

PILE BENT NOTES:

THESE PIER BENTS ARE DESIGNED FOR USE WITH STANDARD H40-06 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGES IN LOCATIONS WHERE ICE AND DRIFT CONDITIONS ARE NOT SEVERE.

PIER PILES ARE TO BE DRIVEN TO THE DESIGN BEARING VALUE W/O IMPACT.

FOR DETAILS OF TRESTLE PILES, TYPES 1, 2 AND 3, SEE STANDARD P10A.

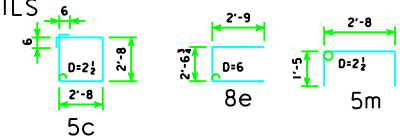
DETAILS SHOWN FOR CONCRETE PILES. FOR ORIENTATION OF STEEL PILES, SEE STANDARD P10A.

MINIMUM CLEAR DISTANCE FROM FACE OF CONCRETE TO NEAR REINFORCING BAR SHALL BE 2 INCHES UNLESS OTHERWISE NOTED OR SHOWN.

REINFORCING BAR LIST AND ESTIMATED QUANTITIES - PER PILE BENT

BAR	SHAPE	9 PILE BENT	10 PILE BENT	11 PILE BENT	12 PILE BENT	13 PILE BENT	14 PILE BENT	15 PILE BENT	16 PILE BENT
		NO. LENGTH WEIGHT	NO. LENGTH WEIGHT	NO. LENGTH WEIGHT	NO. LENGTH WEIGHT	NO. LENGTH WEIGHT	NO. LENGTH WEIGHT	NO. LENGTH WEIGHT	NO. LENGTH WEIGHT
9a		6 40'-8 830	6 40'-8 830	6 40'-8 830	6 40'-8 830	6 40'-8 830	6 40'-8 830	4 40'-8 553	4 40'-8 553
8b		8 40'-8 869	8 40'-8 869	8 40'-8 869	8 40'-8 869	8 40'-8 869	8 40'-8 869	8 40'-8 869	8 40'-8 869
5c		34 11'-8 414	38 11'-8 462	32 11'-8 389	46 11'-8 560	50 11'-8 608	41 11'-8 499	30 11'-8 365	32 11'-8 389
8e		4 8'-1 86	4 8'-1 86	4 8'-1 86	4 8'-1 86	4 8'-1 86	4 8'-1 86	4 8'-1 86	4 8'-1 86
5m		8 5'-6 46	8 5'-6 46	8 5'-6 46	8 5'-6 46	8 5'-6 46	8 5'-6 46	8 5'-6 46	8 5'-6 46
5n		8 2'-8 22	8 2'-8 22	8 2'-8 22	8 2'-8 22	8 2'-8 22	8 2'-8 22	8 2'-8 22	8 2'-8 22
REINFORCING STEEL (LB.)		2267	2315	2242	2413	2461	2352	1941	1965
STRUCTURAL ②	PILE TYPE								
CONCRETE (CY)	1, 2	-----	-----	14.1	14.0	14.0	13.9	13.9	13.8
	3	14.5	14.5	14.5	14.5	14.5	14.5	-----	-----

BENT BAR DETAILS



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

E-E ABUTMENT BEARING	FRICTION BEARING PILING				FRICTION OR POINT BEARING PILING			
	P10A TYPE 1 OR 2				P10A TYPE 3			
	NUMBER OF TRESTLE PILES AND SPACING	① "K" (INCHES)	DES. PILE BRG.(TONS) W/O IMPACT	DES. PILE ③ BRG.(TONS) W/O IMPACT	NUMBER OF TRESTLE PILES AND SPACING	① "K" (INCHES)	DES. PILE BRG.(TONS) W/O IMPACT	DES. PILE ③ BRG.(TONS) W/O IMPACT
138'-10	13 PILES @ 3'-2 CTRS.	14	30	28	9 PILES @ 4'-9 CTRS.	16	43	40
	11 PILES @ 3'-9 1/2 CTRS.	16	36	33	9 PILES @ 4'-9 CTRS.	18	43	40
151'-4	14 PILES @ 2'-11 CTRS.	14	29	27	9 PILES @ 4'-9 CTRS.	16	45	42
	12 PILES @ 3'-5 1/2 CTRS.	16	34	31	9 PILES @ 4'-9 CTRS.	18	45	42
163'-10	15 PILES @ 2'-8 1/2 CTRS.	14	30	28	9 PILES @ 4'-9 CTRS.	16	49	46
	13 PILES @ 3'-2 CTRS.	16	34	32	10 PILES @ 4'-2 1/2 CTRS.	18	44	41
176'-4	16 PILES @ 2'-6 1/4 CTRS.	14	29	27	10 PILES @ 4'-2 1/2 CTRS.	16	47	43
	13 PILES @ 3'-2 CTRS.	16	36	33	11 PILES @ 3'-9 1/2 CTRS.	18	42	39
188'-10	15 PILES @ 2'-8 1/2 CTRS.	14	33	31	10 PILES @ 4'-2 1/2 CTRS.	16	49	46
	14 PILES @ 2'-11 CTRS.	16	35	33	11 PILES @ 3'-9 1/2 CTRS.	18	45	42
201'-4	16 PILES @ 2'-6 1/4 CTRS.	16	35	33	12 PILES @ 3'-5 1/2 CTRS.	16	46	44
					12 PILES @ 3'-5 1/2 CTRS.	18	46	44
213'-10	16 PILES @ 2'-6 1/4 CTRS.	16	37	34	12 PILES @ 3'-5 1/2 CTRS.	16	49	46
					13 PILES @ 3'-2 CTRS.	18	45	42
226'-4	16 PILES @ 2'-6 1/4 CTRS.	16	38	36	13 PILES @ 3'-2 CTRS.	16	47	44
					14 PILES @ 2'-11 CTRS.	18	44	41
243'-0	-----	--	--	--	13 PILES @ 3'-2 CTRS.	16	49	46
					14 PILES @ 2'-11 CTRS.	18	46	43

① SEE STANDARD P10A FOR "K" DIMENSION.

② CONCRETE QUANTITIES SHOWN HAVE HAD THE VOLUME OF EMBEDDED PILES DEDUCTED FOR TYPES 1 AND 2 BASED ON 0.8 FT³ PER FOOT OF EMBEDMENT. THE CONCRETE QUANTITIES FOR TYPE 3 PILES DO NOT REQUIRE REDUCTION FOR PILE EMBEDMENT.

③ FOR ESTIMATING PILE LENGTHS AND FOR DETERMINING ACTUAL PILE LENGTHS IN FIELD.

* TYPE 2 ONLY.

LATEST REVISION DATE

APPROVED BY BRIDGE ENGINEER



Iowa Department of Transportation
Highway Division

STANDARD DESIGN - 40' ROADWAY, THREE SPAN BRIDGE
PRETENSIONED PRESTRESSED
CONCRETE BEAM BRIDGES
HL93 SUPERSTRUCTURE DECEMBER, 2006 HS25 SUBSTRUCTURE

PILE BENT DETAILS
0° SKEW

H40-46-06