E.L. ROBINSON
ENGINEERING

Computation for: **ESTIMATED QUANTITIES**

SFN: **4903367**

Structure: **MAD-00071-06.680R**

PID: **107630**

Design:	**DTA/GA**	Date	**October 6, 2022**
Check:	**BCW/MRV**	Date	**October 6, 2022**
Update:		Date	
Recheck:		Date	

File Names

Comments

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DESIGN: DTA/GA **DATE:** 10/6/22 **UPDATE:** **DATE:**
CHECK: BCW/MRV **DATE:** 10/6/22 **RECHECK:** **DATE:**
STRUCTURE: MAD-00071-06.680R **SFN:** 4903367 **PID:** 107630

ITEM: 202E11203 **PAY UNIT:** LS
SUBJECT: ESTIMATED QUANTITIES
DESCRIPTION: PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN
SUPPLEMENTAL DESCRIPTION:

	SUBTOTAL	TOTAL
SPECIAL INSTRUCTIONS:	**TOTAL**	**LS**

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STRUCTURE: MAD-00071-06.680R **SFN:** 4903367 **PID:** 107630

ITEM: 202E22900 **PAY UNIT:** SY
SUBJECT: ESTIMATED QUANTITIES
DESCRIPTION: APPROACH SLAB REMOVED
SUPPLEMENTAL DESCRIPTION:

				SUBTOTAL	TOTAL
Right Bridge:					
area =	246.29	SY	(25'x44.333' each approach slab)	247	247
SPECIAL INSTRUCTIONS:				**TOTAL**	**247**

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STRUCTURE: MAD-00071-06.680R **SFN:** 4903367 **PID:** 107630

ITEM: 503E11101 **PAY UNIT:** LS
SUBJECT: ESTIMATED QUANTITIES
DESCRIPTION: COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN
SUPPLEMENTAL DESCRIPTION:

	SUBTOTAL	TOTAL
SPECIAL INSTRUCTIONS:	**TOTAL**	**LS**

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STRUCTURE: MAD-00071-06.680R **SFN:** 4903367 **PID:** 107630

ITEM: 503E21100 **PAY UNIT:** CY
SUBJECT: ESTIMATED QUANTITIES
DESCRIPTION: UNCLASSIFIED EXCAVATION
SUPPLEMENTAL DESCRIPTION:

					SUBTOTAL	TOTAL
Behind Existing Rear Abutment						
Top of excavation =	934.66					
Bottom of excavation =	922.8					
Height =	11.86	ft				
Width =	1.50	ft				
Footing bump out =	1.50	sf				
Length =	64.00	ft				
Volume =	1042.56	cf			39	39
In Front of Existing Rear Abutment						
Top of excavation =	928					
Bottom of excavation =	922.8					
Height =	5.2	ft				
Width =	3.00	ft				
Footing bump out =	6.50	sf				
Slope Adjustment =	2.25	sf				
Length =	64.00	ft				
Volume =	726.4	cf			27	66
Excavation at prop. Rear Abutment						
Abutment Section	36.71	sf	Measured in ORD			
Length =	24	ft				
Volume	881.04	cf			33	98
Excavation at pier 1						
Section =	138.49	sf	Measured in ORD			
Length =	66.875	ft				
Volume	9261.519	cf				
Existing Pier 1						
Section	28.91667	sf				
Length	42.58333	ft				
Volume	1231.368	cf		297.413		
Excavation at pier 2						
Section =	88.357	sf	Measured in ORD			
Length =	66.875	ft				
Volume	5908.874	cf				
Existing Pier 2						
Section	28.91667	sf				
Length	42.58333	ft				
Volume	1231.368	cf		173.241		
Left Bridge	401.2					
Right Bridge	471.0					
Average	436.1				437	
Excavation at prop. fwd Abutment						
Section =	36.71	sf	Measured in ORD			
Length =	24	ft				

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STRUCTURE: MAD-00071-06.680R **SFN:** 4903367 **PID:** 107630

ITEM: 503E21100 **PAY UNIT:** CY
SUBJECT: ESTIMATED QUANTITIES
DESCRIPTION: UNCLASSIFIED EXCAVATION
SUPPLEMENTAL DESCRIPTION:

			SUBTOTAL	TOTAL
Volume	881.04	cf	33	131
Behind Existing Fwd Abutment				
Top of excavation =	935.15			
Bottom of excavation =	923.3			
Height =	11.85			
Width =	1.50	ft		
Footing bump out =	1.50	sf		
Length =	64.00	ft		
Volume =	1041.6	cf	39	137
In Front of Existing Fwd Abutment				
Top of excavation =	928.5			
Bottom of excavation =	923.3			
Height =	5.2			
Width =	3.00	ft		
Footing bump out =	6.50	sf		
Slope Adjustment =	2.25	sf		
Length =	64.00	ft		
Volume =	726.4	cf	27	164
SPECIAL INSTRUCTIONS:			**TOTAL**	**633**

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STRUCTURE: MAD-00071-06.680R **SFN:** 4903367 **PID:** 107630

ITEM: 505E11100 **PAY UNIT:** LS
SUBJECT: ESTIMATED QUANTITIES
DESCRIPTION: PILE DRIVING EQUIPMENT MOBILIZATION
SUPPLEMENTAL DESCRIPTION:

	SUBTOTAL	TOTAL
SPECIAL INSTRUCTIONS:	**TOTAL**	**LS**

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STRUCTURE: MAD-00071-06.680R **SFN:** 4903367 **PID:** 107630

ITEM: 507E00200 **PAY UNIT:** FT
SUBJECT: ESTIMATED QUANTITIES
DESCRIPTION: STEEL PILES HP12X53, FURNISHED
SUPPLEMENTAL DESCRIPTION:

									SUBTOTAL	TOTAL
Right Bridge:				estimated length						
rear abutment =	10	each	x	40 ft	+	5 ft	=	450 ft	450	450
pier 1 no. =	22	each	x	40 ft	+	5 ft	=	990 ft	990	1,440
pier 2 no. =	22	each	x	50 ft	+	5 ft	=	1210 ft	1,210	2,650
forward abutment =	10	each	x	40 ft	+	5 ft	=	450 ft	450	3,100

SPECIAL INSTRUCTIONS: **TOTAL** **3,100**

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STRUCTURE: MAD-00071-06.680R **SFN:** 4903367 **PID:** 107630

ITEM: 507E00250 **PAY UNIT:** FT
SUBJECT: ESTIMATED QUANTITIES
DESCRIPTION: STEEL PILES HP12X53, DRIVEN
SUPPLEMENTAL DESCRIPTION:

						SUBTOTAL	TOTAL
Right Bridge:				estimated length			
rear abutment =	10	each	x	40 ft	400 ft	400	400
pier 1 no. =	22	each	x	40 ft	880 ft	880	1,280
pier 2 no. =	22	each	x	50 ft	1100 ft	1,100	2,380
forward abutment =	10	each	x	40 ft	400 ft	400	2,780
SPECIAL INSTRUCTIONS:						**TOTAL**	**2,780**

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STRUCTURE: MAD-00071-06.680R **SFN:** 4903367 **PID:** 107630

ITEM: 509E10000 **PAY UNIT:** LB
SUBJECT: ESTIMATED QUANTITIES
DESCRIPTION: EPOXY COATED REINFORCING STEEL
SUPPLEMENTAL DESCRIPTION:

			SUBTOTAL	TOTAL
Rear Abutment	7448	LBS	7,448	7,448
Fwd Abutment	7476	LBS	7,476	14,924
Rear Diaphragm	4244	LBS	4,244	19,168
Fwd Diaphragm	4244	LBS	4,244	23,412
Deck	79438	LBS	79,438	94,362
Parapet	9805	LBS	9,805	104,167
Pier 1 incl. footing	14039	LBS	14,039	118,206
Pier 2 incl. footing	14039	LBS	14,039	132,245
SPECIAL INSTRUCTIONS:			**TOTAL**	**140,733**

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STRUCTURE: MAD-00071-06.680R **SFN:** 4903367 **PID:** 107630

ITEM: 509E10001 **PAY UNIT:** LB
SUBJECT: ESTIMATED QUANTITIES
DESCRIPTION: EPOXY COATED REINFORCING STEEL, AS PER PLAN
SUPPLEMENTAL DESCRIPTION:

			SUBTOTAL	TOTAL
Pier 1	4774	lbs	4,774	4,774
Pier 2	4818	lbs	4,818	9,592
SPECIAL INSTRUCTIONS:			**TOTAL**	**9,592**

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STRUCTURE: MAD-00071-06.680R **SFN:** 4903367 **PID:** 107630

ITEM: 509E30020 **PAY UNIT:** FT
SUBJECT: ESTIMATED QUANTITIES
DESCRIPTION: NO. 4 GFRP DEFORMED BARS
SUPPLEMENTAL DESCRIPTION:

	SUBTOTAL	TOTAL
Total Length of Railing = 6710.333 ft	6,711	6,711
SPECIAL INSTRUCTIONS:	**TOTAL**	**6,711**

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STRUCTURE: MAD-00071-06.680R **SFN:** 4903367 **PID:** 107630

ITEM: 511E34446 **PAY UNIT:** CY
SUBJECT: ESTIMATED QUANTITIES
DESCRIPTION: CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK
SUPPLEMENTAL DESCRIPTION:

					SUBTOTAL	TOTAL
Right Bridge:						
deck to diaphragm. C.J. =			6.87	cy		
microstation deck cross-section area =			45.51	sf		
deck length to integral abutment face =			166	ft		
triangular area along face of the abutment =			0.5	sf		
deck width =			59.33	ft		
total area =			287.77	cy	288	288
rear diaphragm:						
width =	3	ft				
area =	198.486	sf		area measured in ORD		
total =	595.46	cy			22	310
rear diaphragm:						
width =	3	ft				
area =	198.486	sf		area measured in ORD		
total =	595.46	cy			22	332
				Rounding For stage 2 submittal	3	335
SPECIAL INSTRUCTIONS:					**TOTAL**	**335**

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STRUCTURE: MAD-00071-06.680R **SFN:** 4903367 **PID:** 107630

ITEM: 511E34451 **PAY UNIT:** CY
SUBJECT: ESTIMATED QUANTITIES
DESCRIPTION: CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET), AS PER PLAN
SUPPLEMENTAL DESCRIPTION:

			SUBTOTAL	TOTAL
Right Bridge:				
SBR-1-20 area =	4.083333	sf		
length one side =	193	ft		
no. of sides =	2	each		
parapet volume =	58.38	cy		
transition volume =	1.82	cy		
no. transitions =	4	each		
total transition qty =	7.28	cy		
total =	65.66	cy	66	66

DESIGN DATA:
CONCRETE - COMPRESSIVE STRENGTH = 4.5 KSI
REINFORCING STEEL - MINIMUM YIELD STRENGTH = 60 KSI
GFRP - C&MS 705.28 (MODULUS = 8700 KSI)
AREA OF STANDARD 42" SBR-1 CROSS SECTION = 588.0 SQ. IN.
VOLUME OF 42" SBR-1 14'-0" TRANSITION SECTION = 1.82 CU. YD.

SPECIAL INSTRUCTIONS: **TOTAL** **66**

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STRUCTURE: MAD-00071-06.680R **SFN:** 4903367 **PID:** 107630

ITEM: 511E40513 **PAY UNIT:** CY
SUBJECT: ESTIMATED QUANTITIES
DESCRIPTION: CLASS QC1 CONCRETE WITH QC/QA, PIER ABOVE FOOTINGS, AS PER PLAN
SUPPLEMENTAL DESCRIPTION:

			SUBTOTAL	TOTAL
Pier 1:				
pier 1 elevation area (from microstation) =	1064.24	sf		
width =	2	ft		
end cap area to subtract for one side =	0.43	sf		
end cap volume left side =	0.292526	cy		
end cap volume right side =	0.289346	cy		
pier 1 concrete volume =	78.25072	cy	78	78
Pier 2:				
pier 2 elevation area =	1074.621	sf		
width =	2	ft		
end cap area to subtract for one side =	0.43	sf		
end cap volume left side =	0.295388	cy		
end cap volume right side =	0.292367	cy		
pier 2 concrete volume =	79.01377	cy	79	157
Rounding For stage 2 submittal			2	159
SPECIAL INSTRUCTIONS:			**TOTAL**	**159**

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STRUCTURE: MAD-00071-06.680R **SFN:** 4903367 **PID:** 107630

ITEM: 511E43512 **PAY UNIT:** CY
SUBJECT: ESTIMATED QUANTITIES
DESCRIPTION: CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT INCLUDING FOOTING
SUPPLEMENTAL DESCRIPTION:

					SUBTOTAL	TOTAL
Right Bridge:						
rear footer:						
height=	6.94	ft				
width =	3	ft				
length =	81.667	ft				
total =	62.97433	cy			63	
fwd footer:						
height=	6.93	ft				
width =	3	ft				
length =	81.667	ft				
total =	62.88359	cy			63	
rear wingwalls:						
left wingwall area (microstation) =		29.779	sf	(above beam seat)		
right wingwall area (microstation) =		28.538	sf	(above beam seat)		
wingwall width =		2.5	ft			
wingwall volume =		5.40	cy		5	5
fwd wingwalls:						
left wingwall area (microstation) =		29.779	sf	(above beam seat)		
right wingwall area (microstation) =		28.538	sf	(above beam seat)		
wingwall width =		2.5	ft			
wingwall volume =		5.40	cy		5	11
				Rounding For stage 2 submittal	3	14
SPECIAL INSTRUCTIONS:					**TOTAL**	**140**

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ITEM: 511E46512 **PAY UNIT:** CY
SUBJECT: ESTIMATED QUANTITIES
DESCRIPTION: CLASS QC1 CONCRETE WITH QC/QA, FOOTING
SUPPLEMENTAL DESCRIPTION:

				SUBTOTAL	TOTAL
Right Bridge:					
pier 1 =	66.09	cy			
pier 2 =	66.09	cy			
total =	132.19	cy		132	132
			Rounding For stage 2 submittal	2	134
SPECIAL INSTRUCTIONS:				**TOTAL**	**134**

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ITEM: 512E10100 **PAY UNIT:** SY
SUBJECT: ESTIMATED QUANTITIES
DESCRIPTION: SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
SUPPLEMENTAL DESCRIPTION:

				SUBTOTAL	TOTAL
parapet on bridge sealing perimeter =	9.41	ft			
length =	167	ft			
no. of sides =	2	each			
area =	349.0597	sy		349	349
parapet only perimeter =	7.82	ft			
length, wingwall to transition =	27	ft	per side		
no. of sides =	2	each			
area =	46.92	sy		47	396
transition quantity:					
section E-E perimeter =	7.15	ft			
section D-D perimeter =	7.08	ft			
section C-C perimeter =	7.08	ft			
section B-B perimeter =	8.32	ft			
section E-E to D-D area =	1.19	sy			
section D-D to C-C area =	1.97	sy			
section C-C to B-B area =	8.56	sy			
total area per transition =	11.71	sy			
no. transitions per bridge =	4	each			
total transition area per bridge =	46.83	sy	(does not include approach slab sides)	47	443
diaphragm face area =	20.57	sy			
diaphragm triangle =	9.32	sy			
no. diaphragms =	2	each			
total per bridge =	59.78	sy		60	503
rear abutment	181.20	sf			
forward abutment	182.12	sf			
total =	40.37	sy		40	543
wingwalls:					
rear left =	11.48	sy		11	554
rear right =	11.64	sy		12	566
forward left =	11.52	sy		12	578
forward right =	11.34	sy		11	589
piers:					
elevation area pier 1/side =	1064.24	sf			
total =	249.2732	sy		249	838
elevation area pier 2/side =	1074.621	sf			
total =	251.7196	sy		252	1,090
SPECIAL INSTRUCTIONS:				**TOTAL**	**1,090**

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STRUCTURE: MAD-00071-06.680R **SFN:** 4903367 **PID:** 107630

ITEM: 512E33000 **PAY UNIT:** SY
SUBJECT: ESTIMATED QUANTITIES
DESCRIPTION: TYPE 2 WATERPROOFING
SUPPLEMENTAL DESCRIPTION:

			SUBTOTAL	TOTAL
Rear Abutment:				
behind wingwalls=	28	ft		
width =	3	ft		
total rear =	9.33	sy	10	10
Forward Abutment:				
behind wingwalls=	28	ft		
width =	3	ft		
total rear =	9.33	sy	10	20
SPECIAL INSTRUCTIONS:			**TOTAL**	**20**

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ITEM: 513E10241 **PAY UNIT:** LB
SUBJECT: ESTIMATED QUANTITIES
DESCRIPTION: STRUCTURAL STEEL MEMBERS, LEVEL 2, AS PER PLAN
SUPPLEMENTAL DESCRIPTION:

			SUBTOTAL	TOTAL
w33x130 weight =	130	lbs/ft		
length =	170	ft		
no. beams per bridge =	8	each		
total beam weight =	176800	lbs		
MC18x42.7 weight =	42.7	lbs/ft		
length =	7.45	ft		
no. per bridge =	84	each		
total MC18x42.7 weight per bridge =	26728.83	lbs		
diaphragm connection plate:				
thickness =	0.042	ft		
area =	2.43	ft^2		
no. per bridge =	168	each		
total connection plate weight per bridge =	8334.9	lbs		
splice plates:				
2 outside plate weight =	121.65	lbs		
4 inside plate weight =	88.47	lbs		
2 web plates weight =	163.76	lbs		
total spice plate weight =	373.88	lbs		
no. splices =	16	each		
total splice plate weight per bridge =	5982.0833	lbs		
total beam per bridge (with 0% contingency) =	176800.00	lbs		
total diaphragm per bridge (with 10% contingen	29401.72	lbs		
total dia connection plate per bridge (with 10%	9168.39	lbs		
total splice plate per bridge (with 10% continge	6580.29	lbs		
Total	221950.40	lbs	222,000	222,000
SPECIAL INSTRUCTIONS:			**TOTAL**	**222,000**

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STRUCTURE: MAD-00071-06.680R **SFN:** 4903367 **PID:** 107630

ITEM: 513E20000 **PAY UNIT:** EACH
SUBJECT: ESTIMATED QUANTITIES
DESCRIPTION: WELDED STUD SHEAR CONNECTORS
SUPPLEMENTAL DESCRIPTION:

			SUBTOTAL	TOTAL
Are being revised on the plans.				
no. per row =	3	each		
no. rows for one beam line =	255	rows		
no. beam lines per bridge =	8	each		
total no. shea studs per bridge =	6120	each	6,120	6,120
SPECIAL INSTRUCTIONS:			**TOTAL**	**6,120**

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ITEM: 514E00061 **PAY UNIT:** SF
SUBJECT: ESTIMATED QUANTITIES
DESCRIPTION: FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT, AS PER PLAN
SUPPLEMENTAL DESCRIPTION:

			SUBTOTAL	TOTAL
fascia beam coating details perimeter =	5.65	ft		
painted beam length =	160	ft		
no. exterior beam lines per bridge =	1	each		
total area per bridge =	904.6667	ft^2		
additional coverage at field splices:				
length =	4	ft		
no. of exterior splices =	2	each		
coverage length =	8.41	ft		
total area per bridge (0% contingency) =	67.27	ft^2		
Beam Ends:				
length =	3	ft		
no. of exterior splices =	16	each		
coverage length =	8.41	ft		
total area (0% contingency) =	403.60	sf		
total per bridge =	1375.53	sf	1,380	1,380
SPECIAL INSTRUCTIONS:			**TOTAL**	**1,380**

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CHECK: BCW/MRV **DATE:** 10/6/22 **RECHECK:** **DATE:**
STRUCTURE: MAD-00071-06.680R **SFN:** 4903367 **PID:** 107630

ITEM: 514E00067 **PAY UNIT:** SF
SUBJECT: ESTIMATED QUANTITIES
DESCRIPTION: FIELD PAINTING STRUCTURAL STEEL, FINISH COAT, AS PER PLAN
SUPPLEMENTAL DESCRIPTION:

			SUBTOTAL	TOTAL
fascia beam coating details perimeter =	5.65	ft		
painted beam length =	160	ft		
no. exterior beam lines per bridge =	1	each		
total area per bridge =	904.6667	ft^2		
additional coverage at field splices:				
length =	4	ft		
no. of exterior splices =	2	each		
additional coverage length =	8.41	ft		
total area per bridge (0% contingency) =	67.27	ft^2		
Beam Ends:				
length =	3	ft		
no. of exterior splices =	16	each		
additional coverage length =	8.41	ft		
total area (0% contingency) =	403.60	sf		
total per bridge =	1375.53	sf	1,380	1,380
SPECIAL INSTRUCTIONS:			**TOTAL**	**1,380**

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STRUCTURE: MAD-00071-06.680R **SFN:** 4903367 **PID:** 107630

ITEM: 516E10010 **PAY UNIT:** FT
SUBJECT: ESTIMATED QUANTITIES
DESCRIPTION: ARMORLESS PREFORMED JOINT SEAL
SUPPLEMENTAL DESCRIPTION:

	SUBTOTAL	TOTAL
Right Bridge:		
114.00 ft	114	114
SPECIAL INSTRUCTIONS:	**TOTAL**	**114**

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STRUCTURE: MAD-00071-06.680R **SFN:** 4903367 **PID:** 107630

ITEM: 516E13200 **PAY UNIT:** SF
SUBJECT: ESTIMATED QUANTITIES
DESCRIPTION: 1/2" PREFORMED EXPANSION JOINT FILLER
SUPPLEMENTAL DESCRIPTION:

			SUBTOTAL	TOTAL
Rear Abutment:				
length =	59.67	ft		
width =	0.83	ft		
area =	49.73	sf	50	50
Forward Abutment:				
length =	59.67	ft		
width =	0.83	ft		
area =	49.73	sf	50	100
SPECIAL INSTRUCTIONS:			**TOTAL**	**100**

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STRUCTURE: MAD-00071-06.680R **SFN:** 4903367 **PID:** 107630

ITEM: 516E13600 **PAY UNIT:** SF
SUBJECT: ESTIMATED QUANTITIES
DESCRIPTION: 1" PREFORMED EXPANSION JOINT FILLER
SUPPLEMENTAL DESCRIPTION:

			SUBTOTAL	TOTAL
Parapet at abutments =	16.33	sf	17	17
Rear Abutment:				
length =	59.67	ft		
width =	0.83	ft		
area =	49.73	sf	50	67
Forward Abutment:				
length =	59.67	ft		
width =	0.83	ft		
area =	49.73	sf	50	117
SPECIAL INSTRUCTIONS:			**TOTAL**	**117**

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STRUCTURE: MAD-00071-06.680R **SFN:** 4903367 **PID:** 107630

ITEM: 516E13900 **PAY UNIT:** SF
SUBJECT: ESTIMATED QUANTITIES
DESCRIPTION: 2" PREFORMED EXPANSION JOINT FILLER
SUPPLEMENTAL DESCRIPTION:

			SUBTOTAL	TOTAL
Right Bridge:				
rear diaphragm =	22.325	sf		
fwd diaphragm =	22.325	sf		
total =	44.65	sf	45	45
SPECIAL INSTRUCTIONS:			**TOTAL**	**45**

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STRUCTURE: MAD-00071-06.680R **SFN:** 4903367 **PID:** 107630

ITEM: 516E14014 **PAY UNIT:** FT
SUBJECT: ESTIMATED QUANTITIES
DESCRIPTION: INTEGRAL ABUTMENT EXPANSION JOINT SEAL
SUPPLEMENTAL DESCRIPTION:

			SUBTOTAL	TOTAL
Right Bridge:				
2' lap either side of phase construction jt. =	4	ft		
rear abutment length =	62.67	ft		
fwd abutment length =	62.67	ft		
diaphragm vertical joints =	8.93	ft		
total =	138.26	ft	138	138
SPECIAL INSTRUCTIONS:			**TOTAL**	**138**

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STRUCTURE: MAD-00071-06.680R **SFN:** 4903367 **PID:** 107630

ITEM: 516E44100 **PAY UNIT:** EACH
SUBJECT: ESTIMATED QUANTITIES
DESCRIPTION: ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE)
SUPPLEMENTAL DESCRIPTION: 11.5"x17"x2.049" W/LOAD PLATE

			SUBTOTAL	TOTAL
Right Bridge:				
pier 1 no. =	8	each		
pier 2 no. =	8	each		
total =	16	each	16	16
SPECIAL INSTRUCTIONS:			**TOTAL**	**16**

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CHECK: BCW/MRV **DATE:** 10/6/22 **RECHECK:** **DATE:**
STRUCTURE: MAD-00071-06.680R **SFN:** 4903367 **PID:** 107630

ITEM: 516E44101 **PAY UNIT:** EACH
SUBJECT: ESTIMATED QUANTITIES
DESCRIPTION: ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN
SUPPLEMENTAL DESCRIPTION: 10"x14"x2.499" W/LOAD PLATE ASSEMBLY

			SUBTOTAL	TOTAL
Right Bridge:				
rear and fwd abutment no. =	16	each	16	16
SPECIAL INSTRUCTIONS:			**TOTAL**	**16**

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STRUCTURE: MAD-00071-06.680R **SFN:** 4903367 **PID:** 107630

ITEM: 518E21200 **PAY UNIT:** CY
SUBJECT: ESTIMATED QUANTITIES
DESCRIPTION: POROUS BACKFILL WITH GEOTEXTILE FABRIC
SUPPLEMENTAL DESCRIPTION:

			SUBTOTAL	TOTAL
rear abutment height =	6.940	ft		
abutment length =	59.333	ft		
width =	2	ft		
area =	30.50	cy	31	31
diaphragm area =	204.498	sq ft		
width=	2	ft		
volume =	15.148	cy	15	46
fwd abutment height =	6.930	ft		
abutment length =	59.333	ft		
width =	2	ft		
area =	30.46	cy	30	76
diaphragm area =	204.498	sq ft		
width=	2	ft		
volume =	15.148	cy	15	91
wingwalls:				
rear left wingwall =	6.42	cy	6	98
rear right wingwall =	6.50	cy	6	104
forward left wingwall =	6.51	cy	7	111
forward right wingwall =	6.42	cy	6	117
SPECIAL INSTRUCTIONS:			**TOTAL**	**117**

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STRUCTURE: MAD-00071-06.680R **SFN:** 4903367 **PID:** 107630

ITEM: 518E40000 **PAY UNIT:** FT
SUBJECT: ESTIMATED QUANTITIES
DESCRIPTION: 6" PERFORATED CORRUGATED PLASTIC PIPE
SUPPLEMENTAL DESCRIPTION:

			SUBTOTAL	TOTAL
Right bridge:				
rear abutment length =	81.667	ft		
fwd abutment length =	81.667	ft		
total =	163.334	ft	164	164
SPECIAL INSTRUCTIONS:			**TOTAL**	**164**

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STRUCTURE: MAD-00071-06.680R **SFN:** 4903367 **PID:** 107630

ITEM: 518E40011 **PAY UNIT:** FT
SUBJECT: ESTIMATED QUANTITIES
DESCRIPTION: 6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS, AS PER PLAN
SUPPLEMENTAL DESCRIPTION:

			SUBTOTAL	TOTAL
Right bridge:				
rear abutment length =	25	ft	25	25
forward abutment length =	25	ft	25	50
SPECIAL INSTRUCTIONS:			**TOTAL**	**50**

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STRUCTURE: MAD-00071-06.680R **SFN:** 4903367 **PID:** 107630

ITEM: 526E25011 **PAY UNIT:** SY
SUBJECT: ESTIMATED QUANTITIES
DESCRIPTION: REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=15"), AS PER PLAN
SUPPLEMENTAL DESCRIPTION:

			SUBTOTAL	TOTAL
length =	25	ft		
width =	59.333	ft		
no. per bridge =	2	each		
area =	329.63	sy	330	330
SPECIAL INSTRUCTIONS:			**TOTAL**	**330**

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STRUCTURE: MAD-00071-06.680R **SFN:** 4903367 **PID:** 107630

ITEM: 526E90031 **PAY UNIT:** FT
SUBJECT: ESTIMATED QUANTITIES
DESCRIPTION: TYPE C INSTALLATION, AS PER PLAN
SUPPLEMENTAL DESCRIPTION:

			SUBTOTAL	TOTAL
length =	57.00	ft		
no. per bridge =	2.00	each		
total length per bridge =	114.00	ft	114	114
SPECIAL INSTRUCTIONS:			**TOTAL**	**114**

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STRUCTURE: MAD-00071-06.680R **SFN:** 4903367 **PID:** 107630

ITEM: 601E32100 **PAY UNIT:** CY
SUBJECT: ESTIMATED QUANTITIES
DESCRIPTION: ROCK CHANNEL PROTECTION, TYPE B WITH FILTER
SUPPLEMENTAL DESCRIPTION:

			SUBTOTAL	TOTAL
rear abutment area =	1229.20	sf		
thickness type B =	2.50	ft		
volume =	113.81	cy		
adjust for slope	127.2483	cy	127	127
forward abutment area =	1509.15	sf		
thickness type B =	2.50	ft		
volume =	139.74	cy		
adjust for slope	156.2292	cy	156	283
SPECIAL INSTRUCTIONS:			**TOTAL**	**283**

MADE BY: DTA/GA DATE: 10/6/2022
CHECKED BY: BCW/MRV DATE: 10/6/2022

ESTIMATED QUANTITIES - RIGHT BRIDGE

STRUCTURAL FILE NUMBER: 4903367

ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	ABUT.	PIER	SUPER.	GEN.	REFERENCE SHEET NO.
202	11203	LUMP		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN				LUMP	4, 8, 9, 11, 12, 13, AND 14 OF 52
202	22900	247	SY	APPROACH SLAB REMOVED				247	
503	11101	LUMP		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN				LUMP	4 AND 11 OF 52
503	21100	633	CY	UNCLASSIFIED EXCAVATION	196	437			
505	11100	LUMP		PILE DRIVING EQUIPMENT MOBILIZATION				LUMP	
507	00200	3,100	FT	STEEL PILES HP12X53, FURNISHED	900	2,200			
507	00250	2,780	FT	STEEL PILES HP12X53, DRIVEN	800	1,980			
509	10000	140,733	LB	EPOXY COATED REINFORCING STEEL	14,924	28,078	97,731		
509	10001	9,592	LB	EPOXY COATED REINFORCING STEEL, AS PER PLAN		9,592			27 OF 52
509	30020	6,711	FT	NO. 4 GFRP DEFORMED BARS			6,711		
511	34446	335	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK			335		
511	34451	66	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET), AS PER PLAN			66		47 OF 52
511	40513	159	CY	CLASS QC1 CONCRETE WITH QC/QA, PIER ABOVE FOOTINGS, AS PER PLAN		159			27 OF 52
511	43512	140	CY	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT INCLUDING FOOTING	140				
511	46512	134	CY	CLASS QC1 CONCRETE WITH QC/QA, FOOTING		134			
512	10100	1,090	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	86	501	409	94	
512	33000	20	SY	TYPE 2 WATERPROOFING	20				
513	10241	222,000	LB	STRUCTURAL STEEL MEMBERS, LEVEL 2, AS PER PLAN			222,000		39 OF 52
513	20000	6,120	EACH	WELDED STUD SHEAR CONNECTORS			6,120		
514	00061	1,380	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT, AS PER PLAN			1,380		32 OF 52
514	00067	1,380	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT, AS PER PLAN			1,380		32 OF 52
516	10010	114	FT	ARMORLESS PREFORMED JOINT SEAL				114	
516	13200	100	SF	1/2" PREFORMED EXPANSION JOINT FILLER	100				
516	13600	117	SF	1" PREFORMED EXPANSION JOINT FILLER	100		17		
516	13900	45	SF	2" PREFORMED EXPANSION JOINT FILLER	45				
516	14014	138	FT	INTEGRAL ABUTMENT EXPANSION JOINT SEAL	138				
516	44100	16	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (11.5"x17"x2.049" W/LOAD PLATE)		16			
516	44101	16	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (10"x14"x2.499" W/LOAD PLATE ASSEMBLY)	16				29 OF 52
518	21200	117	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	117				
518	40000	164	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	164				
518	40011	50	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS, AS PER PLAN	50				20 AND 24 OF 52
526	25011	330	SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=15"), AS PER PLAN				330	47 OF 52
526	90031	114	FT	TYPE C INSTALLATION, AS PER PLAN				114	47 OF 52
601	32100	283	CY	ROCK CHANNEL PROTECTION, TYPE B WITH FILTER	283				