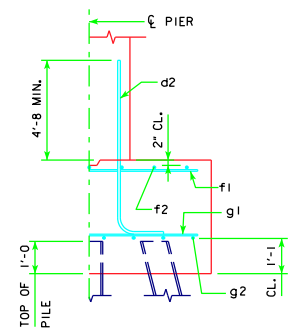
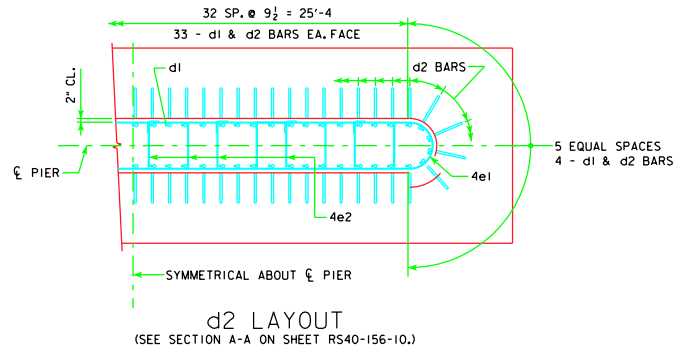


H IN FT.	℄ - ℄ ABUT. BRG.	PILING (HP10x57)		FOOTING SIZE	
		NO. & LAYOUT	① DES. BRG. (TONS)		② LRFD DES. BRG. (KIPS)
16 TO 18	160'-0	12A	68	197	4' x 7' x 32'
	180'-0	12A	73	210	
	200'-0	12B	73	212	
	220'-0	13A	75	217	
	240'-0	14A	74	214	
	260'-0	15A	75	218	4' x 8' x 32'
	280'-0	16A	75	219	
	300'-0	16C	75	218	
	320'-0	18A	73	210	
	340'-0	18A	75	219	
19 TO 21	160'-0	12A	71	204	4' x 7' x 32'
	180'-0	12A	75	218	
	200'-0	12B	75	218	
	220'-0	14A	71	205	
	240'-0	15A	73	211	
	260'-0	16A	73	210	4' x 9' x 32'
	280'-0	17A	74	215	
	300'-0	17B	74	214	
	320'-0	18A	74	215	
	340'-0	19A	75	217	
22 TO 24	160'-0	12A	73	211	4' x 7' x 32'
	180'-0	12B	74	213	
	200'-0	13A	74	214	
	220'-0	14A	73	212	
	240'-0	15B	74	214	
	260'-0	16A	75	215	4' x 9' x 32'
	280'-0	17B	72	208	
	300'-0	17B	75	219	
	320'-0	18A	75	220	
	340'-0	20A	74	214	
25 TO 27	160'-0	12B	71	206	4' x 8' x 32'
	180'-0	12B	75	219	
	200'-0	14A	70	203	
	220'-0	14B	74	214	
	240'-0	15C	75	218	
	260'-0	16B	75	218	4' x 10' x 32'
	280'-0	17B	74	212	
	300'-0	18A	74	213	
	320'-0	19A	75	217	
	340'-0	20B	75	217	
28 TO 30	160'-0	12B	73	212	4' x 12' x 32'
	180'-0	13A	74	214	
	200'-0	14B	71	205	
	220'-0	14B	75	219	
	240'-0	16B	73	210	
	260'-0	16C	73	211	4' x 11' x 32'
	280'-0	17B	75	216	
	300'-0	18A	75	217	
	320'-0	19B	75	219	
	340'-0	20C	75	219	
31 TO 33	160'-0	12C	75	215	4' x 14' x 32'
	180'-0	13B	75	217	
	200'-0	14B	73	212	
	220'-0	15C	74	213	
	240'-0	16B	74	215	
	260'-0	16C	75	215	4' x 10' x 32'
	280'-0	17C	75	219	
	300'-0	18B	75	220	
	320'-0	20C	74	213	
	340'-0	21A	75	215	
34 TO 36	160'-0	13B	73	211	4' x 12' x 32'
	180'-0	14B	72	208	
	200'-0	14C	74	214	
	220'-0	15C	75	219	
	240'-0	16C	72	208	
	260'-0	17B	74	212	4' x 10' x 32'
	280'-0	18B	73	212	
	300'-0	19B	75	216	
	320'-0	20C	75	217	
	340'-0	21A	75	219	

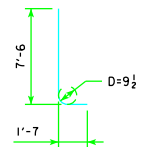
H IN FT.		PILING (HP10x57)			FOOTING SIZE
		℄ - ℄ ABUT. BRG.	NO. & LAYOUT	① DES. BRG. (TONS)	
37 TO 40	160'-0	13C	74	215	4' x 10' x 32'
	180'-0	14C	73	211	
	200'-0	15C	74	214	
	220'-0	15D	75	217	
	240'-0	16C	75	216	
	260'-0	17C	75	216	4' x 11' x 32'
	280'-0	18B	75	219	
	300'-0	19C	75	219	
	320'-0	20D	73	210	
	340'-0	21B	73	211	

FOOTING SIZE	REINFORCING STEEL (ONE FOOTING)					TOTAL WEIGHT (LB.)	STRUCTURAL CONCRETE (CY)
	BAR	NO., SIZE & SPACING	LENGTH	WEIGHT (LB.)			
4' x 7' x 32'	d2	74 - #9 AS SHOWN	9'-1	2285		3487	33.2
	f1	32 - #5 @ 1'-0	6'-8	223			
	f2	7 - #5 @ 1'-0	31'-8	231			
	g1	32 - #6 @ 1'-0	6'-8	320			
	g2	9 - #6 @ 0'-9½	31'-8	428			
	d2	74 - #9 AS SHOWN	9'-1	2285			
4' x 8' x 32'	f1	32 - #5 @ 1'-0	7'-8	256		3791	37.9
	f2	8 - #5 @ 1'-0	31'-8	264			
	g1	32 - #6 @ 1'-0	7'-8	368			
	g2	13 - #6 @ 0'-7½	31'-8	618			
	d2	74 - #9 AS SHOWN	9'-1	2285			
	f1	32 - #5 @ 1'-0	8'-8	289			
4' x 9' x 32'	f2	9 - #5 @ 1'-0	31'-8	297		3984	42.7
	g1	38 - #6 @ 0'-10	8'-8	495			
	g2	13 - #6 @ 0'-8½	31'-8	618			
	d2	74 - #9 AS SHOWN	9'-1	2285			
	f1	32 - #5 @ 1'-0	9'-8	323			
	f2	10 - #5 @ 1'-0	31'-8	330			
4' x 10' x 32'	g1	36 - #7 @ 0'-10½	9'-8	711		4267	47.4
	g2	13 - #6 @ 0'-9½	31'-8	618			
	d2	74 - #9 AS SHOWN	9'-1	2285			
	f1	32 - #5 @ 1'-0	10'-8	356			
	f2	11 - #5 @ 1'-0	31'-8	363			
	g1	34 - #8 @ 0'-11	10'-8	968			
4' x 11' x 32'	g2	13 - #7 @ 0'-10½	31'-8	841		4813	52.1
	d2	74 - #9 AS SHOWN	9'-1	2285			
	f1	32 - #5 @ 1'-0	11'-8	389			
	f2	12 - #5 @ 1'-0	31'-8	396			
	g1	32 - #9 @ 1'-0	11'-8	1269			
	g2	13 - #7 @ 0'-11½	31'-8	841			
4' x 12' x 32'	d2	74 - #9 AS SHOWN	9'-1	2285		5180	56.9
	f1	32 - #5 @ 1'-0	13'-8	456			
	f2	14 - #5 @ 1'-0	31'-8	462			
	g1	39 - #9 @ 0'-9½	13'-8	1812			
	g2	18 - #6 @ 0'-9½	31'-8	856			
	d2	74 - #9 AS SHOWN	9'-1	2285			
4' x 14' x 32'	f1	34 - #5 @ 1'-0	13'-8	485		5871	66.4
	f2	14 - #5 @ 1'-0	33'-8	492			
	g1	41 - #9 @ 0'-10	13'-8	1905			
	g2	19 - #8 @ 0'-9	33'-8	1708			
	f1	34 - #5 @ 1'-0	13'-8	485			
	f2	14 - #5 @ 1'-0	33'-8	492			
4' x 14' x 34'	g1	41 - #9 @ 0'-10	13'-8	1905		6875	70.5
	g2	19 - #8 @ 0'-9	33'-8	1708			

- ① FOR DETERMINING ACTUAL PILE LENGTHS IN FIELD.
② FOR ESTIMATING PILE LENGTHS USING AASHTO LRFD SPECIFICATIONS.



TYPICAL SECTION



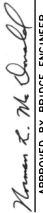
d2
NOTE: D = PIN DIAMETER.
DIMENSIONS ARE OUT TO OUT.

FOOTING NOTES:

THESE FOOTINGS ARE DESIGNED AND DETAILED TO BE USED WITH THE CAP AND COLUMN DETAILS OF THE TEE PIERS AS SHOWN ON SHEET RS40-156-10.

BATTER PILES IN EXTERIOR ROWS 1:4 IN THE DIRECTION SHOWN.

STEEL PILING USED AS POINT BEARING SHALL HAVE A MINIMUM DISTANCE OF APPROXIMATELY 10 FEET FROM BOTTOM OF FOOTING TO TOP OF BEARING ROCK. THE PILE LAYOUTS ARE SUCH THAT THE DISTANCE CENTER TO CENTER OF ADJACENT PILING SHALL NOT EXCEED 8'-0\"/>

LATEST REVISION DATE		 Iowa Department of Transportation Highway Division	
		STANDARD DESIGN - 40' ROADWAY, 3 SPAN BRIDGES ROLLED STEEL BEAM BRIDGES JUNE, 2010	
		TEE PIER - 75 TON STEEL PILE FOOTINGS 45° SKEW - SHEET 1	RS40-161-10