



CALCULATIONS

Project: 2017-0415
PID No. 98005
SCI-335-8.61

Submittal: Final
Date: Jul 22, 2019
By: CAB
Checked: CLP

Bridge Quantity Calculations

ITEM 202E11003 STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN (LS)

LUMP SUM

TOTAL LUMP

ITEM 202E22900 APPROACH SLAB REMOVED (SY)

2 X 15.00 X 20.00 = 600.00 SQ. FT. /9= 66.67 SQ. YD.

TOTAL 67 SQ. YD.

ITEM 202E23500 WEARING COURSE REMOVED (SY)

99.06 X 36.50 = 3615.69 SQ. FT. /9= 401.74 SQ. YD.
2.00 X 15.00 X 20.00 = 600.00 SQ. FT. /9= 66.67 SQ. YD.

TOTAL 468 SQ. YD.

ITEM 503E11101 COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (LS)

LUMP SUM

TOTAL LUMP



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ITEM 503E21301 UNCLASSIFIED EXCAVATION, AS PER PLAN (LS)

LUMP SUM

TOTAL LUMP

ITEM 507E00100 STEEL PILES HP10X42, FURNISHED (FT)

RA	9	X	20	=	180	L.F.
FA	8	X	20	=	<u>160</u>	L.F.
					340	

TOTAL 340 FT

ITEM 507E00751 16" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED, AS PER PLAN (FT)

P1	6	X	25	=	150	L.F.
P2	6	X	25	=	<u>150</u>	L.F.
					300	

TOTAL 300 FT

ITEM 507E92201 PREBORED HOLES, AS PER PLAN (FT)

RA	9	X	18.00	=	162
FA	8	X	18.50	=	148
Piers	12	X	7.50	=	<u>90</u>
					400

TOTAL 400 FT



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ITEM 509E10000 EPOXY COATED REINFORCING STEEL (LB)

Abuts	7473	
Piers	2906	
SUP	<u>57962</u>	
	68341	POUND

TOTAL 68341 POUND

ITEM 511E33312 CLASS QC2 CONCRETE WITH QC/QA, SUPERSTRUCTURE (CY)

DECK	1.75	X	36.00	X	108.43	=	6831.09	CU. FT.	
RA	3.44	X	40.55	X	2.25	=	313.86	CU. FT.	
RA	0.50	X	-1.84	X	37.27	=	-34.29	CU. FT.	
FA	3.43	X	40.55	X	2.25	=	312.94	CU. FT.	
FA	0.50	X	-1.87	X	37.27	=	-34.85	CU. FT.	
P1	2.10	X	3.00	X	32.83	=	206.85	CU. FT.	
P2	2.10	X	3.00	X	35.83	=	225.75	CU. FT.	
P1	2.10	X	2.25	X	3.14	=	14.84	CU. FT.	
P2	2.10	X	2.25	X	3.14	=	<u>14.84</u>	CU. FT.	
							7851.04		/27= 290.78

TOTAL 291 CU.YD.



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ITEM 511E43510 CLASS QC1 CONCRETE, ABUTMENT INCLUDING FOOTING (CY)

RA	3.00	X	3.00	X	61.67	=	555.00	CU. FT.	
RA	1.79	X	2.25	X	61.67	=	248.36	CU. FT.	
RA	1.69	X	2.25	X	10.00	=	38.03	CU. FT.	
RA	1.74	X	2.25	X	7.00	=	27.41	CU. FT.	
RA	3.25	X	2.25	X	2.03	=	14.84	CU. FT.	
RA	3.36	X	2.25	X	2.08	=	15.72	CU. FT.	
FA	3.00	X	3.00	X	55.00	=	495.00	CU. FT.	
FA	2.11	X	2.25	X	55.00	=	261.11	CU. FT.	
FA	2.15	X	2.25	X	5.00	=	24.19	CU. FT.	
FA	2.10	X	2.25	X	5.00	=	23.63	CU. FT.	
FA	3.34	X	2.25	X	2.68	=	20.14	CU. FT.	
FA	3.25	X	2.25	X	1.75	=	12.80	CU. FT.	
							<u>1736.23</u>		
								/27=	64.30
								<u>TOTAL</u>	<u>64 CU.YD.</u>



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ITEM 512E10100 SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) (SY)										
RA	2.34	X	10.00	+	2.40	X	7.00	=	40.20	SQ. FT.
	2.31	X	37.27	+	3.97	X	7.40	=	115.47	SQ. FT.
	2.25	X	25.58	+	0.50	X	23.00	=	69.06	SQ. FT.
									224.73	/9= 24.97 SQ.YD.
FA	2.65	X	5.00	+	2.60	X	5.00	=	26.25	SQ. FT.
	2.93	X	37.27	+	3.80	X	7.73	=	138.58	SQ. FT.
	2.25	X	19.65	+	0.50	X	12.00	=	50.21	SQ. FT.
									215.04	/9= 23.89 SQ.YD.
Pier	2.17	X	32.83	+	2.17	X	32.83	=	142.49	SQ. FT.
	2.33	X	32.83	+	2.33	X	32.83	=	153.00	SQ. FT.
	3.00	X	3.14	+	3.00	X	3.14	=	18.85	SQ. FT.
	3.00	X	35.19	-	6.00	X	1.40	=	97.17	SQ. FT.
									411.51	/9= 45.72 SQ.YD.
Super	0.50	+	1.75	+	0.50	+	1.75	=	4.50	
	1	X	108.43	X	4.50	=	487.94	SQ.FT.	/9=	54.22 SQ.YD.
										<u>148.80 SQ. YD.</u>
									<u>TOTAL</u>	<u>149 SQ.YD.</u>



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ITEM 512E33000 TYPE 2 WATERPROOFING (SY)

RA	6.93	X	61.67	-	7.00	X	1.62			
				-	10.00	X	1.57	=	400.33	SQ. FT.
FA	7.25	X	55.00	-	5.00	X	2.35	=	387.00	SQ. FT.
									787.33	/9= 87.48 SQ.YD.
									<u>TOTAL</u>	<u>87 SQ.YD.</u>

ITEM 516E13200 1/2" PREFORMED EXPANSION JOINT FILLER (SF)

RA				0.75	X	40.55	=	30.41	SQ. FT.	
FA				0.75	X	40.55	=	30.41	SQ. FT.	
									<u>60.83</u>	
									<u>TOTAL</u>	<u>61 SQ. FT.</u>

ITEM 516E13600 1" PREFORMED EXPANSION JOINT FILLER (SF)

RA	3.31	X	4.66	+	0.67	X	40.55	=	42.45	SQ. FT.
FA	3.30	X	4.66	+	0.67	X	40.55	=	42.39	SQ. FT.
									<u>84.84</u>	
									<u>TOTAL</u>	<u>85 SQ. FT.</u>

ITEM 516E25000 NYLON REINFORCED NEOPRENE SHEETING (SF)

RA	3.00	X	43.55	+	3.00	X	9.62	=	159.51	SQ. FT.
FA	3.00	X	43.55	+	3.00	X	9.60	=	159.45	SQ. FT.
									<u>318.96</u>	
									<u>TOTAL</u>	<u>319.00 SQ. FT.</u>



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ITEM 517E70000 RAILING (TWIN STEEL TUBE) (FT)

2 X(110.75 + 4.9167)= 231.33 FT

TOTAL 231.33 FT

ITEM 518E21200 POROUS BACKFILL WITH GEOTEXTILE FABRIC (CY)

RA	2.0	X	6.34	X	37.27	=	472.58	CU. FT.		
	2.0	X	7.10	X	7.40	=	105.08	CU. FT.		
	2.0	X	4.98	X	10.00	=	99.60	CU. FT.		
	2.0	X	5.03	X	7.00	=	70.42	CU. FT.		
							<u>747.68</u>	CU. FT.	/27	27.69 CU. YD.

FA	2.0	X	7.18	X	37.27	=	535.20	CU. FT.		
	2.0	X	7.30	X	5.69	=	83.07	CU. FT.		
	2.0	X	5.83	X	6.33	=	73.81	CU. FT.		
	2.0	X	5.76	X	5.71	=	65.78	CU. FT.		
							<u>757.86</u>	CU. FT.	/27	28.07 CU. YD.

55.76 CU. YD.

TOTAL 56 CU. YD.

ITEM 518E22300 SPECIAL - STEEL DRIP STRIP (FT)

[(2 X 108.55)+(34 X 1.5)]= 268.10 FT.

TOTAL 268 FT

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ITEM 518E40000 6" PERFORATED CORRUGATED PLASTIC PIPE (FT)

RA	61.67	FT.
FA	<u>55.00</u>	FT.
	116.67	FT.

TOTAL 117 FT

ITEM 518E40010 6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS (FT)

RA	2 X	22.00	=	44	FT.
FA	9.33 +	8.75	=	<u>18.08</u>	FT.
				62.08	FT.

TOTAL 62 FT

ITEM 526E25000 REINFORCED CONCRETE APPROACH SLABS (T=15") (SY)

2	X	36.00	X	25.00	=	1800.00	SQ. FT.	/9=	200.00	SQ. YD.
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TOTAL 200 SQ.YD.

ITEM 526E90010 TYPE A INSTALLATION (FT)

2.00	X	37.27	=	74.54	FT.
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TOTAL 75 FT.
