PILE BENT NOTES:

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

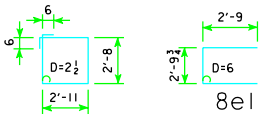
FOR DETAILS OF TRESTLE PILES, TYPES 1, 2 AND 3, SEE STANDARD PIOL.

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

			9 PILE BENT			11 PILE BENT			13 PILE BENT			15 PILE BENT			17 PILE BENT			19 PILE BENT			21 PILE BENT		
BAR	LENGTH	SHAPE	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT
a1	57'-8		8	9	1569	8	9	1569	8	9	1569	6	9	1176	6	9	1176	6	9	1176	6	9	1176
a2	57'-8		4	8	616	4	8	616	4	8	616	4	8	616	4	8	616	4	8	616	4	8	616
b1	57'-8		4	10	993	4	10	993	4	10	993	4	10	993	4	9	784	4	9	784	4	9	784
5c1	12'-2		50	5	634	62	5	787	74	5	939	86	5	1091	66	5	838	74	5	939	62	5	787
8e1	8'-4		4	8	89	4	8	89	4	8	89	4	8	89	4	8	89	4	8	89	4	8	89
(1) REINFORCING STEEL (LB.)			3901			4054			4206			3965			3503			3604			3452		
STRUCTURAL CONCRETE (CY)		(2) PILE TYPE 1, 2	-----			-----			22.1			22.0			21.9			21.8			21.8		
		3	22.7			22.7			22.7			22.7			-----			-----			-----		

BENT BAR DETAILS



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

℄-℄ ABUTMENT BEARING	FRICTION BEARING PILING — PIOL TYPE 1 OR 2				FRICTION OR POINT BEARING PILING — 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	15	14	29	84	9	HP10x57	48	140
	13	16	33	97	11	HP12x53	39	114
151'-4	15	14	30	88	11	HP10x57	41	120
	13	16	35	101	11	HP12x53	41	120
163'-10	15	14	33	95	11	HP10x57	45	130
	15	16	33	95	11	HP12x53	45	130
176'-4	17	14	30	88	11	HP10x57	47	135
	15	16	34	99	13	HP12x53	39	114
188'-10	17	14	31	91	11	HP10x57	49	141
	15	16	36	103	13	HP12x53	41	119
201'-4	19	14	31	91	13	HP10x57	46	132
	17	16	35	101	13	HP12x53	46	132
213'-10	19	14	33	95	13	HP10x57	48	139
	17	16	37	106	15	HP12x53	41	120
226'-4	21	14	31	90	15	HP10x57	44	126
	19	16	34	100	15	HP12x53	44	126
243'-0	21	14	33	95	15	HP10x57	46	133
	19	16	36	105	15	HP12x53	46	133

(1) SEE SHEET H40-31-06 FOR STEP REINFORCING STEEL QUANTITIES AND DETAILS.

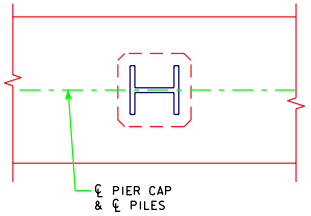
(2) CONCRETE QUANTITIES SHOWN HAVE HAD THE VOLUME OF EMBEDDED PILES DEDUCTED FOR TYPES 1 AND 2 BASED ON 0.8 FT^3 PER FOOT OF EMBEDMENT. THE CONCRETE QUANTITIES FOR TYPE 3 PILES DO NOT REQUIRE REDUCTION FOR PILE EMBEDMENT.

(3) SEE STANDARD PIOL FOR "K" DIMENSION.

(4) FOR DETERMINING ACTUAL PILE LENGTHS IN FIELD.

(5) 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.



PILE ORIENTATION DETAIL FOR TYPE 3 TRESTLE BENT PILES

01-10
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

AUGUST, 2009

PILE BENT PIERS

45° SKEW

H40-55-06

REVISED 01-10 - ADDED FRICTION & POINT BEARING DESCRIPTION NOTE.