

PIK-23-05.23 Bridge Estimated Quantities

Calculated By: CML Date: 5/8/2022 Job No.:
Checked By: PES Date: 5/9/2022 Bridge No.:

Project: PIKE-23-05.23 SFN:

ESTIMATED QUANTITIES						CALC BY: 0	DATE: 5/8/2022
						CHECK BY: 0	DATE: 5/9/2022
ITEM	EXT	PIK-23-03.53 NB	PIK-23-03.53 SB	QUANTITY	UNIT	DESCRIPTION	
202	11203			LS		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	
202	23500	18	18	36	SY	WEARING COURSE REMOVED	
254	1000	753	770	1523	SY	PAVEMENT PLANING, ASPHALT CONCRETE, 1.5" THICK	
407	13900	115	115	230	GAL	TACK COAT, 702.13	
509	10000	1719	1723	3,442	LB	EPOXY COATED REINFORCING STEEL	
510	10001	100	100	200	EA	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN	
511	34410	6	6	12	CY	CLASS QC2 CONCRETE, SUPERSTRUCTURE	
511	54710	6	6	12	CY	CLASS QC1 CONCRETE, ABUTMENT	
512	10100	12	12	24	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
513	10200	1632	1632	3,264	LB	STRUCTURAL STEEL MEMBERS, LEVEL UF	
514	80020	231	231	462	SF	SHOP PAINTING AND FIELD TOUCH-UP OF STRUCTURAL STEEL	
516	11211	88	89	177	FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN	
516	13200	8	8	16	FT	1/2" PREFORMED EXPANSION JOINT FILLER	
516	31010	175	177	352	FT	2" DEEP JOINT SEALER	
856	10000	32	32	64	CY	BRIDGE DECK WATERPROOFING ASPHALT CONCRETE	

202 23500 36 SY WEARING COURSE REMOVED

northbound	4.50	ft	removal length
	35.00	ft	width of bridge deck
	157.50	sq ft	total area
	18.00	sy	total

southbound	4.50	ft	removal length
	35.00	ft	width of bridge deck
	157.50	sq ft	total area
	18.00	sy	total

254 1000 1523 SY PAVEMENT PLANING, ASPHALT CONCRETE, 1.5" THICK

northbound	193.56	ft	removal length
	35.00	ft	width of bridge deck
	6774.60	sq ft	total area
	753.00	sy	total

southbound	197.94	ft	removal length
	35.00	ft	width of bridge deck
	6927.90	sq ft	total area
	770.00	sy	total

407 13900 230 GAL TACK COAT, 702.13

northbound	196.02	ft	length of bridge deck
	35.00	ft	width of bridge deck
	762.30	sy	area of bridge deck
	0.15	gal/sy	application rate
	115.00	gal	total

southbound	197.08	ft	length of bridge deck
	35.00	ft	width of bridge deck
	766.42	sy	area of bridge deck
	0.15	gal/sy	application rate
	115.00	gal	total

509 10000 3,442 LB EPOXY COATED REINFORCING STEEL

NB	abutment	777.00	lb	from resteel spreadsheet
	superstructure	514.00	lb	from resteel spreadsheet
	parapet	428.00	lb	from resteel spreadsheet
		1719.00	lb	total

SB	abutment	779.00	lb	from resteel spreadsheet
	superstructure	516.00	lb	from resteel spreadsheet
	parapet	428.00	lb	from resteel spreadsheet
		1723.00	lb	total

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510	10001	200	EA	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN
abutment		42.00	ea	number of dowel rows in backwall
		1.00	ea	number of dowels per row
		2.00	ea	x2 abutments NB
		2.00	ea	x2 abutments SB
parapet		4.00	ea	number of dowel holes per parapet corner
		4.00	ea	number of parapet corners NB
		4.00	ea	number of parapet corners SB
NB		100.00	lb	total
SB		100.00	lb	total

511	34410	12	CY	CLASS QC2 CONCRETE, SUPERSTRUCTURE
slab	deck	7.50	in	depth thickness
		38.00	ft	width of deck
		2.16	ft	length of replacement per end
		2.00	ea	number of ends NB
		2.00	ea	number of ends SB
		102.60	cu ft	subtotal NB
		102.60	cu ft	subtotal SB
	haunch	9.00	in	haunch length per side
		1.00	in	haunch height per side
		2.00	ea	haunch sides per beam
		6.00	ea	number of beam
		2.16	ft	length of replacement per end
		2.00	ea	number of ends NB
		2.00	ea	number of ends SB
		1.62	cu ft	subtotal NB
		1.62	cu ft	subtotal SB
parapet		506.00	sq in	cross section area
		3.51	sq ft	cross section area
		2.50	ft	average length per slab
		1.45	ft	average length per abutment
		4.00	ea	number of slab/abutment ends NB
		4.00	ea	number of slab/abutment ends SB
		55.56	cu ft	subtotal NB
		55.56	cu ft	subtotal SB
NB		6.00	cy	total
SB		6.00	cy	total

511	54710	12	CY	CLASS QC1 CONCRETE, ABUTMENT
abutment approach		1.25	ft	width of backwall
		1.27	ft	depth of backwall
		44.41	ft	length at approach slab NB rear (from ORD)
		43.03	ft	length at approach slab NB fwd (from ORD)
		44.68	ft	length at approach slab SB rear (from ORD)
		43.37	ft	length at approach slab SB fwd (from ORD)
		138.90	cu ft	subtotal NB
		139.87	cu ft	subtotal SB
NB		6.00	cy	total
SB		6.00	cy	total

512	10100	24	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
parapet		6.53	ft	perimeter (from ord)
		2.50	ft	average length per slab
		1.45	ft	average length per abutment
		4.00	ea	number of ends
		4.00	ea	number of ends
		103.26	sq ft	total NB
		103.26	sq ft	total SB
NB		12.00	sq yd	total
SB		12.00	sq yd	total

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513	10200	3,264	LB	STRUCTURAL STEEL MEMBERS, LEVEL UF
cross frames		9.80	lb/ft	weight of L4x4x3/8
		12.84	ft	total length per beam spacing
		5.00	ea	number of beam spacing
		2.00	ea	number of replaced frame lines NB
		2.00	ea	number of replaced frame lines SB
		1258.32	lb	total weight of L4x4x3/8 NB
		1258.32	lb	total weight of L4x4x3/8 SB
top gusset plates		22.00	in	length of plate
		12.00	in	height of plate
		0.50	in	thickness of plate
		132.00	cu in	volume of plate
		489.00	lb/cu ft	weight of steel per volume
		1.00	ea	number of plates per beam spacing
		5.00	ea	number of beam spacing
		2.00	ea	number of replaced frame lines NB
		2.00	ea	number of replaced frame lines SB
		373.54	lb	total weight of top gusset plates NB
		373.54	lb	total weight of top gusset plates SB
NB		1632.00	lb	total
SB		1632.00	lb	total

514	80020	462	SF	SHOP PAINTING AND FIELD TOUCH-UP OF STRUCTURAL STEEL
existing beams		1.00	sq ft	area at each cross frame weld
		2.00	ea	sides of beam
		6.00	ea	number of beams
		2.00	ea	number of ends
		24.00	sf	area NB
		24.00	sf	area SB
cross frames		1.31	ft	perimeter of L4x4x3/8
		12.84	ft	total length per beam spacing
		5.00	ea	number of beam spacing
		2.00	ea	number of replaced frame lines NB
		2.00	ea	number of replaced frame lines SB
		168.20	sf	total surface area of L4x4x3/8 - NB
		168.20	sf	total surface area of L4x4x3/8 - SB
top gusset plates		22.00	in	length of plate
		12.00	in	height of plate
		0.50	in	thickness of plate
		562.00	sq in	surface area of plate
		1.00	ea	number of plates per beam spacing
		5.00	ea	number of beam spacing
		2.00	ea	number of replaced frame lines NB
		2.00	ea	number of replaced frame lines SB
		5620.00	sq in	total surface area of gusset plates NB
		5620.00	sq in	total surface area of gusset plates SB
		39.03	sq ft	total surface area of gusset plates NB
		39.03	sq ft	total surface area of gusset plates SB
		231.23	sf	total NB
		231.23	sf	total SB
		462.46	sf	total

516	11211	177	FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN
		44.41	ft	length at approach slab NB rear (from ORD)
		43.03	ft	length at approach slab NB fwd (from ORD)
		44.68	ft	length at approach slab SB rear (from ORD)
		43.37	ft	length at approach slab SB fwd (from ORD)
NB		88.00	ft	total
SB		89.00	ft	total

516	13200	16	FT	1/2" PREFORMED EXPANSION JOINT FILLER
		1.63	ft	max width at long side
		1.31	ft	max width at short side
		1.35	ft	max depth
		2.00	ea	number of parapet corners NB
		2.00	ea	number of parapet corners SB
NB		8.00	ft	total
SB		8.00	ft	total

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516	31010	352	FT	2" DEEP JOINT SEALER
		44.41	ft	length at approach slab NB rear (from ORD)
		43.03	ft	length at approach slab NB fwd (from ORD)
		44.68	ft	length at approach slab SB rear (from ORD)
		43.37	ft	length at approach slab SB fwd (from ORD)
		2.00	ea	number of joints at each end
NB		175.00	ft	total
SB		177.00	ft	total

856	10000	64	CY	BRIDGE DECK WATERPROOFING ASPHALT CONCRETE
northbound		196.02	ft	length of bridge deck (from ORD)
		35.00	ft	width of bridge deck
		1.50	in	depth of overlay
		857.59	cu ft	total volume
		32.00	cy	total NB
southbound		197.08	ft	length of bridge deck (from ORD)
		35.00	ft	width of bridge deck
		1.50	in	depth of overlay
		862.23	cu ft	total volume
		32.00	cy	total SB