

DESCRIPTION	REVISIONS	DATE

FOUNDATION DATA

ABUTMENT NO. 1 (HP12X53 PILING)  
FACTORED PILE REACTION = 95.8 TON/PILE

STEEL PILING:  
ALL PILING SHALL BE DRIVEN THRU COMPACTED FILL. PILING SHALL BE DRIVEN TO A POINT BEARING ON SOLID FOUNDATION MATERIAL AT THE APPROXIMATE ELEVATION SHOWN ON THE PLANS. IF THE REQUIRED AXIAL LOAD RESISTANCE IS NOT OBTAINED AT THIS ELEVATION, DRIVING SHALL CONTINUE UNTIL THE REQUIRED AXIAL LOAD RESISTANCE IS OBTAINED. THE LENGTH OF STEEL PILING SHOWN ON THE PLANS IS FOR ESTIMATING PURPOSES ONLY.

ABUTMENT NO. 2 (36" DIAMETER DRILLED SHAFTS)  
FACTORED REACTION = 242.9 TON/SHAFT

NOMINAL UNIT BEARING RESISTANCE = 60 T.S.F.  
BEARING RESISTANCE FACTOR = 0.7  
FACTORED BEARING RESISTANCE = 296.9 TON/SHAFT

NOMINAL UNIT FRICTION RESISTANCE = 9 T.S.F.  
FRICTION RESISTANCE FACTOR = 0.45  
FACTORED FRICTION RESISTANCE = 114.5 TON/SHAFT  
DEPTH OF ROCK NEGLECTED FOR FRICTION = 3 FT

TOTAL FACTORED RESISTANCE = 411.4 TON/SHAFT

PIER NO. 1 (84" DIAMETER DRILLED SHAFTS)  
FACTORED REACTION = 896.0 TON/SHAFT

NOMINAL UNIT BEARING RESISTANCE = 60 T.S.F.  
BEARING RESISTANCE FACTOR = 0.7  
FACTORED BEARING RESISTANCE = 1,616.3 TON/SHAFT

NOMINAL UNIT FRICTION RESISTANCE = 9 T.S.F.  
FRICTION RESISTANCE FACTOR = 0.45  
FACTORED FRICTION RESISTANCE = 623.4 TON/SHAFT  
DEPTH OF ROCK NEGLECTED FOR FRICTION = 5 FT

TOTAL FACTORED RESISTANCE = 2,239.7 TON/SHAFT

PIER NO. 2 (84" DIAMETER DRILLED SHAFTS)  
FACTORED REACTION = 896.0 TON/SHAFT

NOMINAL UNIT BEARING RESISTANCE = 60 T.S.F.  
BEARING RESISTANCE FACTOR = 0.7  
FACTORED BEARING RESISTANCE = 1,616.3 TON/SHAFT

NOMINAL UNIT FRICTION RESISTANCE = 9 T.S.F.  
FRICTION RESISTANCE FACTOR = 0.45  
FACTORED FRICTION RESISTANCE = 623.4 TON/SHAFT  
DEPTH OF ROCK NEGLECTED FOR FRICTION = 5 FT

TOTAL FACTORED RESISTANCE = 2,239.7 TON/SHAFT

PIER NO. 3 (84" DIAMETER DRILLED SHAFTS)  
FACTORED REACTION = 973.6 TON/SHAFT

NOMINAL UNIT BEARING RESISTANCE = 60 T.S.F.  
BEARING RESISTANCE FACTOR = 0.7  
FACTORED BEARING RESISTANCE = 1,616.3 TON/SHAFT

NOMINAL UNIT FRICTION RESISTANCE = 9 T.S.F.  
FRICTION RESISTANCE FACTOR = 0.45  
FACTORED FRICTION RESISTANCE = 801.6 TON/SHAFT  
DEPTH OF ROCK NEGLECTED FOR FRICTION = 5 FT

TOTAL FACTORED RESISTANCE = 2,417.9 TON/SHAFT

PIER NO. 4 (84" DIAMETER DRILLED SHAFTS)  
FACTORED REACTION = 970.0 TON/SHAFT

NOMINAL UNIT BEARING RESISTANCE = 60 T.S.F.  
BEARING RESISTANCE FACTOR = 0.7  
FACTORED BEARING RESISTANCE = 1,616.3 TON/SHAFT

NOMINAL UNIT FRICTION RESISTANCE = 9 T.S.F.  
FRICTION RESISTANCE FACTOR = 0.45  
FACTORED FRICTION RESISTANCE = 801.6 TON/SHAFT  
DEPTH OF ROCK NEGLECTED FOR FRICTION = 5 FT

TOTAL FACTORED RESISTANCE = 2,417.9 TON/SHAFT

FOUNDATION DATA CONT.

PIER NO. 5 (84" DIAMETER DRILLED SHAFTS)  
FACTORED REACTION = 944.7 TON/SHAFT

NOMINAL UNIT BEARING RESISTANCE = 60 T.S.F.  
BEARING RESISTANCE FACTOR = 0.7  
FACTORED BEARING RESISTANCE = 1,616.3 TON/SHAFT

NOMINAL UNIT FRICTION RESISTANCE = 9 T.S.F.  
FRICTION RESISTANCE FACTOR = 0.45  
FACTORED FRICTION RESISTANCE = 801.6 TON/SHAFT  
DEPTH OF ROCK NEGLECTED FOR FRICTION = 5 FT

TOTAL FACTORED RESISTANCE = 2,417.9 TON/SHAFT

PIER NO. 6 (84" DIAMETER DRILLED SHAFTS)  
FACTORED REACTION = 804.0 TON/SHAFT

NOMINAL UNIT BEARING RESISTANCE = 60 T.S.F.  
BEARING RESISTANCE FACTOR = 0.7  
FACTORED BEARING RESISTANCE = 1,616.3 TON/SHAFT

NOMINAL UNIT FRICTION RESISTANCE = 6 T.S.F.  
FRICTION RESISTANCE FACTOR = 0.45  
FACTORED FRICTION RESISTANCE = 415.6 TON/SHAFT  
DEPTH OF ROCK NEGLECTED FOR FRICTION = 5 FT

TOTAL FACTORED RESISTANCE = 2,031.9 TON/SHAFT

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STANDARDS:

- EJ-SQ-04E
- EJ-DTL-02E
- HP1-2-01E
- LECS-4-1
- PUD-3-2
- TR4-2-00E

SUMMARY OF BRIDGE PAY QUANTITIES														
ITEM	UNIT	PHASE I					PHASE II					TOTAL		
		ABUTMENTS	PIERS	SUPER-STRUCTURE	APPROACH SLAB	SLOPE DRAIN	TOTAL	ABUTMENTS	PIERS	SUPER-STRUCTURE	APPROACH SLAB		SLOPE DRAIN	TOTAL
SUBSTRUCTURE EXCAVATION COMMON	C.Y.	115					115	100					100	215
CLSM BACKFILL	C.Y.	187					187	141					141	328
TEMPORARY EARTH RETAINAGE	LSUM	1					1							1
PRESTRESSED CONCRETE BEAMS (TYPE IV)	L.F.			598.0			598.0		398.7				398.7	996.7
PRESTRESSED CONCRETE BEAMS (TYPE J BT)	L.F.			1,795.0			1,795.0		1,196.7				1,196.7	2,991.7
APPROACH SLAB	S.Y.				153.8		153.8			153.8			153.8	307.6
SAW-CUT GROOVING	S.Y.			1,959.6	146.6		2,106.2		1,959.6		146.6		2,106.2	4,212.4
SEALED EXPANSION JOINT	L.F.			91.5			91.5		91.5				91.5	183.0
CONCRETE RAIL (TR4)	L.F.			801.7	60.0		861.7		801.7		60.0		861.7	1,723.4
STRUCTURAL STEEL	LB.			3,840			3,840		3,700				3,700	7,540
STAINLESS STEEL FIXED BEARING ASSEMBLY	EA.			15			15		10				10	25
STAINLESS STEEL EXPANSION BEARING ASSEMBLY	EA.			27			27		18				18	45
SPECIAL CONCRETE FINISH	S.Y.	24	113				137	18	80				98	235
CLASS AA CONCRETE	C.Y.			581.1			581.1		581.1				581.1	1,162.2
CLASS A CONCRETE	C.Y.	64.8	275.0				339.8	53.3	168.3				221.6	561.4
CLASS C CONCRETE	C.Y.					6.2	6.2					5.2	5.2	11.4
MECHANICAL SPLICES	EA.							20	128				148	148
REINFORCING STEEL	LB.		11,770				11,770		5,890				5,890	17,660
EPOXY COATED REINFORCING STEEL	LB.	7,760	78,910	150,610			237,280	6,530	45,210	139,460			191,200	428,480
CLASS B BRIDGE DECK REPAIR	S.Y.						90							90
CLASS C BRIDGE DECK REPAIR	S.Y.						90							90
PILES, FURNISHED (HP 10X42)	L.F.	93					93	93					93	186
PILES, FURNISHED (HP 12X53)	L.F.	453					453	362					362	815
PILES, DRIVEN (HP 10X42)	L.F.	93					93	93					93	186
PILES, DRIVEN (HP 12X53)	L.F.	453					453	362					362	815
PILE SPLICE, H-PILE (NON-BIDDABLE)	EA.	1					1							1
WATER REPELLENT (VISUALLY INSPECTED)	S.Y.	42.5	181.2	1,548.2	27.4		1,799.3	33.4	135.4	1,548.2	27.4		1,744.4	3,543.7
DRILLED SHAFTS 36" DIAMETER	L.F.	27					27	20					20	47
DRILLED SHAFTS 84" DIAMETER	L.F.		790				790		395				395	1,185
CROSSHOLE SONIC LOGGING	EA.	1	6				7							7
SEALER CRACK PREPARATION	L.F.			46			46			848			848	894
SEALER RESIN	GAL.			1			1			10			10	11
TYPE I-A PLAIN RIPRAP	TON							1,290					1,290	1,290
TYPE I-A FILTER BLANKET	TON							285					285	285
6" PERFORATED PIPE UNDERDRAIN ROUND	L.F.	54					54	38					38	92
6" NON-PERF. PIPE UNDERDRAIN RND.	L.F.							48					48	48
REMOVAL OF EXISTING BRIDGE STRUCTURE	LSUM													1

DESIGN	B.J.K.	SH-48 OVER CIMARRON RIVER	CREEK COUNTY
DRAWN	J.F.R.	<b>SUMMARY OF BRIDGE PAY QUANTITIES</b>	
CHECKED	B.J.K.		
APPROV.	B.J.K.		
SQUAD	CEC		
		JOB PIECE NO. 27925(04)	SHEET NO. 27