

PILE BENT NOTES:

THESE PIER BENTS ARE DESIGNED FOR USE IN LOCATIONS WHERE ICE AND DRIFT CONDITIONS ARE NOT SEVERE.

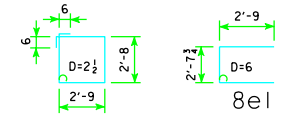
FOR DETAILS OF TRESTLE PILES, TYPES 1, 2 AND 3, SEE STANDARD PIOL.

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

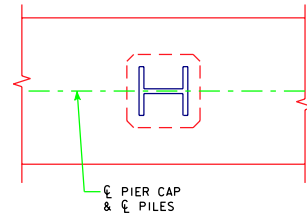
REINFORCING BAR LIST AND ESTIMATED QUANTITIES - PER PILE BENT

BAR	LENGTH	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.	SIZE	WEIGHT	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT
a1	42'-8"		6	9	870	6	9	870	6	9	870	6	9	870	6	9	870	6	9	870	4	9	580	4	9	580
a2	42'-8"		4	8	456	4	8	456	4	8	456	4	8	456	4	8	456	4	8	456	4	8	456	4	8	456
b1	42'-8"		4	9	580	4	9	580	4	9	580	4	9	580	4	9	580	4	9	580	4	8	456	4	8	456
5c1	11'-10"		34	5	420	38	5	469	42	5	518	46	5	568	50	5	617	54	5	666	30	5	370	47	5	580
8e1	8'-2"		4	8	87	4	8	87	4	8	87	4	8	87	4	8	87	4	8	87	4	8	87	4	8	87
① REINFORCING STEEL (LB.)			2413			2462			2511			2561			2610			2659			1949			2159		
STRUCTURAL ② PILE TYPE			-----			-----			15.2			15.2			15.2			15.1			15.1			15.0		
CONCRETE (CY)			1, 2			-----			15.7			15.7			15.7			15.7			15.7			-----		

BENT BAR DETAILS



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



PILE ORIENTATION DETAIL FOR
TYPE 3 TRESTLE BENT PILES

E-E ABUTMENT BEARING	FRICTION BEARING PILING				FRICTION OR POINT BEARING PILING			
	PIOL TYPE 1 OR 2				PIOL TYPE 3			
	NUMBER OF TRESTLE PILES	③ "K" (INCHES)	④ DES. PILE BRG. (TONS)	⑤ LRFD DES. BRG. (KIPS)	NUMBER OF TRESTLE PILES	PILE SIZE	④ DES. PILE BRG. (TONS)	⑤ LRFD DES. BRG. (KIPS)
138'-10"	13	14	32	92	9	HP10x57	46	133
	11	16	38	109	9	HP12x53	46	133
151'-4"	14	14	31	90	9	HP10x57	48	140
	12	16	36	105	10	HP12x53	43	126
163'-10"	15	14	31	91	10	HP10x57	47	136
	13	16	36	105	11	HP12x53	43	124
176'-4"	15	14	33	95	10	HP10x57	49	143
	14	16	35	102	11	HP12x53	45	130
188'-10"	16	14	32	93	11	HP10x57	47	135
	14	16	37	106	12	HP12x53	43	124
201'-4"	16	16	36	103	12	HP10x57	48	138
					13	HP12x53	44	127
213'-10"	16	16	37	109	12	HP10x57	50	145
					13	HP12x53	46	134
226'-4"	-----	--	--	--	13	HP10x57	49	141
					14	HP12x53	45	131
243'-0"	-----	--	--	--	14	HP10x57	47	137
					15	HP12x53	44	128

- SEE SHEET H40-17-06 FOR STEP REINFORCING STEEL QUANTITIES AND DETAILS.
- 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.
- SEE STANDARD PIOL FOR "K" DIMENSION.
- FOR DETERMINING ACTUAL PILE LENGTHS IN FIELD.
- FOR ESTIMATING PILE LENGTHS USING AASHTO LRFD SPECIFICATIONS.

NOTE: FRICTION BEARING INCLUDES SIDE FRICTION AND END BEARING IN SOIL.
POINT BEARING INCLUDES SIDE FRICTION AND POINT BEARING IN ROCK.

LATEST REVISION DATE 01-10	APPROVED BY BRIDGE ENGINEER <i>Harmon L. McDaniel</i>	 Iowa Department of Transportation Highway Division	
		STANDARD DESIGN - 40' ROADWAY, THREE SPAN BRIDGE PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGES AUGUST, 2009	
		PILE BENT PIERS 15° SKEW	H40-49-06