

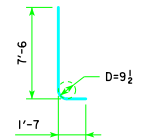
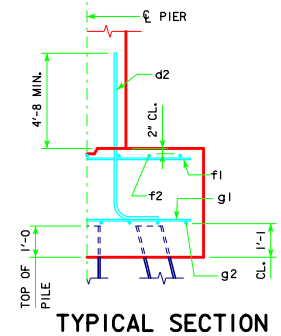
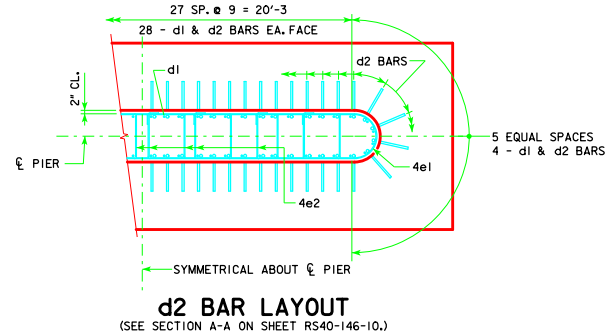
REVISED 05-13 - REVISION FOR LRFD PILE DESIGN.

H IN FT.	C - C ABUT. BRG.	PILING (HP10x57)		FOOTING SIZE
		NO. & LAYOUT	① LRFD P <sub>u</sub> , STRENGTH I, DES. LOAD (KIPS)	
16 TO 18	160'-0	17A	136	4' x 8' x 28'
	180'-0	17A	145	
	200'-0	18A	144	
	220'-0	20A	146	
	240'-0	20D	142	
	260'-0	21A	147	
	280'-0	23B	144	
	300'-0	25A	143	
	320'-0	26A	146	
	340'-0	28B	147	
19 TO 21	160'-0	17A	140	4' x 14' x 32'
	180'-0	18A	140	
	200'-0	19A	144	
	220'-0	20C	146	
	240'-0	20D	146	
	260'-0	22A	145	
	280'-0	24A	142	
	300'-0	25A	147	
	320'-0	27A	146	
	340'-0	27B	146	
22 TO 24	160'-0	17A	145	4' x 8' x 28'
	180'-0	18A	145	
	200'-0	20A	144	
	220'-0	20D	139	
	240'-0	21A	145	
	260'-0	23A	145	
	280'-0	24A	145	
	300'-0	26A	145	
	320'-0	27B	143	
	340'-0	28A	145	
25 TO 27	160'-0	18A	140	4' x 9' x 28'
	180'-0	19A	144	
	200'-0	20B	145	
	220'-0	20D	142	
	240'-0	22A	143	
	260'-0	23B	143	
	280'-0	25A	144	
	300'-0	27A	144	
	320'-0	27B	145	
	340'-0	28B	144	
28 TO 30	160'-0	18B	141	4' x 14' x 30'
	180'-0	19B	145	
	200'-0	20C	145	
	220'-0	20D	145	
	240'-0	22A	146	
	260'-0	23B	146	
	280'-0	25A	146	
	300'-0	27A	146	
	320'-0	28A	144	
	340'-0	28B	146	
31 TO 33	160'-0	18B	145	4' x 14' x 34'
	180'-0	19C	146	
	200'-0	20D	139	
	220'-0	21A	144	
	240'-0	22B	144	
	260'-0	24A	143	
	280'-0	26A	144	
	300'-0	27B	142	
	320'-0	28A	145	
	340'-0	29A	145	
34 TO 36	160'-0	18C	145	4' x 11' x 28'
	180'-0	19D	141	
	200'-0	20D	141	
	220'-0	21A	146	
	240'-0	22B	146	
	260'-0	24A	146	
	280'-0	26A	146	
	300'-0	27B	144	
	320'-0	28B	144	
	340'-0	30A	143	

H IN FT.	C - C ABUT. BRG.	PILING (HP10x57)		FOOTING SIZE
		NO. & LAYOUT	① LRFD P <sub>u</sub> , STRENGTH I, DES. LOAD (KIPS)	
37 TO 40	160'-0	19C	144	4' x 11' x 28'
	180'-0	19D	145	
	200'-0	20D	145	
	220'-0	22A	145	
	240'-0	23B	145	
	260'-0	25A	145	
	280'-0	26B	143	
	300'-0	27B	146	
	320'-0	28B	147	
	340'-0	30A	146	

FOOTING SIZE	REINFORCING STEEL (ONE FOOTING)			TOTAL WEIGHT (L.B.)	STRUCTURAL CONCRETE (CY)	
	BAR NO., SIZE & SPACING	LENGTH	WEIGHT (L.B.)			
4' x 8' x 28'	d2	64 - #9 AS SHOWN	9'-1	1977	3294	33.2
	f1	28 - #5 @ 1'-0	7'-8	224		
	f2	8 - #5 @ 1'-0	27'-8	231		
	g1	28 - #6 @ 1'-0	7'-8	322		
	g2	13 - #6 @ 0'-7 1/2	27'-8	540		
4' x 9' x 28'	d2	64 - #9 AS SHOWN	9'-1	1977	3486	37.3
	f1	28 - #5 @ 1'-0	8'-8	253		
	f2	9 - #5 @ 1'-0	27'-8	260		
	g1	35 - #6 @ 0'-9 1/2	8'-8	456		
	g2	13 - #6 @ 0'-8 1/2	27'-8	540		
4' x 11' x 28'	d2	64 - #9 AS SHOWN	9'-1	1977	4029	45.6
	f1	28 - #5 @ 1'-0	10'-8	312		
	f2	11 - #5 @ 1'-0	27'-8	317		
	g1	31 - #8 @ 0'-11	10'-8	883		
	g2	13 - #6 @ 0'-10 1/2	27'-8	540		
4' x 11' x 30'	d2	64 - #9 AS SHOWN	9'-1	1977	4829	48.9
	f1	30 - #5 @ 1'-0	10'-8	334		
	f2	11 - #5 @ 1'-0	29'-8	340		
	g1	32 - #8 @ 0'-11	10'-8	911		
	g2	16 - #8 @ 0'-8	29'-8	1267		
4' x 14' x 30'	d2	64 - #9 AS SHOWN	9'-1	1977	5778	62.2
	f1	30 - #5 @ 1'-0	13'-8	428		
	f2	14 - #5 @ 1'-0	29'-8	433		
	g1	36 - #9 @ 0'-10	13'-8	1673		
	g2	16 - #8 @ 0'-10 1/2	29'-8	1267		
4' x 14' x 32'	d2	64 - #9 AS SHOWN	9'-1	1977	6567	66.4
	f1	32 - #5 @ 1'-0	13'-8	456		
	f2	14 - #5 @ 1'-0	31'-8	462		
	g1	39 - #9 @ 0'-9 1/2	13'-8	1812		
	g2	22 - #8 @ 0'-7 1/2	31'-8	1860		
4' x 14' x 34'	d2	64 - #9 AS SHOWN	9'-1	1977	6837	70.5
	f1	34 - #5 @ 1'-0	13'-8	485		
	f2	14 - #5 @ 1'-0	33'-8	492		
	g1	41 - #9 @ 0'-10	13'-8	1905		
	g2	22 - #8 @ 0'-7 1/2	33'-8	1978		

① NOTE: P<sub>u</sub>, STRENGTH I DESIGN LOAD (KIPS) IS NOT THE VALUE USED IN THE FIELD FOR DRIVING PILES.



**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 RS40-146-10.

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.

PIER PILES SHALL BE DRIVEN TO VALUES SHOWN IN DESIGN PLANS.

05-13 LATEST REVISION DATE	APPROVED BY BRIDGE ENGINEER <i>Thomas E. McQuinn</i>	 <b>Iowa Department of Transportation</b> Highway Division	STANDARD DESIGN - 40' ROADWAY, 3 SPAN BRIDGES
			<b>ROLLED STEEL BEAM BRIDGES</b> JUNE, 2010
<b>TEE PIER-HP10x57 SRL-1</b> <b>STEEL PILE FOOTINGS</b>		<b>RS40-148-10</b> 30° SKEW - SHEET 1	