

Structure Quantity Estimate

JEF-T289-00.06

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MBI Project No. 189436	2
PID No. 115116	2
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Project Name: Historic Bridge Rehabilitation over Yellow Creek

MBI Project No. 189436

PID No. 115116

Subject: Final Plan Production

PURPOSE

Estimate quantities based upon standard ODOT item characteristics.

NOTES

1. Reference: ODOT Item Master, 2023
2. Values are space-delimited
3. Only lines beginning with itemExtension will be read
4. Each line represents a unique calculation
5. Negative values subtract quantities (e.g. holes, voids, etc.)

INPUT *From file*

SUMMARY

Table 1: ESTIMATED QUANTITIES

ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION
202	11203	1	LS	PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN
503	21101	79	CY	UNCLASSIFIED EXCAVATION, AS PER PLAN
509	10000	1495	LB	EPOXY COATED STEEL REINFORCEMENT
510	10000	100	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT
511	45710	14	CY	CLASS QC1 CONCRETE, ABUTMENT
512	10100	47	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
512	33000	19	SY	TYPE 2 WATERPROOFING
513	10221	32754	LB	STRUCTURAL STEEL MEMBERS, LEVEL 1, AS PER PLAN
513	10321	13001	LB	STRUCTURAL STEEL MEMBERS, LEVEL 6, AS PER PLAN
513	20000	2000	EACH	WELDED STUD SHEAR CONNECTORS
513	95030	3845	EACH	STRUCTURAL STEEL, MISC.:
516	10000	29	FT	PREFORMED ELASTOMERIC COMPRESSION JOINT SEAL
516	13600	24	SF	1" PREFORMED EXPANSION JOINT FILLER
516	41100	20	EACH	1/8" PREFORMED BEARING PAD
516	44101	12	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN
516	47001	1	LS	JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN
517	73008	209	FT	RAILING (THRIE BEAM RAIL), MISC.:
517	76300	209	FT	RAILING, MISC.:
518	22300	209	FT	SPECIAL - STEEL DRIP STRIP
530	00600	1481	SF	SPECIAL - STRUCTURES
602	98000	1	LS	MASONRY, MISC.:
613	41200	79	CY	LOW STRENGTH MORTAR BACKFILL
625	33000	2	EACH	STRUCTURE GROUNDING SYSTEM
630	97700	8	EACH	SIGNING, MISC.:
845	60020	1	LS	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL
845	61000	7	MNHR	GRINDING FINIS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL
845	62020	1	LS	FIELD METALLIZING OF EXISTING STRUCTURAL STEEL

DETAILED RESULTS

```

##
## ITEM 202E11203 PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN
## Disassembly, salvage handling, and disposal of unusable material
## LUMP SUM
##
## . . . . .
##
## ITEM 503E21101 UNCLASSIFIED EXCAVATION, AS PER PLAN
## Excavation for partial abutment seat and backwall removal (Rear 1 of 3)
## Volume = Base x Height x Depth x Number / 27
## Base (ft.) = 15
## Height (ft.) = 1.5
## Depth (ft.) = 24.6667
## Number = 1
## Total (cu.yd.) = 20.55558333333333
##
## . . . . .
##
## ITEM 503E21101 UNCLASSIFIED EXCAVATION, AS PER PLAN
## Excavation for partial abutment seat and backwall removal (Rear 2 of 3)
## Volume = Base x Height x Depth x Number / 27
## Base (ft.) = 1
## Height (ft.) = 3
## Depth (ft.) = 24.6667
## Number = 1
## Total (cu.yd.) = 2.7407444444444444
##
## . . . . .
##
## ITEM 503E21101 UNCLASSIFIED EXCAVATION, AS PER PLAN
## Excavation for partial abutment seat and backwall removal (Rear 3 of 3)

```

```
## Volume = 1/2 x Base x Height x Depth x Number / 27
## Base (ft.) = 14
## Height (ft.) = 3
## Depth (ft.) = 24.6667
## Number = 1
## Total (cu.yd.) = 19.18521111111111
```

```
##
## . . . . .
```

```
## ITEM 503E21101 UNCLASSIFIED EXCAVATION, AS PER PLAN
## Excavation for partial abutment seat and backwall removal (Forward 1 of 3)
## Volume = Base x Height x Depth x Number / 27
## Base (ft.) = 15
## Height (ft.) = 1.5
## Depth (ft.) = 20.6667
## Number = 1
## Total (cu.yd.) = 17.22225
```

```
##
## . . . . .
```

```
## ITEM 503E21101 UNCLASSIFIED EXCAVATION, AS PER PLAN
## Excavation for partial abutment seat and backwall removal (Forward 2 of 3)
## Volume = Base x Height x Depth x Number / 27
## Base (ft.) = 1
## Height (ft.) = 3
## Depth (ft.) = 20.6667
## Number = 1
## Total (cu.yd.) = 2.2963
```

```
##
## . . . . .
```

```
## ITEM 503E21101 UNCLASSIFIED EXCAVATION, AS PER PLAN
## Excavation for partial abutment seat and backwall removal (Forward 3 of 3)
```

```

## Volume = 1/2 x Base x Height x Depth x Number / 27
## Base (ft.) = 14
## Height (ft.) = 3
## Depth (ft.) = 20.6667
## Number = 1
## Total (cu.yd.) = 16.0741
##
## . . . . .
##
## ITEM 509E10000 EPOXY COATED STEEL REINFORCEMENT
## Rear and Forward Abutments ----- See calcs -----
## User supplied weight (#) = 1495
## Number = 1
## Total (#) = 1495
##
## . . . . .
##
## ITEM 510E10000 DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT
## Rear Abutment between proposed concrete and existing stone abutment
## User provided quantity = 48
##
## . . . . .
##
## ITEM 510E10000 DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT
## Forward Abutment between proposed concrete and existing stone abutment
## User provided quantity = 52
##
## . . . . .
##
## ITEM 511E45710 CLASS QC1 CONCRETE, ABUTMENT
## Rear Abutment backwall (Measured)
## Volume = Area x Depth x Number / 27
## Area (sq.ft.) = 38.54

```

```
## Depth (ft.) = 2
## Number = 1
## Total (cu.yd.) = 2.85481481481481
##
## .....
##
## ITEM 511E45710 CLASS QC1 CONCRETE, ABUTMENT
## Rear Abutment seat (Measured)
## Volume = Area x Depth x Number / 27
## Area (sq.ft.) = 110.75
## Depth (ft.) = 1
## Number = 1
## Total (cu.yd.) = 4.10185185185185
##
## .....
##
## ITEM 511E45710 CLASS QC1 CONCRETE, ABUTMENT
## Forward Abutment backwall (Measured)
## Volume = Area x Depth x Number / 27
## Area (sq.ft.) = 37.98
## Depth (ft.) = 2
## Number = 1
## Total (cu.yd.) = 2.81333333333333
##
## .....
##
## ITEM 511E45710 CLASS QC1 CONCRETE, ABUTMENT
## Forward Abutment seat (Measured)
## Volume = Area x Depth x Number / 27
## Area (sq.ft.) = 107.52
## Depth (ft.) = 1
## Number = 1
## Total (cu.yd.) = 3.98222222222222
```

```

##
## . . . . .
##
## ITEM 512E10100 SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
## Rear abutment sealing (top of backwall)
## Area = Base x Height x Number / 9
## Base (ft.) = 27
## Height (ft.) = 1.5
## Number = 1
## Total (sq.yd.) = 4.5
##
## . . . . .
##
## ITEM 512E10100 SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
## Rear abutment sealing (front of backwall)
## Area = Base x Height x Number / 9
## Base (ft.) = 29
## Height (ft.) = 2
## Number = 1
## Total (sq.yd.) = 6.444444444444444
##
## . . . . .
##
## ITEM 512E10100 SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
## Rear abutment sealing (front and sides of seat)
## Area = Base x Height x Number / 9
## Base (ft.) = 29.5
## Height (ft.) = 1
## Number = 1
## Total (sq.yd.) = 3.277777777777778
##
## . . . . .
##

```


ITEM 512E10100 SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

Rear abutment sealing (seat)

Area = Base x Height x Number / 9

Base (ft.) = 29

Height (ft.) = 3

Number = 1

Total (sq.yd.) = 9.66666666666667

##

.

##

ITEM 512E10100 SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

Forward abutment sealing (top of backwall 1 of 2)

Area = Base x Height x Number / 9

Base (ft.) = 21

Height (ft.) = 1.5

Number = 1

Total (sq.yd.) = 3.5

##

.

##

ITEM 512E10100 SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

Forward abutment sealing (top of backwall 1 of 2)

Area = Base x Height x Number / 9

Base (ft.) = 4

Height (ft.) = 2

Number = 1

Total (sq.yd.) = 0.88888888888889

##

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##

ITEM 512E10100 SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

Forward abutment sealing (front of backwall)

Area = Base x Height x Number / 9

```
## Base (ft.) = 27
## Height (ft.) = 2
## Number = 1
## Total (sq.yd.) = 6
##
## .....
##
## ITEM 512E10100 SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
## Forward abutment sealing (front and sides of seat)
## Area = Base x Height x Number / 9
## Base (ft.) = 33
## Height (ft.) = 1
## Number = 1
## Total (sq.yd.) = 3.666666666666667
##
## .....
##
## ITEM 512E10100 SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
## Forward abutment sealing (seat)
## Area = Base x Height x Number / 9
## Base (ft.) = 27
## Height (ft.) = 3
## Number = 1
## Total (sq.yd.) = 9
##
## .....
##
## ITEM 512E33000 TYPE 2 WATERPROOFING
## Type 2 cover joint between concrete and stone (Rear Abutment)
## Area = Base x Height x Number / 9
## Base (ft.) = 28
## Height (ft.) = 3
## Number = 1
```

```

## Total (sq.yd.) = 9.33333333333333
##
## . . . . .
##
## ITEM 512E33000 TYPE 2 WATERPROOFING
## Type 2 cover joint between concrete and stone (Forward Abutment)
## Area = Base x Height x Number / 9
## Base (ft.) = 27
## Height (ft.) = 3
## Number = 1
## Total (sq.yd.) = 9
##
## . . . . .
##
## ITEM 513E10221 STRUCTURAL STEEL MEMBERS, LEVEL 1, AS PER PLAN
## W12x40 Rolled Beams (Stringers)
## Weight = Length x Unit Weight x Number
## Length (ft.) = 104.5
## Unit Weight (# per ft.) = 40
## Number = 4
## Total (#) = 16720
##
## . . . . .
##
## ITEM 513E10221 STRUCTURAL STEEL MEMBERS, LEVEL 1, AS PER PLAN
## W18x97 Rolled Beams (Floorbeams)
## Weight = Length x Unit Weight x Number
## Length (ft.) = 18.25
## Unit Weight (# per ft.) = 97
## Number = 5
## Total (#) = 8851.25
##
## . . . . .

```

```

##
## ITEM 513E10221 STRUCTURAL STEEL MEMBERS, LEVEL 1, AS PER PLAN
## C8x18.75 Channels (Diaphragms)
## Weight = Length x Unit Weight x Number
## Length (ft.) = 3.93
## Unit Weight (# per ft.) = 18.75
## Number = 36
## Total (#) = 2652.75

```

```

##
## .....
##

```

```

## ITEM 513E10221 STRUCTURAL STEEL MEMBERS, LEVEL 1, AS PER PLAN
## Diaphragm Connection Plate to Stringer
## Weight = Area x Depth x Unit Weight x Number
## Area (sq.ft.) = 0.3100
## Depth (ft.) = 0.05208
## Unit Weight (# per cu.ft.) = 490
## Number = 72
## Total (#) = 569.588544

```

```

##
## .....
##

```

```

## ITEM 513E10221 STRUCTURAL STEEL MEMBERS, LEVEL 1, AS PER PLAN
## Diaphragm Connection Plate Holes (Grip = Diaphragm + Connection Plate)
## Weight = Area x Depth x Unit Weight x Number
## Area (sq.ft.) = -0.005454154
## Depth (ft.) = 0.093
## Unit Weight (# per cu.ft.) = 490
## Number = 288
## Total (#) = -71.58118976064

```

```

##
## .....
##

```

```

## ITEM 513E10221 STRUCTURAL STEEL MEMBERS, LEVEL 1, AS PER PLAN
## Diaphragm Connection Plate Bolts (Length = Grip + 1 inch)
## User supplied weight (#) = 0.903
## Number = 288
## Total (#) = 260.064

```

```

##
## .....
##

```

```

## ITEM 513E10221 STRUCTURAL STEEL MEMBERS, LEVEL 1, AS PER PLAN
## HSS 8x4x0.5 (Post connection to stringer)
## Weight = Length x Unit Weight x Number
## Length (ft.) = 1.03
## Unit Weight (# per ft.) = 35.11
## Number = 24
## Total (#) = 867.9192

```

```

##
## .....
##

```

```

## ITEM 513E10221 STRUCTURAL STEEL MEMBERS, LEVEL 1, AS PER PLAN
## Connection Plate HSS to Stringer
## Weight = Area x Depth x Unit Weight x Number
## Area (sq.ft.) = 0.8125
## Depth (ft.) = 0.10416667
## Unit Weight (# per cu.ft.) = 490
## Number = 24
## Total (#) = 995.31253185

```

```

##
## .....
##

```

```

## ITEM 513E10221 STRUCTURAL STEEL MEMBERS, LEVEL 1, AS PER PLAN
## HSS to Stringer Holes (Grip = Web + Connection Plate)
## Weight = Area x Depth x Unit Weight x Number
## Area (sq.ft.) = -0.005454154

```

```
## Depth (ft.) = 0.12875
## Unit Weight (# per cu.ft.) = 490
## Number = 192
## Total (#) = -66.0650765712
##
## .....
##
## ITEM 513E10221 STRUCTURAL STEEL MEMBERS, LEVEL 1, AS PER PLAN
## HSS to Stringer Bolts (Length = Grip + 1 inch)
## User supplied weight (#) = 0.988
## Number = 192
## Total (#) = 189.696
##
## .....
##
## ITEM 513E10221 STRUCTURAL STEEL MEMBERS, LEVEL 1, AS PER PLAN
## Connection Plate HSS to Post
## Weight = Area x Depth x Unit Weight x Number
## Area (sq.ft.) = 0.6076389
## Depth (ft.) = 0.0833
## Unit Weight (# per cu.ft.) = 490
## Number = 24
## Total (#) = 595.2479275512
##
## .....
##
## ITEM 513E10221 STRUCTURAL STEEL MEMBERS, LEVEL 1, AS PER PLAN
## HSS to Post Holes (Grip = Flange + Connection Plate)
## Weight = Area x Depth x Unit Weight x Number
## Area (sq.ft.) = -0.005454154
## Depth (ft.) = 0.105
## Unit Weight (# per cu.ft.) = 490
## Number = 96
```

```
## Total (#) = -26.9391574368
##
## .....
##
## ITEM 513E10221 STRUCTURAL STEEL MEMBERS, LEVEL 1, AS PER PLAN
## HSS to Post Bolts (Length = Grip + 1 inch)
## User supplied weight (#) = 0.946
## Number = 96
## Total (#) = 90.816
##
## .....
##
## ITEM 513E10221 STRUCTURAL STEEL MEMBERS, LEVEL 1, AS PER PLAN
## Outside Flange Splice Plate
## Weight = Base x Height x Depth x Unit Weight x Number
## Base (ft.) = 2.1042
## Height (ft.) = 0.04166667
## Depth (ft.) = 0.6666667
## Unit Weight (# per cu.ft.) = 490
## Number = 16
## Total (#) = 458.248059572242
##
## .....
##
## ITEM 513E10221 STRUCTURAL STEEL MEMBERS, LEVEL 1, AS PER PLAN
## Inside Flange Splice Plate
## Weight = Base x Height x Depth x Unit Weight x Number
## Base (ft.) = 2.1042
## Height (ft.) = 0.04166667
## Depth (ft.) = 0.2395833
## Unit Weight (# per cu.ft.) = 490
## Number = 32
## Total (#) = 329.365730524456
```

```

##
## . . . . .
##
## ITEM 513E10221 STRUCTURAL STEEL MEMBERS, LEVEL 1, AS PER PLAN
## Flange Splice Holes (Grip = Outside + Flange + Inside)
## Weight = Area x Depth x Unit Weight x Number
## Area (sq.ft.) = -0.004175837
## Depth (ft.) = 0.25125
## Unit Weight (# per cu.ft.) = 490
## Number = 320
## Total (#) = -164.511274452
##
## . . . . .
##
## ITEM 513E10221 STRUCTURAL STEEL MEMBERS, LEVEL 1, AS PER PLAN
## Flange Splice Bolts (Length = Grip + 1 inch)
## User supplied weight (#) = 0.864
## Number = 320
## Total (#) = 276.48
##
## . . . . .
##
## ITEM 513E10221 STRUCTURAL STEEL MEMBERS, LEVEL 1, AS PER PLAN
## Web Splice Plate
## Weight = Base x Height x Depth x Unit Weight x Number
## Base (ft.) = 1.333333
## Height (ft.) = 0.03125
## Depth (ft.) = 0.5625
## Unit Weight (# per cu.ft.) = 490
## Number = 16
## Total (#) = 183.7499540625
##
## . . . . .

```



```

##
## ITEM 513E10221 STRUCTURAL STEEL MEMBERS, LEVEL 1, AS PER PLAN
## Web Splice Holes (Grip = Diaphragm + Connection Plate)
## Weight = Area x Depth x Unit Weight x Number
## Area (sq.ft.) = -0.004175837
## Depth (ft.) = 0.08708333
## Unit Weight (# per cu.ft.) = 490
## Number = 96
## Total (#) = -17.1058980320288

```

```

##
## .....
##

```

```

## ITEM 513E10221 STRUCTURAL STEEL MEMBERS, LEVEL 1, AS PER PLAN
## Web Splice Bolts (Length = Grip + 1 inch)
## User supplied weight (#) = 0.616
## Number = 96
## Total (#) = 59.136

```

```

##
## .....
##

```

```

## ITEM 513E10321 STRUCTURAL STEEL MEMBERS, LEVEL 6, AS PER PLAN
## N1 Eyebars (2.5 x 1.25)
## Weight = Area x Depth x Unit Weight x Number
## Area (sq.ft.) = 0.02170139
## Depth (ft.) = 17.25
## Unit Weight (# per cu.ft.) = 490
## Number = 2
## Total (#) = 366.86199795

```

```

##
## .....
##

```

```

## ITEM 513E10321 STRUCTURAL STEEL MEMBERS, LEVEL 6, AS PER PLAN
## N2 Eyebars (2.5 x 1.25)

```

```

## Weight = Area x Depth x Unit Weight x Number
## Area (sq.ft.) = 0.02170139
## Depth (ft.) = 17.25
## Unit Weight (# per cu.ft.) = 490
## Number = 2
## Total (#) = 366.86199795

```

```

##
## .....
##

```

```

## ITEM 513E10321 STRUCTURAL STEEL MEMBERS, LEVEL 6, AS PER PLAN
## N3 Eyebars (4.0 x 1.25)
## Weight = Area x Depth x Unit Weight x Number
## Area (sq.ft.) = 0.03472222
## Depth (ft.) = 17.25
## Unit Weight (# per cu.ft.) = 490
## Number = 2
## Total (#) = 586.9791291

```

```

##
## .....
##

```

```

## ITEM 513E10321 STRUCTURAL STEEL MEMBERS, LEVEL 6, AS PER PLAN
## N4 Eyebars (4.0 x 1.25)
## Weight = Area x Depth x Unit Weight x Number
## Area (sq.ft.) = 0.03472222
## Depth (ft.) = 17.25
## Unit Weight (# per cu.ft.) = 490
## Number = 2
## Total (#) = 586.9791291

```

```

##
## .....
##

```

```

## ITEM 513E10321 STRUCTURAL STEEL MEMBERS, LEVEL 6, AS PER PLAN
## N5 Eyebars (2.5 x 1.25)

```

```

## Weight = Area x Depth x Unit Weight x Number
## Area (sq.ft.) = 0.02170139
## Depth (ft.) = 17.25
## Unit Weight (# per cu.ft.) = 490
## Number = 2
## Total (#) = 366.86199795

```

```

##
## .....
##

```

```

## ITEM 513E10321 STRUCTURAL STEEL MEMBERS, LEVEL 6, AS PER PLAN

```

```

## N6 Eyebars (2.5 x 1.25)
## Weight = Area x Depth x Unit Weight x Number
## Area (sq.ft.) = 0.02170139
## Depth (ft.) = 17.25
## Unit Weight (# per cu.ft.) = 490
## Number = 2
## Total (#) = 366.86199795

```

```

##
## .....
##

```

```

## ITEM 513E10321 STRUCTURAL STEEL MEMBERS, LEVEL 6, AS PER PLAN

```

```

## N13 Eyebars (1.25 x 1.25)
## Weight = Area x Depth x Unit Weight x Number
## Area (sq.ft.) = 0.01085069
## Depth (ft.) = 19.00
## Unit Weight (# per cu.ft.) = 490
## Number = 2
## Total (#) = 202.0398478

```

```

##
## .....
##

```

```

## ITEM 513E10321 STRUCTURAL STEEL MEMBERS, LEVEL 6, AS PER PLAN

```

```

## N17 Eyebars (1.25 x 1.25)

```

```

## Weight = Area x Depth x Unit Weight x Number
## Area (sq.ft.) = 0.01085069
## Depth (ft.) = 19.00
## Unit Weight (# per cu.ft.) = 490
## Number = 2
## Total (#) = 202.0398478

```

```

##
## .....
##

```

```

## ITEM 513E10321 STRUCTURAL STEEL MEMBERS, LEVEL 6, AS PER PLAN
## N20 Eyebars (1.25 x 1.25)
## Weight = Area x Depth x Unit Weight x Number
## Area (sq.ft.) = 0.01085069
## Depth (ft.) = 26.00
## Unit Weight (# per cu.ft.) = 490
## Number = 2
## Total (#) = 276.4755812

```

```

##
## .....
##

```

```

## ITEM 513E10321 STRUCTURAL STEEL MEMBERS, LEVEL 6, AS PER PLAN
## N22 Eyebars (1.25 x 1.25)
## Weight = Area x Depth x Unit Weight x Number
## Area (sq.ft.) = 0.01085069
## Depth (ft.) = 26.00
## Unit Weight (# per cu.ft.) = 490
## Number = 2
## Total (#) = 276.4755812

```

```

##
## .....
##

```

```

## ITEM 513E10321 STRUCTURAL STEEL MEMBERS, LEVEL 6, AS PER PLAN
## N23 Eyebars (2.5 x 1.25)

```

```

## Weight = Area x Depth x Unit Weight x Number
## Area (sq.ft.) = 0.02170139
## Depth (ft.) = 26.00
## Unit Weight (# per cu.ft.) = 490
## Number = 2
## Total (#) = 552.9514172

```

```

##
## .....
##

```

```

## ITEM 513E10321 STRUCTURAL STEEL MEMBERS, LEVEL 6, AS PER PLAN
## S13 Eyebars (1.25 x 1.25)
## Weight = Area x Depth x Unit Weight x Number
## Area (sq.ft.) = 0.01085069
## Depth (ft.) = 19.00
## Unit Weight (# per cu.ft.) = 490
## Number = 2
## Total (#) = 202.0398478

```

```

##
## .....
##

```

```

## ITEM 513E10321 STRUCTURAL STEEL MEMBERS, LEVEL 6, AS PER PLAN
## S17 Eyebars (1.25 x 1.25)
## Weight = Area x Depth x Unit Weight x Number
## Area (sq.ft.) = 0.01085069
## Depth (ft.) = 19.00
## Unit Weight (# per cu.ft.) = 490
## Number = 2
## Total (#) = 202.0398478

```

```

##
## .....
##

```

```

## ITEM 513E10321 STRUCTURAL STEEL MEMBERS, LEVEL 6, AS PER PLAN
## S18 Eyebars (2.5 x 1.25)

```

```

## Weight = Area x Depth x Unit Weight x Number
## Area (sq.ft.) = 0.02170139
## Depth (ft.) = 24.9312
## Unit Weight (# per cu.ft.) = 490
## Number = 2
## Total (#) = 530.22086048064

```

```

##
## .....
##

```

```

## ITEM 513E10321 STRUCTURAL STEEL MEMBERS, LEVEL 6, AS PER PLAN
## S19 Eyebars (0.875 x 0.875)
## Weight = Area x Depth x Unit Weight x Number
## Area (sq.ft.) = 0.00531684
## Depth (ft.) = 24.9312
## Unit Weight (# per cu.ft.) = 490
## Number = 2
## Total (#) = 129.90409737984

```

```

##
## .....
##

```

```

## ITEM 513E10321 STRUCTURAL STEEL MEMBERS, LEVEL 6, AS PER PLAN
## S22 Eyebars (1.25 x 1.25)
## Weight = Area x Depth x Unit Weight x Number
## Area (sq.ft.) = 0.01085069
## Depth (ft.) = 24.9312
## Unit Weight (# per cu.ft.) = 490
## Number = 2
## Total (#) = 265.11030807744

```

```

##
## .....
##

```

```

## ITEM 513E10321 STRUCTURAL STEEL MEMBERS, LEVEL 6, AS PER PLAN
## N11 Channels (10C15.3)

```

```
## Weight = Length x Unit Weight x Number
## Length (ft.) = 17.25
## Unit Weight (# per ft.) = 15.3
## Number = 2
## Total (#) = 527.85
##
## .....
##
## ITEM 513E10321 STRUCTURAL STEEL MEMBERS, LEVEL 6, AS PER PLAN
## N12 Channels (10C15.3)
## Weight = Length x Unit Weight x Number
## Length (ft.) = 26.00
## Unit Weight (# per ft.) = 15.3
## Number = 2
## Total (#) = 795.6
##
## .....
##
## ITEM 513E10321 STRUCTURAL STEEL MEMBERS, LEVEL 6, AS PER PLAN
## N14 Channels (6C8.20)
## Weight = Length x Unit Weight x Number
## Length (ft.) = 19.00
## Unit Weight (# per ft.) = 8.20
## Number = 2
## Total (#) = 311.6
##
## .....
##
## ITEM 513E10321 STRUCTURAL STEEL MEMBERS, LEVEL 6, AS PER PLAN
## S14 Channels (6C8.20)
## Weight = Length x Unit Weight x Number
## Length (ft.) = 19.00
## Unit Weight (# per ft.) = 8.20
```

```

## Number = 2
## Total (#) = 311.6
##
## . . . . .
##
## ITEM 513E10321 STRUCTURAL STEEL MEMBERS, LEVEL 6, AS PER PLAN
## Top Bracing 1-inch Bar
## Weight = Area x Depth x Unit Weight x Number
## Area (sq.ft.) = 0.005454154
## Depth (ft.) = 24.3952
## Unit Weight (# per cu.ft.) = 490
## Number = 8
## Total (#) = 521.576296430336
##
## . . . . .
##
## ITEM 513E10321 STRUCTURAL STEEL MEMBERS, LEVEL 6, AS PER PLAN
## Bottom Bracing 1-inch Bar
## Weight = Area x Depth x Unit Weight x Number
## Area (sq.ft.) = 0.005454154
## Depth (ft.) = 24.3952
## Unit Weight (# per cu.ft.) = 490
## Number = 12
## Total (#) = 782.364444645504
##
## . . . . .
##
## ITEM 513E10321 STRUCTURAL STEEL MEMBERS, LEVEL 6, AS PER PLAN
## LT3, LT6, LT9 Top Bracing Angles
## Weight = Length x Unit Weight x Number
## Length (ft.) = 23.00
## Unit Weight (# per ft.) = 5.40
## Number = 6

```



```
## Total (#) = 745.2
##
## .....
##
## ITEM 513E10321 STRUCTURAL STEEL MEMBERS, LEVEL 6, AS PER PLAN
## NKN3, NKN4, NKN5, SKN3, SKN4, SKN5 Knee Bracing Angles
## Weight = Length x Unit Weight x Number
## Length (ft.) = 5.75
## Unit Weight (# per ft.) = 4.10
## Number = 12
## Total (#) = 282.9
##
## .....
##
## ITEM 513E10321 STRUCTURAL STEEL MEMBERS, LEVEL 6, AS PER PLAN
## EPB1, WPB1 Portal Bracing Angles
## Weight = Length x Unit Weight x Number
## Length (ft.) = 16.08
## Unit Weight (# per ft.) = 3.62
## Number = 4
## Total (#) = 232.8384
##
## .....
##
## ITEM 513E10321 STRUCTURAL STEEL MEMBERS, LEVEL 6, AS PER PLAN
## EPB2, WPB2, EPB6, WPB6 Portal Bracing Angles
## Weight = Length x Unit Weight x Number
## Length (ft.) = 5.16
## Unit Weight (# per ft.) = 3.62
## Number = 8
## Total (#) = 149.4336
##
## .....
```

```
##
## ITEM 513E10321 STRUCTURAL STEEL MEMBERS, LEVEL 6, AS PER PLAN
## EPB3, WPB3, EPB5, WPB5 Portal Bracing Angles
## Weight = Length x Unit Weight x Number
## Length (ft.) = 10.97
## Unit Weight (# per ft.) = 3.62
## Number = 8
## Total (#) = 317.6912
##
## . . . . .
##
## ITEM 513E10321 STRUCTURAL STEEL MEMBERS, LEVEL 6, AS PER PLAN
## EPB4, WPB4 Portal Bracing Angles
## Weight = Length x Unit Weight x Number
## Length (ft.) = 7.49
## Unit Weight (# per ft.) = 3.62
## Number = 4
## Total (#) = 108.4552
##
## . . . . .
##
## ITEM 513E10321 STRUCTURAL STEEL MEMBERS, LEVEL 6, AS PER PLAN
## Upper Lateral Bracing Support Angles
## Weight = Length x Unit Weight x Number
## Length (ft.) = 0.25
## Unit Weight (# per ft.) = 4.90
## Number = 16
## Total (#) = 19.6
##
## . . . . .
##
## ITEM 513E10321 STRUCTURAL STEEL MEMBERS, LEVEL 6, AS PER PLAN
## Portal Plate A
```

```

## Weight = Area x Depth x Unit Weight x Number
## Area (sq.ft.) = 0.9253
## Depth (ft.) = 0.02083333
## Unit Weight (# per cu.ft.) = 490
## Number = 4
## Total (#) = 37.78307728804

```

```

##
## .....
##

```

```

## ITEM 513E10321 STRUCTURAL STEEL MEMBERS, LEVEL 6, AS PER PLAN

```

```

## Portal Plate B
## Weight = Area x Depth x Unit Weight x Number
## Area (sq.ft.) = 0.7722
## Depth (ft.) = 0.02083333
## Unit Weight (# per cu.ft.) = 490
## Number = 4
## Total (#) = 31.53149495496

```

```

##
## .....
##

```

```

## ITEM 513E10321 STRUCTURAL STEEL MEMBERS, LEVEL 6, AS PER PLAN

```

```

## Portal Plate C
## Weight = Area x Depth x Unit Weight x Number
## Area (sq.ft.) = 0.7115
## Depth (ft.) = 0.02083333
## Unit Weight (# per cu.ft.) = 490
## Number = 4
## Total (#) = 29.0529120182

```

```

##
## .....
##

```

```

## ITEM 513E10321 STRUCTURAL STEEL MEMBERS, LEVEL 6, AS PER PLAN

```

```

## Portal Plate D

```

```

## Weight = Area x Depth x Unit Weight x Number
## Area (sq.ft.) = 1.6500
## Depth (ft.) = 0.02083333
## Unit Weight (# per cu.ft.) = 490
## Number = 2
## Total (#) = 33.68749461

```

```

##
## .....
##

```

```

## ITEM 513E10321 STRUCTURAL STEEL MEMBERS, LEVEL 6, AS PER PLAN

```

```

## Portal Plate Center Rectangle
## Weight = Area x Depth x Unit Weight x Number
## Area (sq.ft.) = 0.1111
## Depth (ft.) = 0.02083333
## Unit Weight (# per cu.ft.) = 490
## Number = 2
## Total (#) = 2.26829130374

```

```

##
## .....
##

```

```

## ITEM 513E10321 STRUCTURAL STEEL MEMBERS, LEVEL 6, AS PER PLAN

```

```

## Knee Brace Connection Plate
## Weight = Area x Depth x Unit Weight x Number
## Area (sq.ft.) = 0.2454
## Depth (ft.) = 0.02083333
## Unit Weight (# per cu.ft.) = 490
## Number = 12
## Total (#) = 30.06149519016

```

```

##
## .....
##

```

```

## ITEM 513E10321 STRUCTURAL STEEL MEMBERS, LEVEL 6, AS PER PLAN

```

```

## N11, N12 Batton Plates

```

```

## Weight = Area x Depth x Unit Weight x Number
## Area (sq.ft.) = 0.5833333
## Depth (ft.) = 0.02083333
## Unit Weight (# per cu.ft.) = 490
## Number = 2
## Total (#) = 11.9097196361112

```

```

##
## .....
##

```

```

## ITEM 513E10321 STRUCTURAL STEEL MEMBERS, LEVEL 6, AS PER PLAN
## N14, S14 Lacing Plates (15 x 1.375 x 0.25)
## Weight = Area x Depth x Unit Weight x Number
## Area (sq.ft.) = 0.1432292
## Depth (ft.) = 0.02083333
## Unit Weight (# per cu.ft.) = 490
## Number = 80
## Total (#) = 116.970494618051

```

```

##
## .....
##

```

```

## ITEM 513E10321 STRUCTURAL STEEL MEMBERS, LEVEL 6, AS PER PLAN
## East Portal Lacing Plates (15 x 1.375 x 0.25)
## Weight = Area x Depth x Unit Weight x Number
## Area (sq.ft.) = 0.1432292
## Depth (ft.) = 0.02083333
## Unit Weight (# per cu.ft.) = 490
## Number = 98
## Total (#) = 143.288855907113

```

```

##
## .....
##

```

```

## ITEM 513E10321 STRUCTURAL STEEL MEMBERS, LEVEL 6, AS PER PLAN
## West Portal Lacing Plates (15 x 1.375 x 0.25)

```

```

## Weight = Area x Depth x Unit Weight x Number
## Area (sq.ft.) = 0.1432292
## Depth (ft.) = 0.02083333
## Unit Weight (# per cu.ft.) = 490
## Number = 98
## Total (#) = 143.288855907113

```

```

##
## .....
##

```

```

## ITEM 513E10321 STRUCTURAL STEEL MEMBERS, LEVEL 6, AS PER PLAN
## Floorbeam connection plates (4 per floorbeam)
## Weight = Area x Depth x Unit Weight x Number
## Area (sq.ft.) = 2.32
## Depth (ft.) = 0.0417
## Unit Weight (# per cu.ft.) = 490
## Number = 20
## Total (#) = 948.0912

```

```

##
## .....
##

```

```

## ITEM 513E10321 STRUCTURAL STEEL MEMBERS, LEVEL 6, AS PER PLAN
## Floorbeam hanger rods (1-inch Bar)
## Weight = Area x Depth x Unit Weight x Number
## Area (sq.ft.) = 0.005454154
## Depth (ft.) = 5.00
## Unit Weight (# per cu.ft.) = 490
## Number = 10
## Total (#) = 133.626773

```

```

##
## .....
##

```

```

## ITEM 513E10321 STRUCTURAL STEEL MEMBERS, LEVEL 6, AS PER PLAN
## Floorbeam hanger pins (3.75-inch Bar)

```

```

## Weight = Area x Depth x Unit Weight x Number
## Area (sq.ft.) = 0.07669904
## Depth (ft.) = 2.00
## Unit Weight (# per cu.ft.) = 490
## Number = 10
## Total (#) = 751.650592

```

```

##
## .....
##

```

```

## ITEM 513E20000 WELDED STUD SHEAR CONNECTORS
## Total studs for all beams
## User provided quantity = 2000

```

```

##
## .....
##

```

```

## ITEM 513E95030 STRUCTURAL STEEL, MISC.:
## Button-headed bolts for truss members
## User provided quantity = 3845

```

```

##
## .....
##

```

```

## ITEM 516E10000 PREFORMED ELASTOMERIC COMPRESSION JOINT SEAL
## Rear abutment compression seal
## User supplied length (ft.) = 14.1667

```

```

## Number = 1
## TOTAL (ft.) = 14.1667
##
## .....
##

```

```

## ITEM 516E10000 PREFORMED ELASTOMERIC COMPRESSION JOINT SEAL
## Forward abutment compression seal
## User supplied length (ft.) = 14.1667

```

```

## Number = 1

```

```

## TOTAL (ft.) = 14.1667
##
## . . . . .
##
## ITEM 516E13600 1" PREFORMED EXPANSION JOINT FILLER
## PEJF Rear abutment interface with existing (Both sides)
## Area = Base x Height x Number
## Base (ft.) = 2
## Height (ft.) = 3
## Number = 2
## Total (sq.ft.) = 12
##
## . . . . .
##
## ITEM 516E13600 1" PREFORMED EXPANSION JOINT FILLER
## PEJF Forward abutment interface with existing (Both sides)
## Area = Base x Height x Number
## Base (ft.) = 2
## Height (ft.) = 3
## Number = 2
## Total (sq.ft.) = 12
##
## . . . . .
##
## ITEM 516E41100 1/8" PREFORMED BEARING PAD
## Non-reinforced pads between stringers and floorbeams
## User provided quantity = 20
##
## . . . . .
##
## ITEM 516E44101 ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN
## Stringer to Abutment bearings
## User provided quantity = 8

```



```
##
## . . . . .
##
## ITEM 516E44101 ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN
## Truss to Abutment bearings
## User provided quantity = 4
##
## . . . . .
##
## ITEM 516E47001 JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN
## Jacking and Temporary Support during construction
## LUMP SUM
##
## . . . . .
##
## ITEM 517E73008 RAILING (THRIE BEAM RAIL), MISC.:
## Railing including posts to stringers, each side
## User supplied length (ft.) = 104.5
## Number = 2
## TOTAL (ft.) = 209
##
## . . . . .
##
## ITEM 517E76300 RAILING, MISC.:
## Decorative (lattice) railing, each side
## User supplied length (ft.) = 104.5
## Number = 2
## TOTAL (ft.) = 209
##
## . . . . .
##
## ITEM 518E22300 SPECIAL - STEEL DRIP STRIP
## Drip strip on each deck edge
```

```

## User supplied length (ft.) = 104.5
## Number = 2
## TOTAL (ft.) = 209
##
## . . . . .
##
## ITEM 530E00600 SPECIAL - STRUCTURES
## Partially filled steel grid deck
## Area = Base x Height x Number
## Base (ft.) = 14.1667
## Height (ft.) = 104.5
## Number = 1
## Total (sq.ft.) = 1480.42015
##
## . . . . .
##
## ITEM 602E98000 MASONRY, MISC.:
## Abutment stone repair
## LUMP SUM
##
## . . . . .
##
## ITEM 613E41200 LOW STRENGTH MORTAR BACKFILL
## Backfill for partial abutment seat and backwall (Rear 1 of 3)
## Volume = Base x Height x Depth x Number / 27
## Base (ft.) = 15
## Height (ft.) = 1.5
## Depth (ft.) = 24.6667
## Number = 1
## Total (cu.yd.) = 20.5555833333333
##
## . . . . .
##

```

```

## ITEM 613E41200 LOW STRENGTH MORTAR BACKFILL
## Backfill for partial abutment seat and backwall (Rear 2 of 3)
## Volume = Base x Height x Depth x Number / 27
## Base (ft.) = 1
## Height (ft.) = 3
## Depth (ft.) = 24.6667
## Number = 1
## Total (cu.yd.) = 2.7407444444444444

```

```

##
## .....
##

```

```

## ITEM 613E41200 LOW STRENGTH MORTAR BACKFILL
## Backfill for partial abutment seat and backwall (Rear 3 of 3)
## Volume = 1/2 x Base x Height x Depth x Number / 27
## Base (ft.) = 14
## Height (ft.) = 3
## Depth (ft.) = 24.6667
## Number = 1
## Total (cu.yd.) = 19.185211111111111

```

```

##
## .....
##

```

```

## ITEM 613E41200 LOW STRENGTH MORTAR BACKFILL
## Backfill for partial abutment seat and backwall (Forward 1 of 3)
## Volume = Base x Height x Depth x Number / 27
## Base (ft.) = 15
## Height (ft.) = 1.5
## Depth (ft.) = 20.6667
## Number = 1
## Total (cu.yd.) = 17.22225

```

```

##
## .....
##

```

```

## ITEM 613E41200 LOW STRENGTH MORTAR BACKFILL
## Backfill for partial abutment seat and backwall (Forward 2 of 3)
## Volume = Base x Height x Depth x Number / 27
## Base (ft.) = 1
## Height (ft.) = 3
## Depth (ft.) = 20.6667
## Number = 1
## Total (cu.yd.) = 2.2963

```

```

##
## .....
##

```

```

## ITEM 613E41200 LOW STRENGTH MORTAR BACKFILL
## Backfill for partial abutment seat and backwall (Forward 3 of 3)
## Volume = 1/2 x Base x Height x Depth x Number / 27
## Base (ft.) = 14
## Height (ft.) = 3
## Depth (ft.) = 20.6667
## Number = 1
## Total (cu.yd.) = 16.0741

```

```

##
## .....
##

```

```

## ITEM 625E33000 STRUCTURE GROUNDING SYSTEM
## One per side of bridge (north and south)
## User provided quantity = 2

```

```

##
## .....
##

```

```

## ITEM 630E97700 SIGNING, MISC.:
## Commissioner's plaque (one for each end)
## User provided quantity = 2

```

```

##
## .....

```

```

##
## ITEM 630E97700 SIGNING, MISC.:
## Builder's plaque (one for each end)
## User provided quantity = 2
##
## . . . . .
##
## ITEM 630E97700 SIGNING, MISC.:
## Portal topping "Sunburst" (one for each end)
## User provided quantity = 4
##
## . . . . .
##
## ITEM 845E60020 SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL
## Based on salvaged members
## LUMP SUM
##
## . . . . .
##
## ITEM 845E61000 GRINDING FINES, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL
## One minute per foot of coated members. Estimate using
## User provided quantity = 7
##
## . . . . .
##
## ITEM 845E62020 FIELD METALLIZING OF EXISTING STRUCTURAL STEEL
## Based on salvaged members
## LUMP SUM
##
## . . . . .

```

For additional information regarding Michael Baker International see <https://www.mbakertntl.com/>