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.

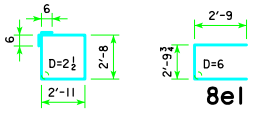
MINIMUM CLEAR DISTANCE FROM FACE OF CONCRETE TO NEAR REINFORCING BAR SHALL BE 2 INCHES UNLESS OTHERWISE NOTED OR SHOWN.

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

REINFORCING BAR LIST AND ESTIMATED QUANTITIES - PER PILE BENT

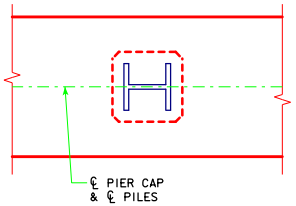
			9 PILE BENT			11 PILE BENT			13 PILE BENT			15 PILE BENT			17 PILE BENT			19 PILE BENT			21 PILE BENT		
BAR	LENGTH	SHAPE	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT
a1	57'-8		8	9	1569	8	9	1569	8	9	1569	6	9	1176	6	9	1176	6	9	1176	6	9	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			FRICTION OR POINT BEARING PILING		
	PIOL TYPE 1 OR 2			PIOL TYPE 3		
	NUMBER OF TRESTLE PILES	(3) "K" (INCHES)	(4) LRFD PU, STRENGTH I DES. LOAD (KIPS)	NUMBER OF TRESTLE PILES	PILE SIZE	(4) LRFD PU, STRENGTH I DES. LOAD (KIPS)
138'-10	15	14	84	9	HP10x57	140
	13	16	97	11	HP12x53	114
151'-4	15	14	88	11	HP10x57	120
	13	16	101	11	HP12x53	120
163'-10	15	14	95	11	HP10x57	130
	15	16	95	11	HP12x53	130
176'-4	17	14	88	11	HP10x57	135
	15	16	99	13	HP12x53	114
188'-10	17	14	91	11	HP10x57	141
	15	16	103	13	HP12x53	119
201'-4	19	14	91	13	HP10x57	132
	17	16	101	13	HP12x53	132
213'-10	19	14	95	13	HP10x57	139
	17	16	106	15	HP12x53	120
226'-4	-----	--	--	15	HP10x57	126
	-----	--	--	15	HP12x53	126
243'-0	-----	--	--	15	HP10x57	133
	-----	--	--	15	HP12x53	133



PILE ORIENTATION DETAIL FOR TYPE 3 TRESTLE BENT PILES

(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) NOTE: PU, STRENGTH I DESIGN LOAD (KIPS) IS NOT THE VALUE USED IN THE FIELD FOR DRIVING PILES.

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

REVISED 05-13 - REVISION FOR LRFD PILE DESIGN.

05-13
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