

Project: CUY-90-14.52
PID: 97390

Bridge Quantity Calculations
Final Tracings Submission



Project: CUY-090-14.52
 Bridge: CUY-90-1452
 ODOT

Date: 1/24/19
 By: CCJ
 Checked: EDW
 Sheet: 1

QUANTITY COMPUTATIONS

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

ITEM NO. 202E11203
 QUANTITY 1
 UNIT LUMP

Deck Concrete Removal

| Width (ft) | Length (ft) | # | Area (SF) |
|------------|-------------|---|------------|
| 58.33 | 311.3686 | 1 | 18163.2 |
| Total= | | | 18163.2 SF |

assume \$20.00 SF Total= \$363,263.16

Abutment Concrete Removal

| | Width (ft) | Area (SF) | Seat Width (ft) | Seat Area (SF) | # | Volume |
|---------------------------------------|------------|------------|-----------------|----------------|---|-----------|
| Abutment Backwalls (Rear) | 1.75 | 356 | | | 1 | 23.07 CY |
| Abutment Backwalls (Forward) | 1.75 | 393 | | | 1 | 25.47 CY |
| | Area (SF) | Depth (ft) | | | | |
| Rear Right Wingwall 1 | 150 | 1.50 | | | 1 | 8.33 CY |
| Rear Left Wingwall 2 | 6.05 | 2.00 | | | 1 | 0.45 CY |
| Forward Left Wingwall 3 | 6.17 | 2.00 | | | 1 | 0.46 CY |
| Forward Right Wingwall 4 | 195.00 | 1.50 | | | 1 | 10.83 CY |
| Left Walk Bridge | 2450 | 0.90 | | | 1 | 81.67 CY |
| Right Walk Wingwalls and Bridge | 3266 | 0.90 | | | 1 | 108.87 CY |
| Right Railing on Wingwalls and Bridge | 600 | 1.00 | | | 1 | 22.22 CY |
| Left Railing Bridge | 899 | 1.00 | | | 1 | 33.30 CY |
| Splash Guards | 2.88 | 292.00 | | | 1 | 31.15 CY |
| Splash Guards | 2.88 | 457.00 | | | 1 | 48.75 CY |

Abutments Total = 394.56 CY
 Cost= \$78,912.67

assume \$200 CY

Vandal Fence Removal

| | Length (ft) | |
|-----------------------------------|-------------|------------------|
| Right Side Bridge | 300 | 300.00 FT |
| Left side on Wingwalls and Bridge | 400 | 400.00 FT |
| | | <u>700.00 FT</u> |

assume \$25 FT Cost= \$17,500.00

Pier Concrete Removal

| Width (ft) | Length (ft) | Height | # | Volume |
|------------|-------------|--------|---|---------|
| 0 | 0 | 0 | 0 | 0.00 CY |

assume \$250 CY Cost= \$0.00

Total Cost = \$459,675.83

Say = \$459,676



Project: CUY-090-14.52
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QUANTITY COMPUTATIONS

Date: 1/24/19
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 Checked: EDW
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DESCRIPTION: APPROACH SLAB REMOVED, AS PER PLAN

ITEM NO. 202E22901
 QUANTITY 254
 UNIT SY

| | Area (ft ²) | # | | |
|-----------------------|-------------------------|---|-----|----|
| APPROACH SLAB REAR | 1160 | 1 | 129 | SY |
| APPROACH SLAB FORWARD | 1128 | 1 | 125 | SY |

TOTAL= 254 SY



Project: CUY-090-14.52
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QUANTITY COMPUTATIONS

| | |
|----------|---------|
| Date: | 1/24/19 |
| By: | CCJ |
| Checked: | EDW |
| Sheet: | 4 |

DESCRIPTION: COFFERDAMS AND EXCAVATION BRACING

| | |
|----------|-----------|
| ITEM NO. | 503E11100 |
| QUANTITY | 20000 |
| UNIT | LS |

Total= 20000



Project: CUY-090-14.52
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Date: 1/24/19
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QUANTITY COMPUTATIONS

DESCRIPTION: UNCLASSIFIED EXCAVATION

ITEM NO. 503E21100
 QUANTITY 82
 UNIT CY

| | area (SF) | top el | bot el | width (ft) | Length (ft) | | |
|--------------------------|-----------|--------|--------|------------|-------------|---------|-------|
| rear abutment | | 679.17 | 674.03 | 3 | 60.75 | 936.76 | 34.69 |
| forward abutment | | 678.00 | 672.73 | 3 | 67.33 | 1064.49 | 39.43 |
| Rear front wingwall 1 | | 679.00 | 673.00 | 3 | 12.00 | 216.00 | 8.00 |
| Rear back wingwall 1 | | 679.00 | 677.00 | 3 | 54.00 | 324.00 | 12.00 |
| Forward front wingwall 3 | | 678.00 | 672.00 | 3 | 21.00 | 378.00 | 14.00 |
| Forward back wingwall 3 | | 678.00 | 676.00 | 3 | 44.00 | 264.00 | 9.78 |

Abut Total= 82.12

TOTAL= 82 CY



Project: CUY-090-14.52
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Date: 1/24/19
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QUANTITY COMPUTATIONS

DESCRIPTION: EPOXY COATED REINFORCING STEEL

ITEM NO. 509E10000
QUANTITY 218028
UNIT LB

| | Conc. (CY) | Total | |
|----------------|-------------------|---------------|-----------|
| Superstructure | | 196963 | LB |
| | | 0 | LB |
| Abutments | | 17462 | LB |
| Piers | | 3603 | LB |
| | | 0 | LB |
| | | TOTAL= | |
| | | 218028 | LB |



Project: CUY-090-14.52
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Date: 1/24/19
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QUANTITY COMPUTATIONS

DESCRIPTION: DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT

ITEM NO. 510E10000
 QUANTITY 616
 UNIT EACH

| | Dowel Hole: | # | TOTAL |
|---|-------------|---|-------|
| REAR ABUTMENT (WINGWALLS) | 144 | 1 | 144 |
| FORWARD ABUBMENT (WINGWALLS) | 152 | 1 | 152 |
| REAR ABUTMENT (BEAM SEAT & Diaphragm Guides) | 50 | 1 | 50 |
| FORWARD ABUBMENT (BEAM SEAT & Diaphragm Guides) | 56 | 1 | 56 |
| ABUTMENT TOTAL= | | | 402 |
| PIER 1 | 70 | | |
| PIER 2 | 72 | | |
| PIER 3 | 72 | | |
| PIER TOTAL= | 214 | | |

TOTAL= 616 EACH



Project: CUY-090-14.52
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ODOT

QUANTITY COMPUTATIONS

Date: 1/24/19
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DESCRIPTION: SEMI-INTEGRAL DIAPHRAGM GUIDE, AS PER PLAN

ITEM NO. 511E33501
QUANTITY 4
UNIT EACH

REAR ABUTMENT #
2
FORWARD ABUBMENT 2

TOTAL= 4 EACH



Project: CUY-090-14.52
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QUANTITY COMPUTATIONS

Date: 1/24/19
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DESCRIPTION: CLASS QC2 CONCRETE, WITH QA/QC, BRIDGE DECK

ITEM NO. 511E34446
 QUANTITY 798
 UNIT CY

| | Slab Length (ft) | Width (ft) | Thickness (ft) | Flange Area (ft^2) | # | Total (CF) | Total (CY) | |
|---------------------|------------------|------------|----------------|--------------------|-----------------|------------|------------|------------|
| Deck | 313.5400 | 58.3333 | 0.7083 | | | 12955.3 | 480 | |
| Haunch-Fascia G1 | 296.8229 | 1.1666 | 0.3417 | 0 | 1 | 118.3 | 4 | |
| Haunch-Interior G2 | 299.6719 | 1.1666 | 0.2573 | 0.0000 | 1 | 89.9 | 3 | |
| Haunch-Interior G3 | 302.7344 | 1.1666 | 0.2667 | 0.0000 | 1 | 94.2 | 3 | |
| Haunch-Interior G4 | 305.7969 | 1.1666 | 0.2594 | 0.0000 | 1 | 92.5 | 3 | |
| Haunch-Interior G5 | 308.8542 | 1.1666 | 0.2688 | 0.0000 | 1 | 96.8 | 4 | |
| Haunch-Interior G6 | 313.2448 | 1.1666 | 0.2479 | 0.0000 | 1 | 90.6 | 3 | |
| Haunch-Fascia G7 | 315.5310 | 1.1666 | 0.3552 | 0 | 1 | 130.8 | 5 | |
| Left overhang | 295.9500 | 2.5000 | 0.3417 | 0 | 1 | 252.8 | 9 | |
| Right overhang | 315.9167 | 2.5000 | 0.3552 | 0 | 1 | 280.5 | 10 | |
| | | | | Deck Area | Diaphragm Guide | | | |
| | Length (ft) | Width (ft) | Height (ft) | Above Diaphragm | Volume | # | Total (CF) | Total (CY) |
| Diaphragm Rear | 60.77 | 4.2500 | 5.06 | 3.7500 | 68.4745 | 1 | 1466.2 | 54 |
| Diaphragm Rear Left | 8.05 | 2.5886 | 5.06 | 2.3385 | | 1 | 124.3 | 5 |
| Diaphragm Forward | 62.00 | 4.2500 | 5.06 | 4.6875 | 68.4745 | 1 | 1555.5 | 58 |
| Light Pedestals | | | 4.48 | 4.62 | | 4 | 82.8 | 3 |
| Sidewalk Left Side | 311 | 9.16666 | 0.7083 | | | 1 | 2019.2 | 75 |
| Sidewalk Right Side | 321.88 | 9.16666 | 0.7083 | | | 1 | 2089.9 | 77 |

TOTAL = 798 CY



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QUANTITY COMPUTATIONS

Date: 1/24/19
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DESCRIPTION: CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET)

ITEM NO. 511E34450
 QUANTITY 70
 UNIT CY

| | | <i>Bridge Parapet</i> | | | |
|--------|-------|-----------------------|-------------|---|-----|
| | | Area | | | |
| | | parapet (ft) | Length (ft) | # | CF |
| Bridge | LEFT | 3 | 304.19 | 1 | 913 |
| Bridge | RIGHT | 3 | 323.6146 | 1 | 971 |

TOTAL= 70

TOTAL= 70 CY



Project: CUY-090-14.52
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QUANTITY COMPUTATIONS

DESCRIPTION: CLASS QC1 CONCRETE, PIER CAP

ITEM NO. 511E42510
QUANTITY 23
UNIT CY

Pier Concrete

| | Ht (ft) | Area (ft^2) | # | Total (CF) | TOTAL (CY) |
|------------|---------|-------------|---|------------|------------|
| Pier 1 Cap | 1.11 | 161.0061 | 1 | 178.72 | 6.62 |
| Pier 2 Cap | 1.20 | 192.4961 | 1 | 231.00 | 8.56 |
| Pier 3 Cap | 1.15 | 166.3498 | 1 | 191.30 | 7.09 |
| Total= | | | | 601.01 | 22.26 |

TOTAL= 23.00 CY



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QUANTITY COMPUTATIONS

Date: 1/24/19
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DESCRIPTION: CLASS QC1 CONCRETE, ABUTMENT NOT INCLUDING FOOTING

ITEM NO. 511E44110
 QUANTITY 37
 UNIT CY

Abutment Concrete

| | | Area (ft ²) | Ht (ft.) | Width (ft) | Len (ft) | # | Total (CF) | | |
|-------------------|---|----------------------------|----------|------------|----------|---|-------------|-----------|--|
| Rear Wingwall | 1 | 13.19 | 0.00 | 0.00 | 10.75 | 1 | 141.79 | | |
| | | 13.54 | | | 1 | 1 | 13.54 | | |
| | | 14.68 | | | 4.75 | 1 | 69.73 | | |
| Rear Wingwall Cap | 2 | | 1.58 | 1.50 | 53.26 | 1 | 126.49 | | |
| FWD Wingwall Cap | 3 | | 1.83 | 1.50 | 43.2083 | 1 | 118.80 | | |
| FWD Wingwalls | 4 | 13.19 | 0.00 | 0.00 | 20.75 | 1 | 273.69 | | |
| | | 14.69 | | | 3.666 | 1 | 53.85 | | |
| | | 13.54 | | | 1 | 1 | 13.54 | | |
| FWD Wingwalls | 5 | 24.07 | 6.85 | 0.00 | 0 | 1 | 164.88 | | |
| Abutment Total= | | | | | | | 976.32 | 36.16 | |
| TOTAL= | | | | | | | 37.0 | CY | |



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QUANTITY COMPUTATIONS

Date: 1/24/19
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DESCRIPTION: CLASS QC2 CONCRETE, MISC,: PARAPET AND SIDEWALK

ITEM NO. 511E53012
 QUANTITY 35
 UNIT CY

Sidewalk

| | Ht (ft.) | Width (ft) | Len (ft) | # | Total (CF) |
|---------------------------------|----------|------------|----------|-----------------|-------------------|
| Right sidewalk on Rear Wingwall | 0.7083 | 9.1667 | 53.2600 | 1 | 345.81 |
| Right Parapet on Rear Wingwall | 2.6660 | 1.1250 | 53.2600 | 1 | 159.74 |
| | | | | | 0.00 |
| Right Sidewalk on Fwd Wingwall | 0.7083 | 9.1667 | 44.3300 | 1 | 287.82 |
| Right Parapet on Fwd Wingwall | 2.6660 | 1.1250 | 43.0000 | 1 | 128.97 |
| | | | | | 0.00 |
| | | | | | 0.00 |
| | | | | Abutment Total= | 922.34 34.16 |

TOTAL= 35.0 CY



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QUANTITY COMPUTATIONS

Date: 1/24/19
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DESCRIPTION: SEALING OF CONCRETE SURFACES (NON-EPOXY)

ITEM NO. 512E10050
 QUANTITY 902
 UNIT SY

Superstructure

| | Perimeter (ft) | Length (ft) | # | Area (SF) | Area (SY) |
|--|----------------|-------------|---|-------------------------------------|-----------|
| Bridge Deck Railing and Sidewalk Left | 10.54 | 309.8 | 1 | 3265.40 | 362.8 |
| Bridge Deck Railing and Sidewalk Right | 10.54 | 322.3 | 1 | 3396.62 | 377.4 |
| Approach and Wingwall Railing and Sidewalk Rear | 10.54 | 68.26 | 1 | 719.46 | 79.9 |
| Approach and Wingwall Railing and Sidewalk Forward | 10.54 | 69.2 | 1 | 729.37 | 81.0 |
| | | | | Railing and Sidewalk Total= 8110.85 | 901.2 |

TOTAL= 8110.85 902.0 SY



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QUANTITY COMPUTATIONS

DESCRIPTION: SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

ITEM NO. 512E10100
 QUANTITY 1873
 UNIT SY

| | | Sealing Ht (ft) | Width (ft) | Face Area (SF) | # | Area (SF) | Area (SY) |
|--------------------------|-----------|--------------------|------------|-------------------------|---|-----------|-----------|
| REAR | STEM FACE | | | 1615.01 | 1 | 1615.01 | 179.4 |
| | WW#1 | 28.34 | 1.50 | 1113.88 | 1 | 1156.39 | 128.5 |
| | WW#2 | 2.50 | 3.50 | 24.15 | 1 | 32.90 | 3.7 |
| Rear Approach Railing | | 4.46 | 68.25 | | 1 | 304.28 | 33.8 |
| | | | | Rear Abutment Total= | | 3108.6 | 345.4 |
| FORWARD | STEM FACE | | | 1564.05 | 1 | 1564.05 | 173.8 |
| | WW#3 | 5.25 | 5.25 | 35.45 | 1 | 63.01 | 7.0 |
| | WW#4 | 37.55 | 1.50 | 1068.06 | 1 | 1124.39 | 124.9 |
| Forward Approach Railing | | 4.46 | 68.17 | | 1 | 303.91 | 33.8 |
| | | | | Forward Abutment Total= | | 3055.4 | 339.5 |
| | | | | Abutments Total= | | 6163.9 | 684.88 |
| PIER 1 | | Ht (ft) | Width (ft) | # | | Area (SF) | Area (SY) |
| | COLUMNS | 21.71 | 9.42 | 4 | | 818.0 | 90.9 |
| | CAP FACES | 4.21 | 51.29 | 2 | | 431.9 | 48.0 |
| | CAP ENDS | 4.21 | 4.71 | 2 | | 39.7 | 4.4 |
| PIER 2 | | | | | | | |
| | COLUMNS | 26.48 | 11 | 4 | | 1165.1 | 129.5 |
| | CAP FACES | 4.86 | 52.25 | 2 | | 507.9 | 56.4 |
| | CAP ENDS | 4.86 | 5.5 | 2 | | 53.5 | 5.9 |
| PIER 3 | | | | | | | |
| | COLUMNS | 20.45 | 9.42 | 4 | | 770.6 | 85.6 |
| | CAP FACES | 4.21 | 53.08 | 2 | | 446.9 | 49.7 |
| | CAP ENDS | 4.21 | 4.71 | 2 | | 39.7 | 4.4 |
| | | | | PIERS TOTAL= | | 4273.2 | 474.8 |

Superstructure

| | Perimeter (ft) | Length (ft) | # | Area (SF) | Area (SY) |
|----------------------------|----------------|-------------|---------------|-----------|-----------|
| Bridge Deck Parapets Left | 9.3750 | 301.4200 | 1 | 2825.81 | 314.0 |
| Bridge Deck Parapets Right | 9.3750 | 323.1100 | 1 | 3029.16 | 336.6 |
| Rear Abutment Diaphragm | 4.6200 | 60.7700 | 1 | 280.76 | 31.2 |
| Forward Abutment Diaphragm | 4.4800 | 63.3750 | 1 | 283.92 | 31.5 |
| | | | Parapet Total | 6419.65 | 713.3 |

Super Total= 6419.65 713.29

TOTAL= 16856.73 1873.0 SY



Project: CUY-090-14.52
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QUANTITY COMPUTATIONS

Date: 1/24/19
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DESCRIPTION: SEALING CONCRETE BRIDGE DECK with HMWM RESIN

ITEM NO. 512E10300
QUANTITY 74
UNIT SY

Length (ft) Width (ft) #
331.07 2.00 1.00

Area (SF)
662.14

Total= 662.14

TOTAL = 74 SY



Project: CUY-090-14.52
Bridge: CUY-90-1452
ODOT

QUANTITY COMPUTATIONS

Date: 1/24/19
By: CCJ
Checked: EDW
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DESCRIPTION: CONCRETE REPAIR BY EPOXY INJECTION

ITEM NO. 512E10600
QUANTITY 19
UNIT FT

Length (ft)
Abutments 18.44
Piers

Length (ft)
18.44
0
Total= 18.44

TOTAL = 19 FT



Project: CUY-090-14.52
Bridge: CUY-90-1452
ODOT

Date: 1/24/19
By: CCJ
Checked: EDW
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QUANTITY COMPUTATIONS

DESCRIPTION: TYPE 2 WATERPROOFING

ITEM NO. 512E33000
QUANTITY 4
UNIT SY

| Length (ft) | Height (ft) | # | Area (SF) |
|-------------|-------------|------|-----------|
| 4.62 | 3.00 | 1.00 | 13.86 |
| 4.48 | 3.00 | 1.00 | 13.44 |
| Total= | | | 27.30 |

TOTAL = 4 SY



Project: CUY-090-14.52
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Date: 1/24/19
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QUANTITY COMPUTATIONS

DESCRIPTION: REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES

ITEM NO. 512E74000
 QUANTITY 1045
 UNIT SY

| | | Sealing Ht (ft) | Width (ft) | Face Area (SF) | # | Area (SF) | Area (SY) |
|---------|-----------|--------------------|------------|----------------------|---|-----------|-----------|
| REAR | STEM FACE | | | 1615.01 | 1 | 1615.01 | 179.4 |
| | WW#1 | 28.34 | 1.50 | 1113.88 | 1 | 1156.39 | 128.5 |
| | WW#2 | 2.50 | 3.50 | 24.15 | 1 | 32.90 | 3.7 |
| | | | | Rear Abutment Total= | | 2804.3 | 311.6 |
| FORWARD | STEM FACE | | | 1564.05 | 1 | 1564.05 | 173.8 |
| | WW#3 | 5.25 | 5.25 | 35.45 | 1 | 63.01 | 7.0 |
| | WW#4 | 37.55 | 1.50 | 1068.06 | 1 | 1124.39 | 124.9 |
| | | | | For Abutment Total= | | 2751.4 | 305.7 |
| | | | | Abutments Total= | | 5555.7 | 617.31 |
| PIER 1 | | Ht (ft) | Width (ft) | # | | Area (SF) | Area (SY) |
| | COLUMNS | 21.71 | 9.42 | 4 | | 818.0 | 90.9 |
| | CAP FACES | 3.00 | 51.29 | 2 | | 307.7 | 34.2 |
| | CAP ENDS | 3.00 | 4.71 | 2 | | 28.3 | 3.1 |
| PIER 2 | | | | | | | |
| | COLUMNS | 26.48 | 11 | 4 | | 1165.1 | 129.5 |
| | CAP FACES | 3.50 | 52.25 | 2 | | 365.8 | 40.6 |
| | CAP ENDS | 3.50 | 5.5 | 2 | | 38.5 | 4.3 |
| PIER 3 | | | | | | | |
| | COLUMNS | 20.45 | 9.42 | 4 | | 770.6 | 85.6 |
| | CAP FACES | 3.00 | 53.08 | 2 | | 318.5 | 35.4 |
| | CAP ENDS | 3.00 | 4.71 | 2 | | 28.3 | 3.1 |
| | | | | PIERS TOTAL= | | 3840.7 | 426.7 |

TOTAL= 9396.45 1045.0 SY



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QUANTITY COMPUTATIONS

Date: 1/24/19
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DESCRIPTION: STRUCTURAL STEEL MEMBERS, LEVEL UF

ITEM NO. 513E10200
 QUANTITY 6100
 UNIT LB

| | Length (ft) | Width (ft) | wt (lb/ft) | Thk. (ft) | # | % | Total (lb) |
|--------------------|-------------|------------|------------|-----------|-----|---|----------------|
| End Angles | 8.5 | | 7.2 | | 4 | | 244.8 |
| End Angles | 9 | | 7.2 | | 4 | | 259.2 |
| Bearing Stiffeners | 4 | 0.54 | 490 | 0.0625 | 84 | | 5573.75 |
| | | | | | 900 | | 0 |
| | | | | | | | 0 |
| | | | | | | | Total= 6077.75 |

Rounded up to account for field splices

TOTAL = 6100 LB



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QUANTITY COMPUTATIONS

Date: 1/24/19
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DESCRIPTION: WELDED STUD SHEAR CONNECTORS

ITEM NO. 513E20000
QUANTITY 4905
UNIT EACH

| SHEAR STUD # of rows # of beams | | | Total |
|---------------------------------|-----|---|-------------|
| G1 | 226 | 3 | 678 |
| G2 | 229 | 3 | 687 |
| G3 | 231 | 3 | 693 |
| G4 | 234 | 3 | 702 |
| G5 | 236 | 3 | 708 |
| G6 | 238 | 3 | 714 |
| G7 | 241 | 3 | 723 |
| TOTAL= | | | 4905 |

EACH



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QUANTITY COMPUTATIONS

Date: 1/24/19
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| | | | |
|--------------|--|----------|-----------|
| DESCRIPTION: | SURFACE PREPERATION OF EXISTING STRUCTURAL STEEL | ITEM NO. | 514E00050 |
| | | QUANTITY | 30400 |
| | | UNIT | SF |
| DESCRIPTION: | FIELD PAINTING STRUCTURAL STEEL, PRIME COAT | ITEM NO. | 514E00056 |
| | | QUANTITY | 30400 |
| | | UNIT | SF |
| DESCRIPTION: | FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT | ITEM NO. | 514E00060 |
| | | QUANTITY | 30400 |
| | | UNIT | SF |
| DESCRIPTION: | FIELD PAINTING STRUCTURAL STEEL, FINISH COAT | ITEM NO. | 514E00066 |
| | | QUANTITY | 30400 |
| | | UNIT | SF |
| DESCRIPTION: | FINAL INSPECTION REPAIR | ITEM NO. | 514E10000 |
| | | QUANTITY | 15 |
| | | UNIT | EACH |

| | Total | | | | | | |
|-----------------------------|-------------|---------|---------|----------------|-----|-----------|-----------------|
| | Length (ft) | bf (in) | d (in) | Perimeter (in) | # | Area (SF) | Area (SF) |
| Existing Girders | 2143.48 | 14 | 48.875 | 139.75 | 1 | | 24962.61 |
| x-frames | 9.13 | | | 12 | 248 | | 2264.24 |
| x-frames | 8.5 | | | 12 | 124 | | 1054.00 |
| New and Existing stiffeners | | | | | 126 | 4.58 | 577.08 |
| | | | | | | | Total= 28857.93 |

Rounded up to account for field splices

TOTAL = 30400.00 SF



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QUANTITY COMPUTATIONS

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DESCRIPTION: GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL

ITEM NO. 514E00504
QUANTITY 36
UNIT MNHR

| | Length (ft) | HRS/LEN GTH | MNHR |
|----------------|-------------|----------------|-------|
| Existing Beams | 2143.48 | 0.016667 | 35.72 |

Total= 35.72

TOTAL = 36.00 MNHR



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QUANTITY COMPUTATIONS

Date: 1/24/19
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DESCRIPTION: ARMORLESS PREFORM JOINT SEAL

ITEM NO. 516E10010
QUANTITY 158
UNIT FT

| | Length | # | Total (FT) |
|-----------------------|---------------|----------|-------------------|
| Rear Approach Slab | 86.50 | 1 | 87 |
| Forward Approach slab | 71.00 | 1 | 71 |

TOTAL = 158 FT



Project: CUY-090-14.52
 Bridge: CUY-90-1452
 ODOT

QUANTITY COMPUTATIONS

Date: 1/24/19
 By: CCJ
 Checked: EDW
 Sheet: 25

DESCRIPTION: 1/2" PREFORMED EXPANSION JOINT SEALER

ITEM NO. 516E13200
 QUANTITY 21
 UNIT SF

| | <i>Height (FT)</i> | <i>Width</i> | <i>Length</i> | |
|-------------------------|--------------------|--------------|---------------|----|
| <i>REAR Wingwall</i> | 6.75 | 1.50 | 10.1 | FT |
| <i>FORWARD Wingwall</i> | 6.75 | 1.50 | 10.1 | FT |
| APPROACH SLAB TOTAL= | | | 20.3 | FT |

TOTAL = 21.0 SF



Project: CUY-090-14.52
 Bridge: CUY-90-1452
 ODOT

QUANTITY COMPUTATIONS

Date: 1/24/19
 By: CCJ
 Checked: EDW
 Sheet: 26

DESCRIPTION: 1" PREFORMED EXPANSION JOINT FILLER

ITEM NO. 516E13600
 QUANTITY 31
 UNIT SF

| | Area (SF) | # | Area | |
|--|-----------|------|----------------|----------------|
| <i>Right Rear at end of wall Sidewalk</i> | 6.14 | 1.00 | 6.1 | SF |
| <i>Right Rear between Sidewalk & Rail at Bridge Limits</i> | 9.14 | 1.00 | 9.1 | SF |
| <i>Right FWD at end of wall Sidewalk</i> | 6.14 | 1.00 | 6.1 | SF |
| <i>Right FWD between Sidewalk & Rail at Bridge Limits</i> | 9.14 | 1.00 | 9.1 | SF |
| <i>Left FWD between Sidewalk at Bridge Limits</i> | 6.14 | 1.00 | 6.1 | SF |
| | | | TOTAL= | 30.6 SF |
| | | | TOTAL = | 31.0 SF |



Project: CUY-090-14.52
 Bridge: CUY-90-1452
 ODOT

Date: 1/24/19
 By: CCJ
 Checked: EDW
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QUANTITY COMPUTATIONS

DESCRIPTION: 2" PREFORMED EXPANSION JOINT FILLER

ITEM NO. 516E13900
 QUANTITY 180
 UNIT SF

| | <i>Length</i> | <i>height</i> | <i>#</i> | Area | |
|---------------------------------------|---------------|---------------|----------|-----------------|----------|
| <i>Rear WINGWALL</i> | 2.00 | 1.50 | 1 | 3.0 | SF |
| <i>Between Wall and Approach slab</i> | 14.50 | 1.00 | 1 | 14.5 | SF |
| <i>Sleeper Slab</i> | 4.00 | 1.00 | 1 | 4.0 | SF |
| <i>Forward WINGWALL</i> | 2.00 | 1.50 | 1 | 3.0 | SF |
| <i>Between Wall and Approach slab</i> | 24.46 | 1.25 | 1 | 30.6 | SF |
| <i>Sleeper Slab</i> | 4.00 | 1.00 | 1 | 4.0 | SF |
| <i>DIAPHRAGM END(REAR Left)</i> | 4.25 | 6.09 | 2 | 51.8 | SF |
| <i>DIAPHRAGM END(REAR Right)</i> | 1.00 | 6.09 | 2 | 12.2 | SF |
| <i>DIAPHRAGM END(FORWARD)</i> | 4.04 | 6.15 | 2 | 49.7 | SF |
| | | | | ABUTMENT TOTAL= | 172.7 SF |

TOTAL = 180.0 SF



Project: CUY-090-14.52
Bridge: CUY-90-1452
ODOT

QUANTITY COMPUTATIONS

Date: 1/24/19
By: CCJ
Checked: EDW
Sheet: 28

DESCRIPTION: SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL

ITEM NO. 516E14020
QUANTITY 149
UNIT FT

| | Length | # | Total (FT) |
|------------------|---------------|----------|-------------------|
| Rear abutment | 76.83 | 1 | 77 |
| Forward Abutment | 72.00 | 1 | 72 |

TOTAL = 149 FT



Project: CUY-090-14.52
Bridge: CUY-90-1452
ODOT

QUANTITY COMPUTATIONS

Date: 1/24/19
By: CCJ
Checked: EDW
Sheet: 29

DESCRIPTION: ELASTOMERIC BEARINGS WITH INTERNAL LAMINATES ONLY
(12"x12"x3.70") (NEOPRENE)

ITEM NO. 516E43300
QUANTITY 1
UNIT EA

| | # BRGS | # | Total |
|-----------|--------|---|-------|
| Abutments | 1 | 1 | 1 |

TOTAL = 1 EA



Project: CUY-090-14.52
Bridge: CUY-90-1452
ODOT

QUANTITY COMPUTATIONS

Date: 1/24/19
By: CCJ
Checked: EDW
Sheet: 30

DESCRIPTION: ELASTOMERIC BEARINGS WITH INTERNAL LAMINATES
(12"x18"x3.70") AND LOAD PLATE (13"x19"x1.5") (NEOPRENE)

ITEM NO. 516E44200
QUANTITY 14
UNIT EA

| | # BRGS | # | Total |
|-----------|--------|---|-------|
| Abutments | 7 | 2 | 14 |

TOTAL = 14 EA



Project: CUY-090-14.52
Bridge: CUY-90-1452
ODOT

Date: 1/24/19
By: CCJ
Checked: EDW
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QUANTITY COMPUTATIONS

DESCRIPTION:

| |
|--|
| ELASTOMERIC BEARINGS WITH INTERNAL LAMINATES (15"x20"x3.25") AND LOAD PLATE (16"x21"x1.5") (NEOPRENE) |
|--|

ITEM NO. 516E44200
QUANTITY 21
UNIT EA

| | # BRGS | # | Total |
|-------|--------|---|-------|
| Piers | 7 | 3 | 21 |

TOTAL = 21 EA



Project: CUY-090-14.52
Bridge: CUY-90-1452
ODOT

Date: 1/24/19
By: CCJ
Checked: EDW
Sheet: 32

QUANTITY COMPUTATIONS

DESCRIPTION: JACKING AND TEMPORARY SUPPORT OF STRUCTURE, AS PER PLAN

ITEM NO. 516E47001
QUANTITY 35000
UNIT LS

| | # Jacking Points | # | Cost/Point | Total |
|-----------|------------------|---|---------------|-----------------|
| Abutments | 7 | 2 | \$1,000.00 | \$14,000 |
| Piers | 7 | 3 | \$1,000.00 | \$21,000 |
| | | | Total= | \$35,000 |



Project: CUY-090-14.52
 Bridge: CUY-90-1452
 ODOT

Date: 1/24/19
 By: CCJ
 Checked: EDW
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QUANTITY COMPUTATIONS

DESCRIPTION: POROUS BACKFILL WITH GEOTEXTILE FABRIC

ITEM NO. 518E21200
 QUANTITY 110
 UNIT CY

| | <i>ground el</i> | <i>top ftg el</i> | <i>Height (ft)</i> | <i>width</i> | <i>length</i> | <i>#</i> | <i>CF</i> | <i>CY</i> | |
|-------------------------|------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|-----------|
| REAR ABUTMENT | 678.23 | 672.02 | 6.21 | 2 | 58.33 | 1 | 724.50 | 26.83 | |
| FORWARD ABUTMENT | 677 | 670.75 | 6.25 | 2 | 61.85 | 1 | 773.13 | 28.63 | |
| Rear WINGWALL Right | 679.5 | 672.75 | 6.75 | 4 | 14.50 | 1 | 391.50 | 14.50 | |
| Rear WINGWALLS Left | 678.65 | 672.03 | 6.62 | 2 | 5.00 | 1 | 66.20 | 2.45 | |
| Forward WINGWALLS Right | 677.77 | 670.50 | 7.27 | 4 | 24.50 | 1 | 712.46 | 26.39 | |
| WINGWALLS 4 | 677.22 | 670.73 | 6.49 | 2 | 8.00 | 1 | 103.84 | 3.85 | |
| | | | | | | | ABUTMENTS TOTAL= | 102.65 | |
| | | | | | | | TOTAL = | 110.0 | CY |



Project: CUY-090-14.52
Bridge: CUY-90-1452
ODOT

QUANTITY COMPUTATIONS

Date: 1/24/19
By: CCJ
Checked: EDW
Sheet: 34

DESCRIPTION: REINFORCED CONCRETE APPROACH SLAB WITH QC/QA (T=12")

ITEM NO. 526E10000
QUANTITY 99
UNIT SY

| | AREA (SF) | # | Total (SF) | Total (SY) |
|--------|--------------|---|------------|------------|
| Rear | 886.58 | 1 | 886.58 | 98.5 |
| | | | 0.00 | 0.0 |
| Total= | | | 886.6 | 98.5 |

TOTAL = 99.0 SY



Project: CUY-090-14.52
 Bridge: CUY-90-1452
 ODOT

QUANTITY COMPUTATIONS

Date: 1/24/19
 By: CCJ
 Checked: EDW
 Sheet: 35

DESCRIPTION: REINFORCED CONCRETE APPROACH SLAB WITH QC/QA (T=15")

ITEM NO. 526E25000
 QUANTITY 163
 UNIT SY

| | AREA (SF) | # | Total (SF) | Total (SY) |
|---------|--------------|---|------------|--------------|
| Forward | 1458.03 | 1 | 1458.03 | 162.0 |
| Total= | | | 1458.0 | 162.0 |

TOTAL = 163.0 SY



Project: CUY-090-14.52
Bridge: CUY-90-1452
ODOT

QUANTITY COMPUTATIONS

Date: 1/24/19
By: CCJ
Checked: EDW
Sheet: 36

DESCRIPTION: TYPE C INSTALLATION

ITEM NO. 526E90030
QUANTITY 129
UNIT FT

| | Len (ft) | # | Total Length (FT) | |
|-----------------------|-----------------|----------|----------------------------------|-----------|
| Rear Approach Slab | 67.1 | 1 | 67.1 | |
| Forward Approach Slab | 61.8 | 1 | 61.8 | |
| TOTAL = | | | 129.0 | FT |



Project: CUY-090-14.52
 Bridge: CUY-90-1452
 ODOT

QUANTITY COMPUTATIONS

Date: 1/24/19
 By: CCJ
 Checked: EDW
 Sheet: 37

DESCRIPTION: PATCHING CONCRETE STRUCTURE, AS PER PLAN

ITEM NO. 519E11101
 QUANTITY 774
 UNIT SF

| | Area (SF) | # | 50% Increase | Total (SF) |
|------------------|-----------|---|-----------------|---------------|
| REAR ABUTMENT | 6.00 | 1 | 3.00 | 9 |
| Forward ABUTMENT | 510.00 | 1 | 255.00 | 765 |
| TOTAL = | | | | 774 SF |



Project: CUY-090-14.52
 Bridge: CUY-90-1452
 ODOT

QUANTITY COMPUTATIONS

Date: 1/24/19
 By: CCJ
 Checked: EDW
 Sheet: 38

DESCRIPTION: SPECIAL - FORM LINER

ITEM NO. 530E13000
 QUANTITY 1524
 UNIT SF

| | Length (ft) | Height (Ft) | # | Total (SF) |
|-------------------------------|-------------|-------------|---|------------------------|
| LEFT SIDE on Bridge | 302.2 | 2.00 | 1 | 604 |
| RIGHT SIDE on Bridge | 323.61 | 2.00 | 1 | 647 |
| | | | | Total on Bridge 1252 |
| RIGHT SIDE off Bridge Rear | 67.75 | 2 | 1 | 136 |
| RIGHT SIDE off Bridge Forward | 68.25 | 2 | 1 | 137 |
| | | | | Total off Bridge 272 |
| | | | | TOTAL = 1524 SF |



Project: CUY-090-14.52
 Bridge: CUY-90-1452
 ODOT

QUANTITY COMPUTATIONS

Date: 1/24/19
 By: CCJ
 Checked: EDW
 Sheet: 39

DESCRIPTION: VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC, AS PER PLAN

ITEM NO. 607E39901
 QUANTITY 755
 UNIT FT

| | Len (ft) | # | | Total Length (FT) |
|--|-----------------|----------|-------------------------------------|--------------------------|
| Vandal Fence Left on Bridge | 298.08 | 1 | | 298.1 |
| Vandal Fence Right on Bridge | 322.45 | 1 | | 322.5 |
| | | | TOTAL on Bridge= | 621 |
| Fence Right on Rear Wall and Approach | 66.666 | 1 | | 66.7 |
| Fence Right on Forward Wall and Approach | 67.166 | 1 | | 67.2 |
| | | | TOTAL on Rear and Forward Approach= | 134 |
| | | | TOTAL = | 755 FT |