

Diagram showing bent bar details for reinforcement. The diagram includes a general bent bar detail (8b) and three specific bent bar details (4e1, 4e2, 4e3) for different bent bar shapes. Dimensions are given in inches and fractions. The general detail (8b) shows a bent bar with dimensions: 10'-9 1/2" (bottom), 13'-7 1/4" (bottom), 13'-10 1/2" (top), 2'-0 1/2" (right), 6" (right), 1'-10" (left), and 6" (left). The bent bar is labeled D=6. The specific details (4e1, 4e2, 4e3) show bent bars with dimensions: 4e1 (top: 2'-2", 4 1/2", 2'-9 1/2", 3'-4" (curved), 2'-9 1/2", 4 1/2", 4e2 (top: 2'-2", 4e3 (top: 4'-5 1/2", 4e2 (bottom: 5'-4", 4e3 (bottom: 4'-5 1/2", 4e2 (left: 4 1/2", 4e3 (left: 4 1/2", 4e2 (right: 2'-2", 4e3 (right: 2'-2"). The bent bars are labeled D=2. The bent bars are labeled 5c1, 5c2 & 5c3.

NOTE: ALL DIMENSIONS ARE OUT TO OUT.
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[illegible]

H IN FEET	COLUMN HEIGHT	STRUCTURAL CONCRETE (CY)	REINFORCING STEEL																								TOTAL WEIGHT (LB.)
			d1 BAR				4e1 BAR				4e2 BAR				4e3 BAR												
			NO.	SIZE	LENGTH	WEIGHT	NO.	SIZE	LENGTH	WEIGHT	NO.	SIZE	LENGTH	WEIGHT	NO.	SIZE	LENGTH	WEIGHT									
16	5'-9"	9.8	48	9	8'-6"	1387	12	4	11'-10"	95	12	4	15'-9"	126	12	4	14'-0"	112	1720								
17	6'-9"	11.5	48	9	9'-6"	1550	14	4	11'-10"	111	14	4	15'-9"	147	14	4	14'-0"	131	1939								
18	7'-9"	13.2	48	9	10'-6"	1714	16	4	11'-10"	126	16	4	15'-9"	169	16	4	14'-0"	150	2158								
19	8'-9"	15.0	48	9	11'-6"	1877	18	4	11'-10"	142	18	4	15'-9"	188	18	4	14'-0"	168	2376								
20	9'-9"	16.7	48	9	12'-6"	2040	20	4	11'-10"	158	20	4	15'-9"	210	20	4	14'-0"	187	2595								
21	10'-9"	18.4	48	9	13'-6"	2203	22	4	11'-10"	174	22	4	15'-9"	231	22	4	14'-0"	206	2814								
22	11'-9"	20.1	48	9	14'-6"	2366	24	4	11'-10"	190	24	4	15'-9"	253	24	4	14'-0"	224	3033								
23	12'-9"	21.8	48	9	15'-6"	2530	26	4	11'-10"	206	26	4	15'-9"	274	26	4	14'-0"	243	3253								
24	13'-9"	23.5	48	9	16'-6"	2693	28	4	11'-10"	221	28	4	15'-9"	295	28	4	14'-0"	262	3471								
25	14'-3"	24.4	48	9	17'-0"	2774	30	4	11'-10"	237	30	4	15'-9"	316	30	4	14'-0"	281	3608								
26	15'-3"	26.1	48	9	18'-0"	2938	32	4	11'-10"	253	32	4	15'-9"	337	32	4	14'-0"	299	3827								
27	16'-3"	27.8	48	9	19'-0"	3101	34	4	11'-10"	269	34	4	15'-9"	358	34	4	14'-0"	318	4046								
28	17'-3"	29.5	48	9	20'-0"	3264	36	4	11'-10"	285	36	4	15'-9"	379	36	4	14'-0"	337	4265								
29	18'-3"	31.2	48	9	21'-0"	3428	38	4	11'-10"	301	38	4	15'-9"	400	38	4	14'-0"	355	4484								
30	19'-3"	32.9	48	9	22'-0"	3590	40	4	11'-10"	316	40	4	15'-9"	421	40	4	14'-0"	374	4701								
31	20'-3"	34.6	48	9	23'-0"	3754	42	4	11'-10"	332	42	4	15'-9"	442	42	4	14'-0"	393	4921								
32	21'-3"	36.3	48	9	24'-0"	3917	44	4	11'-10"	348	44	4	15'-9"	463	44	4	14'-0"	411	5139								
33	22'-3"	38.0	48	9	25'-0"	4080	46	4	11'-10"	364	46	4	15'-9"	484	46	4	14'-0"	430	5358								
34	23'-3"	39.7	48	9	26'-0"	4243	48	4	11'-10"	379	48	4	15'-9"	505	48	4	14'-0"	449	5576								
35	24'-3"	41.5	48	9	27'-0"	4406	50	4	11'-10"	395	50	4	15'-9"	526	50	4	14'-0"	468	5795								
36	25'-3"	43.2	48	9	28'-0"	4570	52	4	11'-10"	411	52	4	15'-9"	547	52	4	14'-0"	486	6014								
37	26'-3"	44.9	48	9	29'-0"	4733	54	4	11'-10"	427	54	4	15'-9"	568	54	4	14'-0"	505	6233								
38	27'-3"	46.6	48	9	30'-0"	4896	56	4	11'-10"	443	56	4	15'-9"	589	56	4	14'-0"	524	6452								
39	28'-3"	48.3	48	9	31'-0"	5059	58	4	11'-10"	458	58	4	15'-9"	610	58	4	14'-0"										

SEE "TEE PIER NOTES" ON H44-01-07 FOR NOTES REGARDING APPLICATION OF THESE PIER STANDARDS.

ELIMINATE 2x8 BEVELED KEYWAY ON TOP OF CAP FOR EXPANSION PIERS.

① SEE SHEET H44-17-07 FOR STEP REINFORCING STEEL QUANTITIES AND DETAILS.

LATEST REVISION DATE APPROVED BY BRIDGE ENGINEER <i>Norman L. McQuinn</i>	 Iowa Department of Transportation Highway Division	
	STANDARD DESIGN - 44' ROADWAY, THREE SPAN BRIDGE PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGES	
	HL93 SUPERSTRUCTURE	MARCH, 2007
TEE PIER CAP AND COLUMN 15° SKEW		H44-51-07