PILE BENT NOTES:

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

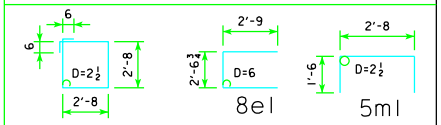
FOR DETAILS OF TRESTLE PILES, TYPES 1, 2 AND 3, SEE STANDARD PIOL.

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

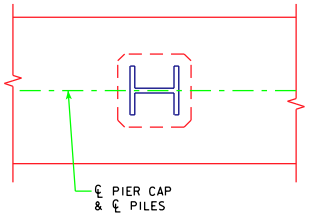
			9 PILE BENT			10 PILE BENT			11 PILE BENT			12 PILE BENT			13 PILE BENT			14 PILE BENT			15 PILE BENT			16 PILE BENT		
BAR	LENGTH	SHAPE	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT
a1	40'-8		8	9	1106	8	9	1106	6	9	830	6	9	830	6	9	830	6	9	830	6	9	830	6	9	830
a2	40'-8		4	8	434	4	8	434	4	8	434	4	8	434	4	8	434	4	8	434	4	8	434	4	8	434
b1	40'-8		4	9	553	4	9	553	4	9	553	4	9	553	4	9	553	4	9	553	4	9	553	4	9	553
5c1	11'-8		42	5	511	38	5	462	42	5	511	46	5	560	50	5	608	54	5	657	44	5	535	47	5	572
8e1	8'-1		4	8	86	4	8	86	4	8	86	4	8	86	4	8	86	4	8	86	4	8	86	4	8	86
5m1	5'-8		8	5	47	8	5	47	8	5	47	8	5	47	8	5	47	8	5	47	8	5	47	8	5	47
5n1	2'-10		8	5	24	8	5	24	8	5	24	8	5	24	8	5	24	8	5	24	8	5	24	8	5	24
REINFORCING STEEL (LB.)			2761			2712			2485			2534			2582			2631			2509			2546		
STRUCTURAL (1) CONCRETE (CY)	PILE TYPE																									
	1, 2		-----			-----			14.0			14.0			13.9			13.9			13.8			13.8		
	3		14.5			14.5			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.

℄-℄ ABUTMENT BEARING	FRICTION BEARING PILING				FRICTION OR POINT BEARING PILING			
	PIOL TYPE 1 OR 2				PIOL TYPE 3			
	NUMBER OF TRESTLE PILES	(2) "K" (INCHES)	(3) DES. PILE BRG. (TONS)	(4) LRFD DES. BRG. (KIPS)	NUMBER OF TRESTLE PILES	PILE SIZE	(3) DES. PILE BRG. (TONS)	(4) LRFD DES. BRG. (KIPS)
160'-0	13	14	32	92	9	HP10x57	46	133
	11	16	38	109	9	HP12x53	46	133
180'-0	14	14	32	93	9	HP10x57	50	145
	12	16	38	109	10	HP12x53	45	131
200'-0	15	14	33	94	10	HP10x57	49	142
	13	16	38	109	11	HP12x53	44	129
220'-0	15	16	36	103	11	HP10x57	49	141
					12	HP12x53	45	129
240'-0	16	16	37	106	12	HP10x57	49	141
					13	HP12x53	45	130
260'-0	--	--	--	--	13	HP10x57	49	141
					14	HP12x53	45	131
280'-0	--	--	--	--	14	HP10x57	49	141
					15	HP12x53	45	131
300'-0	--	--	--	--	15	HP10x57	49	141
					16	HP12x53	46	132
320'-0	--	--	--	--	16	HP10x57	49	141
340'-0	--	--	--	--	--	--	--	--



PILE ORIENTATION DETAIL FOR TYPE 3 TRESTLE BENT PILES

(1) 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.

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

(3) FOR DETERMINING ACTUAL PILE LENGTHS IN FIELD.

(4) 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

APPROVED BY BRIDGE ENGINEER

Iowa Department of Transportation
Highway Division

STANDARD DESIGN - 40' ROADWAY, 3 SPAN BRIDGES

ROLLED STEEL BEAM BRIDGES

JUNE, 2010

PILE BENT PIERS

0° SKEW

RS40-097-10