

BY: BWJ DATE: 3/7/2025
CHK: ABD DATE: 3/20/2025
(rev. tracings 8/23/2025)

AMERICAN STRUCTUREPOINT
HAM-74-0358
Quantities Tracings

JOB# 2022.02375

ITEM #	DESCRIPTION	QUANTITY	UNIT
202E11203	PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	LS	LS
202E22900	APPROACH SLAB REMOVED	133	SY
202E23500	WEARING COURSE REMOVED	133	SY
202E98200	REMOVAL MISC.: PORTIONS OF STRUCTURE REMOVED, BULB ANGLE, AS PER PLAN	499	FT
503E11101	COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN	LS	LS
503E21300	UNCLASSIFIED EXCAVATION	LS	LS
505E11100	PILE DRIVING EQUIPMENT MOBILIZATION	LS	LS
507E00500	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN	1,760	FT
507E00550	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED	2,140	FT
509E10000	EPOXY COATED STEEL REINFORCEMENT	223,132	LB
509E20001	CONCRETE REINFORCEMENT, REPLACEMENT OF EXISTING CONCRETE REINFORCEMENT, AS PER PLAN	500	LB
509E26000	GALVANIZED STEEL REINFORCEMENT	4,763	LB
509E30020	NO. 4 DEFORMED GFRP REINFORCEMENT	4,256	FT
510E10001	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN	238	EACH
511E33500	SEMI-INTEGRAL DIAPHRAGM GUIDE	2	EACH
511E34446	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK	631	CY
511E34450	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET)	45	CY
511E41012	CLASS QC1 CONCRETE WITH QC/QA, PIER ABOVE FOOTINGS	158	CY
511E44112	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT NOT INCLUDING FOOTING	67	CY
511E46512	CLASS QC1 CONCRETE WITH QC/QA, FOOTING	130	CY
511E51512	CLASS QC2 CONCRETE WITH QC/QA, SIDEWALK	57	CY
512E10050	SEALING OF CONCRETE SURFACES (NON-EPOXY)	222	SY
512E10100	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	1,059	SY
512E10600	CONCRETE REPAIR BY EPOXY INJECTION	100	FT
513E10260	STRUCTURAL STEEL MEMBERS, LEVEL 3	268,700	LB
513E20000	WELDED STUD SHEAR CONNECTORS	8,952	EACH
514E00050	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL	4,400	SF
514E00056	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT	4,400	SF
514E00060	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT	19,680	SF
514E00066	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT	19,680	SF
514E00504	GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL	10	MNHR
514E10000	FINAL INSPECTION REPAIR	9	EACH
514E20001	FIELD PAINTING OF DAMAGED STRUCTURAL STEEL, AS PER PLAN	56	SF
514E27700	FIELD PAINTING, MISC.: COATING OF BEAM ENDS	251	SF
516E10010	ARMORLESS PREFORMED JOINT SEAL	148	FT
516E13600	1" PREFORMED EXPANSION JOINT FILLER	13	SF
516E13900	2" PREFORMED EXPANSION JOINT FILLER	86	SF
516E14020	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL	171	FT
516E44201	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (14" x 20" x 3.128")	27	EACH
516E44201	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (11" x 13" x 3.607")	18	EACH
516E47001	JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN	LS	LS
517E75122	RAILING (CONCRETE PARAPET WITH TWIN STEEL TUBE RAILING AND VANDAL PROTECTION FENCE)	300	FT
518E21200	POROUS BACKFILL WITH GEOTEXTILE FABRIC	288	CY
518E40000	6" PERFORATED CORRUGATED PLASTIC PIPE	180	FT
518E40010	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	100	FT
519E11101	PATCHING CONCRETE STRUCTURE, AS PER PLAN	100	SF
523E20000	DYNAMIC LOAD TESTING	2	EACH
526E25010	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=15")	411	SY
526E90030	TYPE C INSTALLATION	148	FT
601E20000	CRUSHED AGGREGATE SLOPE PROTECTION	271	SY
607E39900	VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC	249	FT
607E39930	VANDAL PROTECTION FENCE, 12' CURVED, COATED FABRIC	249	FT
625E33000	STRUCTURE GROUNDING SYSTEM	1	EACH

202E11203	PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	LS	LS
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DECK:

TOTAL: 8507.00 SQ FT ~measured in CAD

TOTAL:	\$250,000	LS
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202E22900	APPROACH SLAB REMOVED	133	SY
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COUNT: 2.00 EACH
LENGTH: 25.00 FT
WIDTH: 24.00 FT

TOTAL:	133.3	SY
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202E23500	WEARING COURSE REMOVED	133	SY
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TOTAL:	133.3	SY
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202E98200	REMOVAL MISC.: PORTIONS OF STRUCTURE REMOVED, BULB ANGLE, AS PER PLAN	499	FT
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COUNT:	2	EACH
LENGTH:	249.50	FT
TOTAL:	499.00	FT

TOTAL:	499	FT
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503E11101	COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN	1	LS
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TOTAL:	1.0	LS
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503E21300	UNCLASSIFIED EXCAVATION	1	LS
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TOTAL:	1.0	LS
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505E11100	PILE DRIVING EQUIPMENT MOBILIZATION	1	LS
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TOTAL:	1.0	LS
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507E00500	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN	1760	FT
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ABUTMENTS:

COUNT:	4.00	EACH	~number of proposed abutment locations
COUNT:	7.00	EACH	~number of proposed piles each location
LENGTH:	20	FT	
SUB-TOTAL:	560.00	FT	

PIERS:

COUNT:	6.00	EACH	~number of proposed pier locations
COUNT:	8.00	EACH	~number of proposed piles each location
LENGTH:	25	FT	
SUB-TOTAL:	1200.00	FT	

TOTAL:	1760	FT
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507E00550	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED	2140	FT
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ABUTMENTS:

COUNT:	4.00	EACH	~number of proposed abutment locations
COUNT:	7.00	EACH	~number of proposed piles each location
LENGTH:	25	FT	~ friction pile estimated length (draft geotech report)
SUB-TOTAL:	700.00	FT	

PIERS:

COUNT:	6.00	EACH	~number of proposed pier locations
COUNT:	8.00	EACH	~number of proposed piles each location
LENGTH:	30	FT	~ friction pile estimated length (draft geotech report)
SUB-TOTAL:	1440.00	FT	

TOTAL:	2140	FT
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509E10000	EPOXY COATED STEEL REINFORCEMENT	223132	LB
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FROM PLANS:

REAR ABUTMENT:	4254.00	LB
FORWARD ABUTMENT:	4537.00	LB
PIERS:	30112.00	LB
SUPERSTRUCTURE:	171579.00	LB
PARAPETS:	12650.00	LB

PLAN TOTAL:	223132.0	LB
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509E20001	CONCRETE REINFORCEMENT, REPLACEMENT OF EXISTING CONCRETE REINFORCEMENT, AS PER PLAN	500	LB
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TOTAL:	500.00	LB
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509E26000	GALVANIZED STEEL REINFORCEMENT	4763	LB
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FROM PLANS:

REAR ABUTMENT: 549.00 LB
FORWARD ABUTMENT: 549.00 LB
PIERS: 3665.00 LB

PLAN TOTAL:	4763.0	LB
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509E30020	NO. 4 DEFORMED GFRP REINFORCEMENT	4256	FT
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PLAN TOTAL:	4255.7	FT
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510E10001	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN	238	EACH
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ABUTMENTS:

COUNT: 2 EACH ~# abutments
DOWELS: 32
ABUT TOTAL: 64.00 EACH

PIERS:

COUNT: 3 EACH ~# piers
DOWELS: 58
PIER TOTAL: 174.00 EACH

TOTAL:	238.00	EACH
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511E33500	SEMI-INTEGRAL DIAPHRAGM GUIDE	2	EACH
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511E34446	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK	631	CY
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DECK:

COUNT: 1 EACH
LENGTH: 249.50 FT
WIDTH: 73.83 FT
DEPTH: 0.73 FT
SUB-TOTAL: 497.49 CU YD 1 EACH x 249.5 FT x 73.83 FT x 0.73 FT x 1CU YD/27CU FT

HAUNCHES:

COUNT: 9 EACH
LENGTH: 243.00 FT ~f/f of abutment diaphragms
WIDTH: 1.01 FT ~width of flange W36x182 and W36x194 (ex)
DEPTH: 0.18 FT ~2" average haunch over proposed beams, 4" over existing,
SUB-TOTAL: 14.74 CU YD

OVERHANG:

COUNT: 2 EACH
LENGTH: 243.00 FT ~f/f of abutment diaphragms
WIDTH: 2.42 FT ~edge of flange to out of deck
DEPTH: 0.18 FT ~haunch depth
SUB-TOTAL: 7.85 CU YD

END DIAPHRAGMS:

COUNT: 2.00 EACH
LENGTH: 73.83 FT
WIDTH: 3.75 FT
HEIGHT: 5.40 FT ~1.5' average bearing embedment + 36" beam + 2" haunch + chamfer at diaphragm
SUB-TOTAL: 110.75 CU YD

TOTAL:	631.00	CU YD
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511E34450	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET)	45	CY
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PARAPET:

COUNT:	1	EACH	
LENGTH:	271.50	FT	~Bridge Limits + 6" on either side - 14'-0" Transitions (STD. DWG. SBR-1-20)
AREA:	4.08	SF	~STD. DWG. SBR-1-20
SUB-TOTAL:	41.06	CY	1 EACH x 271.5 FT x 4.08 SF x 1CY/27CF

TRANSITIONS:

COUNT:	2	EACH	~2 per side x 2 sides
VOLUME:	1.82	CU YD	(STD. DWG. SBR-1-20)
SUB-TOTAL:	3.64	CY	2 EACH x 1.82 CU YD

TOTAL:	44.70	CY
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511E41012	CLASS QC1 CONCRETE WITH QC/QA, PIER ABOVE FOOTINGS	158	CY
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WEST PIER CAPS:

COUNT:	3.00	EACH	
AREA:	170.00	SF	~taken from plans, measured about centerline of existing column 2
THICKNESS:	3.00	FT	
SUB-TOTAL:	56.67	CU YD	3 EACH x 170 SF x 3 FT x 1 CU YD / 27 CU FT

EAST PIER CAPS:

COUNT:	3.00	EACH	
AREA:	155.00	SF	~taken from plans, measured about centerline of existing column 2
THICKNESS:	3.00	FT	
SUB-TOTAL:	51.67	CU YD	3 EACH x 155 SF x 3 FT x 1 CU YD / 27 CU FT

PIER COLUMNS:

COUNT:	12.00	EACH	
PLAN AREA:	7.07	SF	
HEIGHT:	15.50	FT	~average
SUB-TOTAL:	48.69	CU YD	12 EACH x 7.07 SF x 15.5 FT x 1 CU YD / 27 CU FT

TOTAL:	158.00	CU YD
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511E44112	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT NOT INCLUDING FOOTING	67	CY
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ABUTMENT STEMS:

AREA:	190.00	SF	~R.A. avg, measured in CAD
AREA:	197.00	SF	~F.A. avg, measured in CAD
THICKNESS:	3.75	FT	
SUB-TOTAL:	53.75	CU YD	

WINGWALLS:

AREA:	106.00	SQ FT	~RA wingwalls, measured in CAD
AREA:	130.00	SQ FT	~FA wingwalls, measured in CAD
THICKNESS:	1.50	FT	
SUB-TOTAL:	13.11	CU YD	

ABUT. STEM TOTAL:	53.8	CU YD
WINGWALL TOTAL:	13.1	CU YD

TOTAL:	67.00	CU YD
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511E46512	CLASS QC1 CONCRETE WITH QC/QA, FOOTING	130	CY
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ABUTMENT FOOTING:

AREA:	154.00	SQ FT	~west side, FA
AREA:	140.00	SQ FT	~east side, FA
AREA:	148.00	SQ FT	~west side, RA
AREA:	133.00	SQ FT	~east side, RA
THICKNESS:	3.00	FT	
SUB-TOTAL:	63.89	CU YD	

PIER FOOTING:

COUNT:	6.00	EACH	~east side
AREA:	42.00	SQ FT	
COUNT:	6.00	EACH	~west side
AREA:	42.00	SQ FT	
THICKNESS:	3.50	FT	
SUB-TOTAL:	65.33	CU YD	

TOTAL:	130.00	CU YD
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511E51512	CLASS QC2 CONCRETE WITH QC/QA, SIDEWALK	57	CY
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SIDEWALK:

COUNT:	1	EACH	
LENGTH:	299.50	FT	~bridge limits + approach slabs
WIDTH:	7.00	FT	~includes area under railing, SBR-1-20 doesn't include area under railing
AVE. DEPTH:	0.73	FT	~8" curb w/ 0.0156 x-slope
SUB-TOTAL:	56.62	CU YD	1 EACH x 299.5 FT x 7 FT x 0.73 FT x 1 CU YD/27CU FT

TOTAL:	57.00	CU YD
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512E10050	SEALING OF CONCRETE SURFACES (NON-EPOXY)	222	SY
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SIDEWALK

PERIMETER:	6.67	FT	~walkable area of sidewalk width + 8" curb
LENGTH:	299.50	FT	~o/o bridge + 25' approach slabs

TOTAL:	221.85	SY
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512E10100	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	1060	SY
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PIER COLUMNS:

COUNT:	3.00	EACH	~# of piers
NUMBER:	4.00	EACH	~columns/pier
HEIGHT:	12.50	FT	~average exposed height
DIAMETER:	3.00	FT	
SUB-TOTAL:	117.81	SY	

PIER CAPS:

COUNT:	3.00	EACH	~# of piers
AREA:	656.27	SF	~area of flat cap faces + curved portions at edges
COUNT:	3.00	EACH	~# of piers
AREA:	161.28	SF	~cap underside
SUB-TOTAL:	272.52	SY	

PIER TOTAL: 391 SY

DIAPHRAGMS:

COUNT:	2.00	EACH	
LENGTH:	73.83	FT	
HEIGHT:	4.70	FT	~exposed diaphragm under bridge
SUB-TOTAL:	77.11	SY	

ABUTMENT STEMS

COUNT:	2.00	EACH	
LENGTH:	39.67	FT	
HEIGHT:	2.00	FT	~exposed height of abutment, 1.7' @ RA, 2.2' @ FA
SUB-TOTAL:	17.63	SY	

WINGWALLS:

COUNT:	2.00	EACH	
AREA:	62.00	SQ FT	~RA, measured in CAD, exposed face + 1' on top
COUNT:	2.00	EACH	
AREA:	76.00	SQ FT	~FA, measured in CAD, exposed face + 1' on top
SUB-TOTAL:	30.67	SY	

ABUT TOTAL: 125 SY

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PARAPET AND EDGE OF DECK:

PERIMETER:	7.35	FT	~BR-2-15 railing
LENGTH:	249.50	FT	~bridge limits + approach slabs - (2) 6' transitions
PERIMETER:	5.00	FT	~BR-2-15 railing without edge of deck, sidewalk or underside
LENGTH:	38.00	FT	~approach slabs - (2) 6' transitions
PERIMETER:	9.00	FT	~BR-2-15 railing transitions
LENGTH:	12.00	FT	~(2) 6' transitions
PERIMETER:	9.46	FT	~SBR-1-20 railing
LENGTH:	249.50	FT	~bridge limits
PERIMETER:	7.89	FT	~SBR-1-20 railing without edge of deck, sidewalk or underside
LENGTH:	22.00	FT	~bridge limits
PERIMETER:	7.89	FT	~SBR-1-20 railing transitions
LENGTH:	28.00	FT	~(2) 14' transitions

SUPERSTRUCTURE TOTAL: 543 SY

TOTAL: 1059.38 SY

512E10600 CONCRETE REPAIR BY EPOXY INJECTION

100

FT

TOTAL: 100.00 FT

~estimate

513E10260 STRUCTURAL STEEL MEMBERS, LEVEL 3

268700

LB

BEAMS:

COUNT:	5	EACH	
LENGTH:	246.5	FT	
WEIGHT:	182.0	LB/FT	~W36x182 (existing beams W36x150 & W36x194)
SUB-TOTAL:	224315	LB	

CROSS-FRAMES:

COUNT:	49	EACH	~at 7.1' c/c spacing
BEAMS C/C S:	7.1	FT	
HEIGHT:	3	FT	
STRAIGHT LENGTH:	6.3	FT	~flange to flange measurement - 1.5" from edge of flange at each beam
DIAGONAL LENGTH:	6.6	FT	~assume members starts average of 6" from inside of flanges
WEIGHT:	16.2	LB/FT	~5x5x1/2 members
SUB-TOTAL:	15501	LB	

CROSS-FRAMES:

COUNT:	33	EACH	~at 9.33' c/c spacing
BEAMS C/C S:	9.1	FT	
HEIGHT:	3	FT	
STRAIGHT LENGTH:	8.3	FT	~flange to flange measurement - 1.5" from edge of flange at each beam
DIAGONAL LENGTH:	8.5	FT	~assume members starts average of 6" from inside of flanges
WEIGHT:	16.2	LB/FT	~5x5x1/2 members
SUB-TOTAL:	13584	LB	

CROSS-FRAMES PLATES:

COUNT:	164	EACH	~stiffener plates
HEIGHT:	2.8	FT	
WIDTH:	0.60	FT	~assume plates protrude 1.5" from edge of flange
THICKNESS:	0.38	IN	
UNIT WEIGHT:	490.0	LBS/CU FT	
SUB-TOTAL:	4254	LB	

DIAPHRAGM PLATES:

COUNT:	164	EACH	~top plates
HEIGHT:	0.75	FT	~plate measurements based on beam design sketches
WIDTH:	1.17	FT	
THICKNESS:	0.38	IN	
DENSITY:	490.0	LBS/ CU FT	~density of steel
SUB-TOTAL:	2197	LB	

DIAPHRAGM PLATES:

COUNT:	164	EACH	~bottom plates
HEIGHT:	1.0	FT	~plate measurements based on beam design sketches
WIDTH:	1.17	FT	
THICKNESS:	0.38	IN	
DENSITY:	490.0	LBS/ CU FT	~density of steel
SUB-TOTAL:	2930	LB	

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SPLICE PLATES:

# BEAMS:	5	EACH
# SPLICES	3	# SPLICES/BEAM
# SPLICES:	15	EACH

COUNT:	2	EACH	~web plate
HEIGHT:	2.5	FT	
WIDTH:	1.56	FT	
THICKNESS:	0.50	IN	
DENSITY:	490.0	LBS/ CU FT	
SUB-TOTAL:	160	LB	

COUNT:	4	EACH	~inner flange plate couple
LENGTH:	1.56	FT	
WIDTH:	0.40	FT	
THICKNESS:	0.88	IN	
DENSITY:	490.0	LBS/ CU FT	
SUB-TOTAL:	88	LB	

COUNT:	2	EACH	~outer flange plate couple
LENGTH:	1.56	FT	
WIDTH:	1.00	FT	
THICKNESS:	0.75	IN	
DENSITY:	490.0	LBS/ CU FT	
SUB-TOTAL:	96	LB	

SPLICE PLATE TOTAL: 5150 LB

BOLTS:

PLATES:	10277	LBS	~diaphragm and splice plate weight
	7%		~percentage of total plate weight to account for bolts, note: plate steel areas not reduced for bolt holes.
SUB-TOTAL:	719	LB	

TOTAL:	268651	LB
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513E20000 WELDED STUD SHEAR CONNECTORS

8952 EACH

PROPOSED BEAMS:

BEAMS:	5.00	EACH
ROWS:	368.00	EACH
COUNT:	3.00	STUDS/ROW
SUB-TOTAL:	5520.00	EACH

EXISTING BEAMS:

BEAMS:	4.00	EACH
ROWS:	286.00	EACH
COUNT:	3.00	STUDS/ROW
SUB-TOTAL:	3432.00	EACH

TOTAL:	8952	EACH
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514E00050 SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL

4400 SF

EXISTING BEAMS:

COUNT:	2	EACH	~exterior existing beams
LENGTH:	241.50	FT	
PERIMETER:	9.11	FT	~2*beam height + 3* flange width, W36x194

TOTAL:	4399.3	SF
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514E00056 FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT

4400 SF

EXISTING BEAMS:

COUNT:	2	EACH	~exterior existing beams
LENGTH:	241.50	FT	
PERIMETER:	9.11	FT	~2*beam height + 3* flange width, W36x194

TOTAL:	4399.3	SF
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514E00060	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT	19680	SF
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PROPOSED BEAMS:

COUNT:	5	EACH	
LENGTH:	241.50	FT	~beam length minus area contained in semi-integral diaphragm
PERIMETER:	9.11	FT	~W36x182 (existing beams W36x150 & W36x194)
SUB-TOTAL:	10998	SF	

EXISTING BEAMS:

COUNT:	2	EACH	~existing exterior beams
LENGTH:	241.50	FT	
PERIMETER:	9.11	FT	~2*beam height + 3* flange width, W36x194
SUB-TOTAL:	4399	SF	

CROSS-FRAMES:

COUNT:	49	EACH	~at 7.1' c/c spacing
BEAMS C/C S:	7.1	FT	
HEIGHT:	3	FT	
STRAIGHT LENGTH:	6.3	SF	~flange to flange measurement - 1.5" from edge of flange at each beam
DIAGONAL LENGTH:	6.6	SF	~assume members starts average of 6" from inside of flange top/bottom flanges
PERIMETER:	1.7	SF	~5x5x1/2 members
SUB-TOTAL:	1595	SF	

CROSS-FRAMES:

COUNT:	33	EACH	~at 9.33' c/c spacing
BEAMS C/C S:	9.1	FT	
HEIGHT:	3	FT	
STRAIGHT LENGTH:	8.3	FT	
DIAGONAL LENGTH:	8.5	FT	
PERIMETER:	1.7	SF	~5x5x1/2 members
SUB-TOTAL:	1398	SF	

CROSS-FRAMES PLATES:

COUNT:	164	EACH	~stiffener plates
HEIGHT:	2.8	FT	
WIDTH:	0.60	FT	~assume plates protrude 1.5" from edge of flange
THICKNESS:	0.38	IN	
SUB-TOTAL:	570	SF	

DIAPHRAGM PLATES:

COUNT:	164	EACH	~diaphragm top plates
HEIGHT:	0.75	FT	~diaphragm plate measurements based on beam design sketches
WIDTH:	1.17	FT	
THICKNESS:	0.38	IN	
SUB-TOTAL:	307	SF	

DIAPHRAGM PLATES:

COUNT:	164	EACH	~diaphragm bottom plates
HEIGHT:	1.0	FT	~diaphragm plate measurements based on beam design sketches
WIDTH:	1.17	FT	
THICKNESS:	0.38	IN	
SUB-TOTAL:	405	SF	

TOTAL:	19672	SF
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514E00066	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT	19680	SF
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TOTAL:	19672	SF
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514E00504	GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL	10	MNHR
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EXISTING BEAMS:

COUNT:	2	EACH	~existing exterior beams
LENGTH:	249.5	FT	
SUB-TOTAL:	499	FT	~assume 1hr per 50 ft.

TOTAL:	10.0	MNHR
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514E10000	FINAL INSPECTION REPAIR	9	EACH
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COUNT:	7.0	EACH	~(5) proposed beams + (2) existing beams painted
LENGTH:	246.5	FT	
FT/INSPECTION:	300.0		~1 inspection/300' of beams per CM&S 514.21
CROSS-FRAMES:	82.0	#	~2.5% of all cross-frames

TOTAL:	9	EACH
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514E20001	FIELD PAINTING OF DAMAGED STRUCTURAL STEEL, AS PER PLAN	56	SF
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COUNT:	5	EACH	
PERIMETER:	9.00	SF	~W36x150
LENGTH:	49.00	FT	
PERIMETER:	9.11	FT	~W36x194
LENGTH:	196.00	FT	
%	0.5%		~assume 1 in 200 SF needs repaired

TOTAL:	56	SF
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514E27700	FIELD PAINTING, MISC.: COATING OF BEAM ENDS	251	SF
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PROPOSED BEAMS:

COUNT:	10	EACH	~number of proposed beam ends
LENGTH:	2.75	FT	~9" beam projection + 1' to edge of diaphragm + 1' past face of diaphragm per BDM
PERIMETER:	9.11	FT	~top of top flange included in prime coat

TOTAL:	250.5	SF
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516E10010	ARMORLESS PREFORMED JOINT SEAL	148	FT
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COUNT:	2	EACH	
LENGTH:	73.83	FT	

TOTAL:	147.7	FT
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516E13600	1" PREFORMED EXPANSION JOINT FILLER	13	SF
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AT PARAPETS:

NUMBER:	2	EACH	
PARAPET AREA:	2.00	SF	

NUMBER:	2	EACH	
PARAPET AREA:	4.08	SF	

AREA:	12.2	SF
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516E13900	2" PREFORMED EXPANSION JOINT FILLER	86	SF
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WINGWALL/DIAPHRAGM:

COUNT:	4	EACH	
WIDTH:	3.75	FT	
HEIGHT:	5.68	FT	~average diaphragm height at wingwalls

TOTAL:	85.1	FT
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516E14020	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL	171	FT
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COUNT:	2	EACH	
LENGTH:	73.8	FT	
HEIGHT:	5.75	FT	~height of diaphragm

TOTAL:	170.7	FT
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BY: BWJ DATE: 3/7/2025
CHK: ABD DATE: 3/20/2025
(rev. tracings 8/23/2025)

AMERICAN STRUCTUREPOINT
HAM-74-0358
Quantities Tracings

JOB# 2022.02375

516E44201	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (14" x 20" x 3.128")	27	EACH
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PIERS:
BEAM LINES: 9.00 EACH ~14 X 20
LOCATIONS: 3.00 EACH ~pier 1, 2 and 3
TOTAL: 27.00 EACH

TOTAL:	27	EACH
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516E44201	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (11" x 13" x 3.607")	18	EACH
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ABUTMENTS:
BEAM LINES: 9.00 EACH ~11 X 13
LOCATIONS: 2.00 EACH ~rear and forward abutments
TOTAL: 18.00 EACH

TOTAL:	18	EACH
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516E47001	JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN	LS	LS
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LOCATIONS:
TOTAL: 20.00 EA ~4 existing beam lines * 5 substructures

TOTAL:	\$25,000	LS
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517E75122	RAILING (CONCRETE PARAPET WITH TWIN STEEL TUBE RAILING AND VANDAL PROTECTION FENCE)	300	FT
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COUNT: 1 EACH
LENGTH: 299.50 FT

TOTAL:	300	FT
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518E21200	POROUS BACKFILL WITH GEOTEXTILE FABRIC	288	CY
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ABUTMENTS:
AREA: 72 SF ~RA, behind existing footing
AREA: 72 SF ~FA, behind existing footing
AVG. HEIGHT: 5 FT
SUB-TOTAL: 80.00 CY

AREA: 113 SF ~RA, behind proposed footing
AREA: 121 SF ~FA, behind proposed footing
AVG. HEIGHT: 8 FT
SUB-TOTAL: 208.00 CY

TOTAL:	288.0	CY
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518E40000	6" PERFORATED CORRUGATED PLASTIC PIPE	180	FT
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LENGTH: 90 FT ~RA
LENGTH: 90 FT ~FA

TOTAL:	180.0	FT
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518E40010	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	100	FT
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TOTAL:	100.0	FT
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519E11101	PATCHING CONCRETE STRUCTURE, AS PER PLAN	100	SF
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TOTAL:	100.0	SF
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BY: BWJ DATE: 3/7/2025
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AMERICAN STRUCTUREPOINT
HAM-74-0358
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JOB# 2022.02375

523E20000	DYNAMIC LOAD TESTING	2	EACH
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COUNT: 2.00 EACH

TOTAL: 2.00 EACH

526E25010	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=15")	411	SY
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COUNT: 2.00 EACH
LENGTH: 25.00 FT
WIDTH: 73.83 FT

TOTAL: 410.18 SY

526E90030	TYPE C INSTALLATION	148	FT
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COUNT: 2 EACH
LENGTH: 73.83 FT ~approach slab width

TOTAL: 148 FT

601E20000	CRUSHED AGGREGATE SLOPE PROTECTION	271	SY
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AREA: 1032 SF ~RA
AREA: 1400 SF ~FA

TOTAL: 270.2 SY

607E39900	VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC	249	FT
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TOTAL: 249 FT

607E39930	VANDAL PROTECTION FENCE, 12' CURVED, COATED FABRIC	249	FT
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TOTAL: 249 FT

625E33000	STRUCTURE GROUNDING SYSTEM	1	EACH
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TOTAL: 1 EACH