	4.00	6.25	-21.73	-358.55		
Minus back-Rear Abut.	4.00	0.00	-7.56	-30.24		
Sum =				385.70	386	SF
LEFT REAR ABUTMENT					393	SF
LEFT FORWARD ABUTMENT					386	SF
RIGHT REAR ABUTMENT					382	SF
RIGHT FORWARD ABUTMENT					347	SF
TOTAL					1508	SF



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CUY-77-11.11
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Bridge No. CUY-77-11.119/11.126 Estimated Quantity Calculations

Item: 511 Ext.: 81300 Unit: EACH

Item Description: CONCRETE, MISC.: MOCKUP, MOLDED BRICK SURFACES

Member Location : GENERAL

ITEM 511 - CONCRETE, MISC.: MOCKUP, MOLDED BRICK SURFACES	3 EACH
TOTAL	3 EACH



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Bridge No. CUY-77-11.119/11.126 Estimated Quantity Calculations

Item: 512 Ext.: 10051 Unit: SY

Item Description: SEALING OF CONCRETE SURFACES (NON-EPOXY), AS PER PLAN

Member Location : GENERAL

Right Rear Abut.	Width (ft)	Length (ft)	Height (ft)	Surface (ft ²)		
Abutment Tower-Rear Abut.	4.00	6.25	39.44	808.52		
Minus sides-Rear Abut.	4.00	6.25	-24.34	-401.61		
Minus back-Rear Abut.	4.00	0.00	-6.40	-25.60		
Sum =				381.31	43	SY
Left Rear Abut.	Width (ft)	Length (ft)	Height (ft)	Surface (ft ²)		
Abutment Tower-Rear Abut.	4.00	6.25	40.68	833.94		
Minus sides-Rear Abut.	4.00	6.25	-24.98	-412.17		
Minus back-Rear Abut.	4.00	0.00	-7.21	-28.84		
Sum =				392.93	44	SY
Right Forward Abut.	Width (ft)	Length (ft)	Height (ft)	Surface (ft ²)		
Abutment Tower-Forward Abut.	4.00	6.25	36.26	743.33		
Minus sides-Rear Abut.	4.00	6.25	-22.91	-378.01		
Minus back-Rear Abut.	4.00	0.00	-4.65	-18.60		
Sum =				346.72	39	SY
Left Forward Abut.	Width (ft)	Length (ft)	Height (ft)	Surface (ft ²)		
Abutment Tower-Forward Abut.	4.00	6.25	37.78	774.49		
Minus sides-Rear Abut.	4.00	6.25	-21.73	-358.55		
Minus back-Rear Abut.	4.00	0.00	-7.56	-30.24		
Sum =				385.70	43	SY
LEFT REAR ABUTMENT					44	SY
LEFT FORWARD ABUTMENT					43	SY
RIGHT REAR ABUTMENT					43	SY
RIGHT FORWARD ABUTMENT					39	SY
TOTAL					169	SY



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Bridge No. CUY-77-11.119/11.126 Estimated Quantity Calculations

Item: 512 Ext.: 10101 Unit: SY

Item Description: SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN

Member Location : ABUTMENTS

Right Rear Abutment	Width (ft)	Height (ft)	Area (ft ²)		
Abutment - N.F.	53.09	17.64	936.57		
Abutment Seat	51.84	6.25	324.02		
Back Wall	50.43	4.89	246.76		
Backwall curbs	11.31	3.90	44.12		
Cap - N.F.	52.51	5.09	267.10		
Wingwall - Top	1.33	43.00	57.19		
Wingwall - N.F. 1	34.00	16.40	287.00		
Wingwall - N.F. 2	43.00	8.51	187.22		
End of Wingwall	1.00	8.51	8.51		
Pedestal Sides	38.00	1.30	49.40		
Top of Backwall Curbs	1.75	22.60	39.55		
Backside of Backwall Curbs	15.31	3.90	59.72		
End of Backwall Curb (behind tower)	1.75	3.90	6.82		
Total			2513.99	280	SY
Left Rear Abutment	Width (ft)	Height (ft)	Area (ft ²)		
Abutment - N.F.	52.27	18.88	986.87		
Abutment Seat	53.23	6.25	332.71		
Back Wall	54.94	4.93	270.66		
Backwall curbs	15.83	3.90	61.75		
Cap	52.27	5.28	276.16		
Wingwall - Top	1.33	110.00	146.30		
Wingwall - N.F. 1	93.75	19.30	914.34		
Wingwall - N.F. 2	110.00	8.43	467.86		
Wingwall - F.F.	110.11	1.43	157.46		
End of Wingwall	1.00	8.25	8.25		
Pedestal Sides	38.00	1.34	50.92		
Top of Backwall Curbs	1.75	24.90	43.58		
Backside of Backwall Curbs	19.83	3.90	77.35		
End of Backwall Curb (behind tower)	1.75	3.90	6.82		
Total			3801.04	423	SY



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Bridge No. CUY-77-11.119/11.126 Estimated Quantity Calculations

Item: 512 Ext.: 10101 Unit: SY

Item Description: SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN

Member Location : ABUTMENTS

Right Forward Abutment	Width (ft)	Height (ft)	Area (ft ²)		
Abutment - N.F.	50.43	14.41	726.65		
Abutment Seat	51.78	6.25	323.60		
Back Wall	53.09	4.97	264.05		
Backwall curbs	11.31	4.07	46.07		
Cap	50.43	5.09	256.51		
Wingwall - Top	1.33	40.00	53.20		
Wingwall - N.F. 1	40.00	23.44	480.52		
Wingwall - N.F. 2	0.00	0.00	0.00		
Wingwall - F.F.	47.36	1.00	47.36		
End of Wingwall	1.00	7.04	7.04		
Pedestal Sides	38.00	1.46	55.48		
Top of Backwall Curbs	1.75	22.45	39.29		
Backside of Backwall Curbs	17.99	4.07	73.26		
End of Backwall Curb (behind tower)	1.75	4.07	7.13		
Total			2380.17		265 SY
Left Forward Abutment	Width (ft)	Height (ft)	Area (ft ²)		
Abutment - N.F.	54.94	15.93	875.15		
Abutment Seat	53.98	6.25	337.35		
Back Wall	52.27	4.89	255.78		
Backwall curbs	11.31	4.07	46.07		
Cap	54.94	5.36	294.47		
Wingwall - Top	1.33	34.00	45.22		
Wingwall - N.F. 1	34.00	23.30	407.75		
Wingwall - N.F. 2	0.00	0.00	0.00		
Wingwall - F.F.	42.22	1.00	42.22		
End of Wingwall	1.00	7.20	7.20		
Pedestal Sides	38.00	1.43	54.34		
Top of Backwall Curbs	1.75	24.50	42.88		
Backside of Backwall Curbs	17.16	4.07	69.87		
End of Backwall Curb (behind tower)	1.75	4.07	7.13		
Total			2485.41		277 SY
				LEFT REAR ABUTMENT	423 SY
				LEFT FORWARD ABUTMENT	277 SY
				RIGHT REAR ABUTMENT	280 SY
				RIGHT FORWARD ABUTMENT	265 SY
				TOTAL	1245 SY



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Bridge No. CUY-77-11.119/11.126 Estimated Quantity Calculations

Item: SPECIAL Ext.: 51267200 Unit: SY

Item Description: WATERPROOFING: COLD LIQUID-APPLIED ELASTOMERIC MEMBRANE WATERPROOFING

Member Location : Superstructure

Location	Width (ft)	Length (ft)	Area (ft ²)		
Deck (Right)	33.25	153.96	5119.17		
Curb Right Side (Right)	3.11	153.96	478.82		
Curb Left Side (Right)	3.11	153.96	478.82		
			Total	6076.80	
676 SY					
Deck (Left)	33.25	153.96	5119.17		
Curb Right Side (Left)	3.11	153.96	478.82		
Curb Left Side (Left)	3.11	153.96	478.82		
			Total	6076.80	
676 SY					
				Left Bridge	676 SY
				Right Bridge	676 SY
				TOTAL	1352 SY



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Bridge No. CUY-77-11.119/11.126 Estimated Quantity Calculations

Item: SPECIAL Ext.: 51267200 Unit: SY

Item Description: WATERPROOFING: SLOPED WATERPROOFING

Member Location : Superstructure

Location	Width (ft)	Length (ft)	Area (ft ²)		
Deck (Right)	33.25	153.96	5119.17		
Total			5119.17	569	SY
Deck (Left)	33.25	153.96	5119.17		
Total			5119.17	569	SY
				Left Bridge	569 SY
				Right Bridge	569 SY
				TOTAL	1138 SY



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Bridge No. CUY-77-11.119/11.126 Estimated Quantity Calculations

Item: 513 Ext.: 10321 Unit: LB

Item Description: STRUCTURAL STEEL MEMBERS, LEVEL 6, AS PER PLAN

Member Location : SUPERSTRUCTURE

Summary		
Superstructure (Left Bridge)	1443452	LB
Superstructure (Right Bridge)	1443452	LB
Rear Abutment (Left Bridge)	2147	LB
Forward Abutment (Right Bridge)	2147	LB
Rear Abutment (Left Bridge)	2147	LB
Forward Abutment (Right Bridge)	2147	LB

Superstructure (Left Bridge)	1443452	LB
Superstructure (Right Bridge)	1443452	LB
Rear Abutment (Left Bridge)	2147	LB
Forward Abutment (Left Bridge)	2147	LB
Rear Abutment (Right Bridge)	2147	LB
Forward Abutment (Right Bridge)	2147	LB
TOTAL	2895490	LB



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Bridge No. CUY-77-11.119/11.126 Estimated Quantity Calculations

Item: 513 Ext.: 10321 Unit: LB
 Item Description: STRUCTURAL STEEL MEMBERS, LEVEL 6, AS PER PLAN
 Member Location : SUPERSTRUCTURE

Girder 1 OR 3	Quantity	Length (ft)	Area (ft)	(lb)	Right Bridge	Left Bridge
Web (1 3/8x163.75)	1	148.33	1.564	113646.57		
Top Flange (2 3/4x39) Sec 1 & 3	1	71.42	0.745	26063.36		
Top Flange (3 3/4x39) Sec 2	1	72.00	1.016	35831.25		
Bottom Flange (2PL 1 3/8X39) Sec 1	2	37.74	0.372	13772.98		
Bottom Flange (2L 8X8X1) Sec 1	2	37.61	51.0 PLF	3836.69		
Bottom Flange (2PL 1 3/8X39) Sec 2	2	71.98	0.372	26268.65		
Bottom Flange (2L 8X8X1) Sec 2	2	71.98	51.0 PLF	7341.88		
Bottom Flange (PL 1 1/4X39) Sec 2	1	71.98	0.339	11940.29		
Bottom Flange (2PL 1 3/8X39) Sec 3	2	38.74	0.372	14137.93		
Bottom Flange (2L 8X8X1) Sec 3	2	38.74	51.0 PLF	3951.44		
Total Girder 1 OR 3				256791.04	256792	LB
Total Girder 2 OR 4				256791.04	256792	LB
End Plates	Quantity	Thickness (ft)	Area (ft)	(lb)		
1x39	4	0.083	46.922	7663.91		
Total				7663.91	7664	LB
Intermediate Stiffeners	Quantity	Thickness (ft)	Area (ft)	(lb)		
Short (0.75x12x117.5)	48	0.063	9.792	14393.75		
Total				14393.75	14394	LB
Intermediate Stiffeners	Quantity	Thickness (ft)	Area (ft)	(lb)		
Tall (0.75x12x155.5)	48	0.063	12.958	19048.75		
Total				19048.75	19049	LB
Bearing Stiffeners	Quantity	Thickness (ft)	Area (ft)	(lb)		
2x18.5x164	16	0.167	21.069	27530.74		
Total				27530.74	27531	LB
Stiffener Conn. Angles at Splice	Quantity	Length (ft)	(lb/ft)	(lb)		
L8x6x3/4	16	0.89	33.8 PLF	478.83		
Total				478.83	479	LB
Short Conn. Angles on bottom flange	Quantity	Length (ft)	(lb/ft)	(lb)		
L6x4x1/2	5	0.50	16.2 PLF	40.50		
L6x6x1/2	4	0.50	19.6 PLF	39.20		
Total				39.20	40	LB



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Bridge No. CUY-77-11.119/11.126 Estimated Quantity Calculations

Item: 513 Ext.: 10321 Unit: LB
 Item Description: STRUCTURAL STEEL MEMBERS, LEVEL 6, AS PER PLAN
 Member Location : SUPERSTRUCTURE

Floor Beams - W36x231	Quantity	Length (ft)	(lb)			
Full Length Floor Beams	44	38.672	393060.94			
Short Floor Beam 1	2	26.759	12362.45			
Short Floor Beam 2	2	19.259	8897.45			
Short Floor Beam 3	2	11.759	5432.45			
Short Floor Beam 4	2	5.189	2397.11			
Transverse Beam 1	2	4.640	2143.68			
Transverse Beam 2	2	4.360	2014.32			
Transverse Beam 3	2	4.090	1889.58			
Transverse Beam 4	2	3.480	1607.76			
Total			429805.72			429806 LB
Floor Beam - Connections	Quantity	L8x8x1/2 (ft)	(lb)			
TPG Connections	192	2.19	11088.00			
FB to Transverse Beam	16	2.33	985.60			
Transverse Beam to FB	16	L5x5x1/2 (ft)				
		2.33	604.80			
Total			12678.40			12679 LB
FB at End FB - Connections	Quantity	Thickness (ft)	Area (ft)	(lb)		
Transverse Beams - Plates	16	0.031	1.780	435.98		
Total				435.98		436 LB
FB at End FB - Connections	Quantity	Thickness (ft)	Area (ft)	(lb)		
Short Floor Beams - Bent Plates	16	0.042	4.736	1547.13		
Total				1547.13		1548 LB
End Floor Beam - Plate Girder	Quantity	Length (ft)	Area (ft)	(lb)		
Web PL (1 3/8x32)	2	37.667	0.306	11279.07		
Flange (2 1/4x22)	4	37.667	0.344	25377.92		
Total				36656.99		36657 LB
End Floor Beam - Connections	Quantity	Thickness (ft)	Area (ft)	(lb)		
Bent Plate at TPG	8	0.125	6.62	3243.70		
3/8" Shim Plate	8	0.031	3.04	372.50		
Total				3616.20		3617 LB
End FB Jacking/Bearing Stiff	Quantity	Thickness (ft)	Area (ft)	(lb)		
Jacking (1x10x32)	20	0.083	2.222	1814.81		
Total				1814.81		1815 LB



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Bridge No. CUY-77-11.119/11.126 Estimated Quantity Calculations

Item: 513 Ext.: 10321 Unit: LB
 Item Description: STRUCTURAL STEEL MEMBERS, LEVEL 6, AS PER PLAN
 Member Location : SUPERSTRUCTURE

Diaphragm - W30x90	Quantity	W30x90 (ft)	(lb)			
Diaphragms 3'-0"	82	2.79	20620.95			
Diaphragms 2'-6"	8	2.29	1651.80			
Total			22272.75			22273 LB
Diaphragm - Connections	Quantity	L6x6x1/2 (ft)	(lb)			
Diaphragms	360	1.83	12936.00			
Total			12936.00			12936 LB
Knee Brace	Quantity	Thickness (ft)	Area (ft)	(lb)		
3/4"x16.5" Base PL	28	0.063	3.55	3045.91		
3/4"x12" Flange PL	28	0.063	10.59	9082.35		
1/2" Web PL-Bottom Half	28	0.042	4.431	2532.80		
1/2" Web PL-Top Half	28	0.042	9.538	5452.42		
Total			20113.49			20114 LB
Conduit Hanger Support-Angles	Quantity	L3x3x3/8 (ft)	(lb)			
L3x3x3/8	13	1.46	136.50			
Total			136.50			137 LB
Conduit Hanger Support-Plates	Quantity	Thickness (ft)	Area (ft)	(lb)		
Connection Plates 6x4x1/2	13	0.042	0.17	44.24		
Total			44.24			45 LB
Conduit Hanger Support-Rods	Quantity	Length (ft)	Area (ft)	(lb)		
5/8" dia. Rods	26	1.500	0.002	40.71		
Total			40.71			41 LB



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Bridge No. CUY-77-11.119/11.126 Estimated Quantity Calculations

Item: 513 Ext.: 10321 Unit: LB
 Item Description: STRUCTURAL STEEL MEMBERS, LEVEL 6, AS PER PLAN
 Member Location : SUPERSTRUCTURE

Abutment Plate	Quantity	Thickness (ft)	Area (ft)	(lb)	Abutment	
Rear Abutment (3/4x19x35.2')	1	0.063	55.733	1706.83	1707	LB
Forward Abutment (3/4x19x35.2')	1	0.063	55.733	1706.83	1707	LB
Total				3413.67		
Stop Plate	Quantity	Thickness (ft)	Area (ft)	(lb)		
Rear Abutment (1/2x3.71 x 35.2')	1	0.042	10.961	223.78		
Forward Abutment (1/2x3.71 x 35.2')	1	0.042	10.961	223.78		
Total				447.56	448	LB
Abutment Top Plate	Quantity	Thickness (ft)	Area (ft)	(lb)		
1/2" x 19"	4	0.042	3.750	306.25		
Total				306.25	307	LB
Abutment Curb Plate	Quantity	Thickness (ft)	Area (ft)	(lb)		
1/2" x 4'	4	0.042	7.000	571.67		
Total				571.67	572	LB



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Item: 513 Ext.: 10321 Unit: LB
 Item Description: STRUCTURAL STEEL MEMBERS, LEVEL 6, AS PER PLAN
 Member Location : SUPERSTRUCTURE

3/4" Bolts	Quantity	Length (in)	Wt/100 (lb)	(lb)
Ballast Curb PL to Top PL	650	3	75.7	492.1
Top PL to Conn. Angle	650	3	75.7	492.1
Conn. Angle to TPG	650	4	88.1	572.7

1" Bolts	Quantity	Length (in)	Wt/100 (lb)	(lb)
Diaphragm to FB	2548	4	171.4	4367.3
FB to TPG Web	3648	4	171.4	6252.7
FB to Trans Beam	216	4	171.4	370.2
Trans Beam to FB	216	4	171.4	370.2
Trans Beam to End FB	128	4	171.4	219.4
Knee Brace	1064	4	171.4	1823.7
Bottom Flange Splice	1472	10	304.6	4483.7
Angle Splice to Web	184	8	260.4	479.1
Stiffener at Splice	72	4	171.4	123.4
Bottom Flange to Web	982	6	216.4	2125.0
Bot Flange (not in splice)	3820	7	238.4	9106.9

1 1/8" Bolts	Quantity	Length (in)	Wt/100 (lb)	(lb)
Knee Brace	896	4	227.3	2036.6
Web Splice	1088	6	218.3	2375.1
Top Flange Splice	1080	10	395.3	4269.2
End FB to TPG	144	8	339.3	488.6

Total	40447.96
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40448 LB



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Bridge No. CUY-77-11.119/11.126 Estimated Quantity Calculations

Item: 513 Ext.: 20000 Unit: EACH

Item Description: WELDED STUD SHEAR CONNECTORS

Member Location : Superstructure

	Count Rows	Count long	Count Loc.	Count Stud	
Right Rear Abutment					
Abutment Plate	3.00	25.00	1.00	75.00	
Abutment Curb Plate	6.00	3.00	2.00	36.00	
Total				111.00	111
Left Rear Abutment					
Abutment Plate	3.00	25.00	1.00	75.00	
Abutment Curb Plate	6.00	3.00	2.00	36.00	
Total				111.00	111
Right Forward Abutment					
Abutment Plate	3.00	25.00	1.00	75.00	
Abutment Curb Plate	6.00	3.00	2.00	36.00	
Total				111.00	111
Left Forward Abutment					
Abutment Plate	3.00	25.00	1.00	75.00	
Abutment Curb Plate	6.00	3.00	2.00	36.00	
Total				111.00	111
LEFT REAR ABUTMENT					111 EACH
LEFT FORWARD ABUTMENT					111 EACH
RIGHT REAR ABUTMENT					111 EACH
RIGHT FORWARD ABUTMENT					111 EACH
TOTAL					444 EACH



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Bridge No. CUY-77-11.119/11.126 Estimated Quantity Calculations

Item: 513 Ext.: 20001 Unit: EACH
 Item Description: WELDED STUD SHEAR CONNECTORS, AS PER PLAN
 Member Location : Superstructure

	Drilled Shaft			Count Stud		
Right Rear Abutment						
Wingwall	DS-1 to 7			144.00		
Abutment				519.00		
Total				663.00	663	
Left Rear Abutment						
Wingwall	DS-14 to 29			350.00		
Abutment				535.00		
Total				885.00	885	
Right Forward Abutment						
Wingwall	DS-8 to 13			120.00		
Abutment				426.00		
Total				546.00	546	
Left Forward Abutment						
Wingwall	DS-30 to 35			120.00		
Abutment				448.00		
Total				568.00	568	
LEFT REAR ABUTMENT					885	EACH
LEFT FORWARD ABUTMENT					568	EACH
RIGHT REAR ABUTMENT					663	EACH
RIGHT FORWARD ABUTMENT					546	EACH
TOTAL					2662	EACH



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Bridge No. CUY-77-11.119/11.126 Estimated Quantity Calculations

Item: 513 Ext.: 90000 Unit: LB

Item Description: STRUCTURAL STEEL, MISC.: TEMPORARY BALLAST RETAINER

Member Location : General

Steel 490 lb/ft ³				
	Area (ft ²)	Length (ft)	Count	Weight (lbs)
1/2" Bent Plate	0.19	106.00	1	9738.75
3/8" Stiffener	2.22	0.03	42	1429.17
	W (lbs/ft)	Length (ft)	Count	Weight (lbs)
L4x4x1/2 Post	12.80	5.55	12	852.80
Handrail Pipe	2.72	107.67	2	585.71
Handrail Pipe Splice	3.66	0.58	20	42.70
Neg. weight Handrail	Area (ft ²)	thicknes (ft)	Count	Weight (lbs)
Clip	0.02	0.04	-12	-3.83
Total				12645
TOTAL				12646 LB



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Bridge No. CUY-77-11.119/11.126 Estimated Quantity Calculations

Item: 514 Ext.: 00800 Unit: LB

Item Description: FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT

Member Location : Superstructure

SEE STRUCTURAL STEEL MEMBERS 513E10321 FOR CALCULATIONS

Summary		
Deck Plate and 1/2" Thick Plate	414298	LB
THROUGH GIRDERS INCLUDING BEARING AND INTERMEDIATE STIFFENERS, END FLOOR BEAM TO GIRDER CONNECTION, AND FLOOR BEAM TO END FLOOR BEAM CONNECTION.	2472606	LB

Superstructure (Left Bridge)	1443452	LB
Superstructure (Right Bridge)	1443452	LB
Rear Abutment (Left Bridge)	2147	LB
Forward Abutment (Left Bridge)	2147	LB
Rear Abutment (Right Bridge)	2147	LB
Forward Abutment (Right Bridge)	2147	LB
TOTAL	2895490	LB



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Bridge No. CUY-77-11.119/11.126 Estimated Quantity Calculations

Item: 514 Ext.: 00850 Unit: LB

Item Description: FIELD PAINTING STRUCTURAL STEEL, FINISH COAT

Member Location : Superstructure

SEE STRUCTURAL STEEL MEMBERS 513E10321 FOR CALCULATIONS

Summary		
Deck Plate and 1/2" Thick Plate	414298	LB
THROUGH GIRDERS INCLUDING BEARING AND INTERMEDIATE STIFFENERS, END FLOOR BEAM TO GIRDER CONNECTION, AND FLOOR BEAM TO END FLOOR BEAM CONNECTION.	2472606	LB

Superstructure (Left Bridge)	1443452	LB
Superstructure (Right Bridge)	1443452	LB
Rear Abutment (Left Bridge)	2147	LB
Forward Abutment (Left Bridge)	2147	LB
Rear Abutment (Right Bridge)	2147	LB
Forward Abutment (Right Bridge)	2147	LB
TOTAL	2895490	LB



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Bridge No. CUY-77-11.119/11.126 Estimated Quantity Calculations

Item: 514 Ext.: 10000 Unit: EACH

Item Description: FINAL INSPECTION REPAIR

Member Location : Superstructure

514.21 Final Inspection

- 1 Sample per 300 linear feet of beam line for webs and flanges
- 2.5% of all cross frame assemblies and other secondary members
- Or 1 sample for every 2400 SF for other types of bridges

Left Bridge

No. Samples

Left Beam

L,web =	154	ft	1
L,tf =	154	ft	1
L,bf =	154	ft	1

Right Beam

L,web =	154	ft	1
L,tf =	154	ft	1
L,bf =	154	ft	1

Floorbeams

L =	1817.10	ft	6
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Right Bridge

No. Samples

Same as Left Bridge 12

Superstructure (Left Bridge)	12	EACH
Superstructure (Right Bridge)	12	EACH
Rear Abutment (Left Bridge)		
Forward Abutment (Left Bridge)		
Rear Abutment (Right Bridge)		
Forward Abutment (Right Bridge)		
TOTAL	24	EACH



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Bridge No. CUY-77-11.119/11.126 Estimated Quantity Calculations

Item: 516 Ext.: 13900 Unit: SF

Item Description: 2" PREFORMED EXPANSION JOINT FILLER

Member Location : Abutments

Location	Width (ft)	Height (ft)	Area (ft ²)		
Abutment & Wingwall (Right Rear)	1.00	25.34	25.34	26	SF
Abutment & Wingwall (Left Rear)	1.00	25.98	25.98	26	SF
Abutment & Wingwall (Right Forw.)	1.00	23.91	23.91	24	SF
Abutment & Wingwall (Left Forw.)	1.00	22.73	22.73	23	SF
			Total	97.96	
				LEFT REAR ABUTMENT	26 SF
				LEFT FORWARD ABUTMENT	23 SF
				RIGHT REAR ABUTMENT	26 SF
				RIGHT FORWARD ABUTMENT	24 SF
				TOTAL	99 SF



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Job: P402180012
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 SFN 1806271/2

Bridge No. CUY-77-11.119/11.126 Estimated Quantity Calculations

Item: 518 Ext.: 20000 Unit: SY

Item Description: PREFABRICATED GEOCOMPOSITE DRAIN

Member Location : Abutments

Location (Right Rear)	Width (ft)	Neg.W (ft)	Length (ft)	Area (ft ²)		
Abutment	53.09	8.00	17.64	795.45		
Wingwall 1	43.00	7.00	7.23	260.10		
Wingwall 2	17.00	1.00	14.90	238.40		
Total				1293.95	144	SY
Location (Left Rear)	Width (ft)	Neg.W (ft)	Length (ft)	Area (ft ²)		
Abutment	52.27	8.00	18.26	808.39		
Wingwall 1	110.00	17.00	4.46	415.24		
Wingwall 2	50.50	1.00	19.30	955.35		
Total				2178.98	243	SY
Location (Right Forward)	Width (ft)	Neg.W (ft)	Length (ft)	Area (ft ²)		
Abutment	50.43	8.00	14.41	611.37		
Wingwall 1	40.00	7.00	5.77	190.57		
Wingwall 2	19.50	1.00	14.90	275.65		
Total				1077.60	120	SY
Location (Left Forward)	Width (ft)	Neg.W (ft)	Length (ft)	Area (ft ²)		
Abutment	54.94	8.00	16.22	761.09		
Wingwall 1	34.00	6.00	5.42	151.62		
Wingwall 2	17.00	1.00	16.10	257.60		
Total				1170.31	131	SY
LEFT REAR ABUTMENT					243	SY
LEFT FORWARD ABUTMENT					131	SY
RIGHT REAR ABUTMENT					144	SY
RIGHT FORWARD ABUTMENT					120	SY
TOTAL					638	SY



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Bridge No. CUY-77-11.119/11.126 Estimated Quantity Calculations

Item: 518 Ext.: 21201 Unit: CY

Item Description: POROUS BACKFILL WITH GEOTEXTILE FABRIC, AS PER PLAN

Member Location : Abutments

Right Rear Abutment	Width (ft)	Height (ft)	Depth (ft)	Volume (ft ³)		
Abutment Backwall	55.81	9.48	2.00	1058.10		
Abutment Facing	53.09	2.00	1.00	106.19		
Wingwall	43.00	2.00	1.00	86.00		
Total				1250.29	47	CY
Left Rear Abutment	Width (ft)	Height (ft)	Depth (ft)	Volume (ft ³)		
Abutment Backwall	60.32	9.71	2.00	1171.37		
Abutment Facing	52.27	2.00	1.00	104.54		
Wingwall	110.00	2.00	1.00	220.00		
Total				1495.91	56	CY
Right Forward Abutment	Width (ft)	Height (ft)	Depth (ft)	Volume (ft ³)		
Abutment Backwall	58.47	9.56	2.00	1118.02		
Abutment Facing	50.43	2.00	1.00	100.85		
Wingwall	40.00	2.00	1.00	80.00		
Total				1298.87	49	CY
Left Forward Abutment	Width (ft)	Height (ft)	Depth (ft)	Volume (ft ³)		
Abutment Backwall	57.65	9.75	2.00	1124.58		
Abutment Facing	54.94	2.00	1.00	109.88		
Wingwall	34.00	2.00	1.00	68.00		
Total				1302.45	49	CY
LEFT REAR ABUTMENT					56	CY
LEFT FORWARD ABUTMENT					49	CY
RIGHT REAR ABUTMENT					47	CY
RIGHT FORWARD ABUTMENT					49	CY
TOTAL					201	CY



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Bridge No. CUY-77-11.119/11.126 Estimated Quantity Calculations

Item: 518 Ext.: 40000 Unit: FT

Item Description: 6" PERFORATED CORRUGATED PLASTIC PIPE

Member Location : Abutments

Right Rear Abutment				Length (ft)		
Abutment				53.09		
Wingwall				43.17		
Total				96.26	97	FT
Left Rear Abutment				Length (ft)		
Abutment				52.27		
				0.00		
Wingwall				110.17		
Total				162.44	163	FT
Right Forward Abutment				Length (ft)		
Abutment				50.43		
				0.00		
Wingwall				40.17		
Total				90.59	91	FT
Left Forward Abutment				Length (ft)		
Abutment				54.94		
				0.00		
Wingwall				34.17		
Total				89.10	90	FT
LEFT REAR ABUTMENT					163	FT
LEFT FORWARD ABUTMENT					90	FT
RIGHT REAR ABUTMENT					97	FT
RIGHT FORWARD ABUTMENT					91	FT
TOTAL					441	FT



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Bridge No. CUY-77-11.119/11.126 Estimated Quantity Calculations

Item: 518 Ext.: 40011 Unit: FT

Item Description: 6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS, AS PER PLAN

Member Location : Abutments

Right Rear Abutment				Length (ft)		
Wingwall						
Total				0.00	0	FT
Left Rear Abutment				Length (ft)		
Wingwall				95.00		
Total				95.00	95	FT
Right Forward Abutment				Length (ft)		
Wingwall						
Total				0.00	0	FT
Left Forward Abutment				Length (ft)		
Wingwall				27.50		
Total				27.50	28	FT
LEFT REAR ABUTMENT					95	FT
LEFT FORWARD ABUTMENT					28	FT
RIGHT REAR ABUTMENT						FT
RIGHT FORWARD ABUTMENT						FT
TOTAL					123	FT



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Bridge No. CUY-77-11.119/11.126 Estimated Quantity Calculations

Item: 518 Ext.: 42201 Unit: FT

Item Description: 8" PERFORATED CORRUGATED STEEL PIPE, 707.01, AS PER PLAN

Member Location : Abutments

Right Rear Abutment				Length (ft)		
Abutment Backwall				56.00		
Total				56.00	56	FT
Left Rear Abutment				Length (ft)		
Abutment Backwall				61.00		
Total				61.00	61	FT
Right Forward Abutment				Length (ft)		
Abutment Backwall				59.00		
Total				59.00	59	FT
Left Forward Abutment				Length (ft)		
Abutment Backwall				57.00		
Total				57.00	57	FT
LEFT REAR ABUTMENT					61	FT
LEFT FORWARD ABUTMENT					57	FT
RIGHT REAR ABUTMENT					56	FT
RIGHT FORWARD ABUTMENT					59	FT
TOTAL					233	FT



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Job: P402180012
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Bridge No. CUY-77-11.119/11.126 Estimated Quantity Calculations

Item: 518 Ext.: 42301 Unit: FT

Item Description: 8" NON-PERFORATED CORRUGATED STEEL PIPE, INCLUDING SPECIALS, 707.01, AS PER PLAN

Member Location : Abutments

Right Rear Abutment				Length (ft)		
Abutment Backwall				68.00		
Total				68.00	68	FT
Left Rear Abutment				Length (ft)		
Abutment Backwall				195.00		
Total				195.00	195	FT
Right Forward Abutment				Length (ft)		
Abutment Backwall				114.21		
Total				114.21	115	FT
Left Forward Abutment				Length (ft)		
Abutment Backwall				138.80		
Total				138.80	139	FT
					LEFT REAR ABUTMENT	195 FT
					LEFT FORWARD ABUTMENT	139 FT
					RIGHT REAR ABUTMENT	68 FT
					RIGHT FORWARD ABUTMENT	115 FT
					TOTAL	517 FT



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Bridge No. CUY-77-11.119/11.126 Estimated Quantity Calculations

Item: 518 Ext.: 62100 Unit: FT

STRUCTURE DRAINAGE, MISC.: 8" DIA. PERFORATED HALF-ROUND 12 GAGE, GALVANIZED AND

Item Description: BITUMINOUS COATED CORRUGATED STEEL DRAIN WITH PAN

Member Location : Superstructure

Location	Length (ft)
Right Bridge	311.92
Left Bridge	311.92
Total	623.84

312 FT
312 FT

Right Bridge 312 FT
Left Bridge 312 FT
TOTAL 624 FT



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Bridge No. CUY-77-11.119/11.126 Estimated Quantity Calculations

Item: 524 Ext.: 94703 Unit: FT

Item Description: DRILLED SHAFTS, 36" DIAMETER, ABOVE BEDROCK, AS PER PLAN

Member Location : Abutments

			Count	Length (ft)		
Right Rear Abutment						
Wingwall			4.00	153.30		
				Total	153.30	154 FT
Left Rear Abutment						
Wingwall			8.00	203.90		
				Total	203.90	204 FT
Right Forward Abutment						
Wingwall			5.00	139.90		
				Total	139.90	140 FT
Left Forward Abutment						
Wingwall			3.00	88.50		
				Total	88.50	89 FT
					LEFT REAR ABUTMENT	204 FT
					LEFT FORWARD ABUTMENT	89 FT
					RIGHT REAR ABUTMENT	154 FT
					RIGHT FORWARD ABUTMENT	140 FT
					TOTAL	587 FT



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Bridge No. CUY-77-11.119/11.126 Estimated Quantity Calculations

Item: 524 Ext.: 94803 Unit: FT

Item Description: DRILLED SHAFTS, 42" DIAMETER, ABOVE BEDROCK, AS PER PLAN

Member Location : Abutments

			Count	Length (ft)		
Right Rear Abutment						
Wingwall						
				Total	0.00	0 FT
Left Rear Abutment						
Wingwall			6.00	299.70		
				Total	299.70	300 FT
Right Forward Abutment						
Wingwall						
				Total	0.00	0 FT
Left Forward Abutment						
Wingwall			3.00	132.70		
				Total	132.70	133 FT
					LEFT REAR ABUTMENT	300 FT
					LEFT FORWARD ABUTMENT	133 FT
					RIGHT REAR ABUTMENT	0 FT
					RIGHT FORWARD ABUTMENT	0 FT
					TOTAL	433 FT



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Bridge No. CUY-77-11.119/11.126 Estimated Quantity Calculations

Item: 524 Ext.: 94903 Unit: FT

Item Description: DRILLED SHAFTS, 48" DIAMETER ABOVE BEDROCK, AS PER PLAN

Member Location : Abutments

			Count	Length (ft)		
Right Rear Abutment						
Wingwall			3.00	172.80		
				Total	172.80	173 FT
Left Rear Abutment						
Wingwall			3.00	184.00		
				Total	184.00	184 FT
Right Forward Abutment						
Wingwall			2.00	114.10		
				Total	114.10	115 FT
Left Forward Abutment						
Wingwall						
				Total	0.00	0 FT
					LEFT REAR ABUTMENT	184 FT
					LEFT FORWARD ABUTMENT	0 FT
					RIGHT REAR ABUTMENT	173 FT
					RIGHT FORWARD ABUTMENT	115 FT
					TOTAL	472 FT



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Bridge No. CUY-77-11.119/11.126 Estimated Quantity Calculations

Item: 524 Ext.: 95000 Unit: FT

Item Description: DRILLED SHAFTS, MISC.: DEMONSTRATION DRILLED SHAFT

Member Location : General

	Length (ft)	Count	Length (ft)	
DEMONSTRATION DRILLED SHAFT	92.00	3.00	276.00	276 FT
DEMONSTRATION DRILLED SHAFT				276 FT
TOTAL				276 FT



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Bridge No. CUY-77-11.119/11.126 Estimated Quantity Calculations

Item: SPECIAL Ext.: 53000200 Unit: LS

Item Description: STRUCTURES, TIMBER LAGGING SYSTEM

Member Location : Abutment

STRUCTURES, TIMBER LAGGING SYSTEM = LS

LEFT REAR ABUTMENT	LS
LEFT FORWARD ABUTMENT	LS
RIGHT REAR ABUTMENT	LS
RIGHT FORWARD ABUTMENT	LS
TOTAL	LS



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Bridge No. CUY-77-11.119/11.126 Estimated Quantity Calculations

Item: SPECIAL Ext.: 53000200 Unit: LS

Item Description: STRUCTURES SURVEY AND MONITORING OF TRACK AND TEMPORARY WALLS

Member Location : GENERAL

LEFT BRIDGE	LS	
LEFT REAR ABUTMENT	LS	
LEFT FORWARD ABUTMENT	LS	
GENERAL	LS	
RIGHT BRIDGE	LS	
RIGHT REAR ABUTMENT	LS	
RIGHT FORWARD ABUTMENT	LS	
GENERAL	LS	
		LEFT BRIDGE
		RIGHT BRIDGE
		TOTAL
		LS
		LS
		LS



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Bridge No. CUY-77-11.119/11.126 Estimated Quantity Calculations

Item: SPECIAL Ext.: 53051020 Unit: SF

Item Description: RETAINING WALL, TIMBER LAGGING

Member Location : Abutments

	Count Piles	Length (ft)	Height (ft)	Area (ft ²)		
Right Rear Abutment						
Wingwall 1	7.00	37.40	7.01	262.17		
Wingwall 2	6.00	29.20	14.90	224.99		
Total				487.16	488	SF
Left Rear Abutment						
Wingwall 1	16.00	97.20	5.25	510.30		
Wingwall 2	14.00	89.80	19.30	876.22		
Total				1386.52	1387	SF
Right Forward Abutment						
Wingwall 1	6.00	35.20	5.54	195.01		
Wingwall 2	6.00	34.20	14.90	262.24		
Total				457.25	458	SF
Left Forward Abutment						
Wingwall 1	6.00	29.20	5.70	166.44		
Wingwall 2	6.00	28.20	14.60	213.16		
Total				379.60	380	SF
LEFT REAR ABUTMENT					1387	SF
LEFT FORWARD ABUTMENT					380	SF
RIGHT REAR ABUTMENT					488	SF
RIGHT FORWARD ABUTMENT					458	SF
TOTAL					2713	SF



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Bridge No. CUY-77-11.119/11.126 Estimated Quantity Calculations

Item: 601 Ext.: 20000 Unit: SY

Item Description: CRUSHED AGGREGATE SLOPE PROTECTION

Member Location : ABUTMENTS

LEFT REAR ABUTMENT	121	SY
LEFT FORWARD ABUTMENT	129	SY
RIGHT REAR ABUTMENT	129	SY
RIGHT FORWARD ABUTMENT	119	SY

LEFT REAR ABUTMENT	121	SY
LEFT FORWARD ABUTMENT	129	SY
RIGHT REAR ABUTMENT	129	SY
RIGHT FORWARD ABUTMENT	119	SY
TOTAL	498	SY



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Bridge No. CUY-77-11.119/11.126 Estimated Quantity Calculations

Item: SPECIAL Ext.: 69091000 Unit: LS

Item Description: AS-BUILT CONSTRUCTION PLANS

Member Location : GENERAL

AS-BUILT CONSTRUCTION PLANS = <u>LS</u>	
GENERAL	LS
TOTAL	LS



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Bridge No. CUY-77-11.119/11.126 Estimated Quantity Calculations

Item: 869 Ext.: 00100 Unit: EACH

Item Description: HIGH LOAD MULTI-ROTATIONAL (HLMR) BEARINGS UNIDIRECTIONAL

Member Location : ABUTMENTS

Rear Abutment (Right)	2
Rear Abutment (Left)	2
Forward Abutment (Right)	
Forward Abutment (Left)	

LEFT REAR ABUTMENT	2	EACH
LEFT FORWARD ABUTMENT	0	EACH
RIGHT REAR ABUTMENT	2	EACH
RIGHT FORWARD ABUTMENT	0	EACH
TOTAL	4	EACH



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Bridge No. CUY-77-11.119/11.126 Estimated Quantity Calculations

Item: 869 Ext.: 00100 Unit: EACH

Item Description: HIGH LOAD MULTI-ROTATIONAL (HLMR) BEARINGS FIXED

Member Location : ABUTMENTS

Rear Abutment (Right)	
Rear Abutment (Left)	
Forward Abutment (Right)	2
Forward Abutment (Left)	2

LEFT REAR ABUTMENT	0	EACH
LEFT FORWARD ABUTMENT	2	EACH
RIGHT REAR ABUTMENT	0	EACH
RIGHT FORWARD ABUTMENT	2	EACH
TOTAL	4	EACH



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Bridge No. CUY-77-11.119/11.126 Estimated Quantity Calculations

Item: 869 Ext.: 00100 Unit: EACH

Item Description: HIGH LOAD MULTI-ROTATIONAL (HLMR) BEARINGS MULTIDIRECTIONAL

Member Location : ABUTMENTS

Rear Abutment (Right)	2
Rear Abutment (Left)	2
Forward Abutment (Right)	2
Forward Abutment (Left)	2

LEFT REAR ABUTMENT	2	EACH
LEFT FORWARD ABUTMENT	2	EACH
RIGHT REAR ABUTMENT	2	EACH
RIGHT FORWARD ABUTMENT	2	EACH
TOTAL	8	EACH