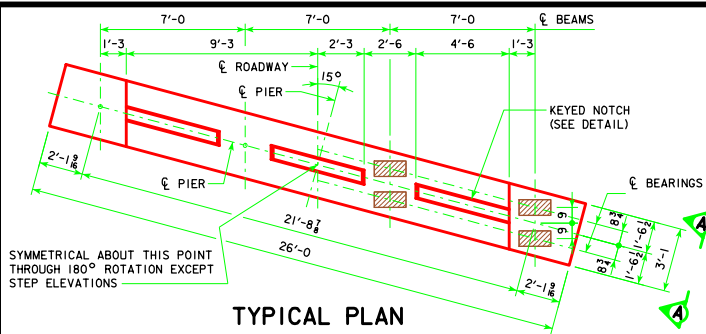


REVISED 05-13 - REVISION FOR LRFD PILE DESIGN.



**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.

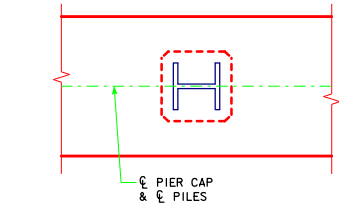
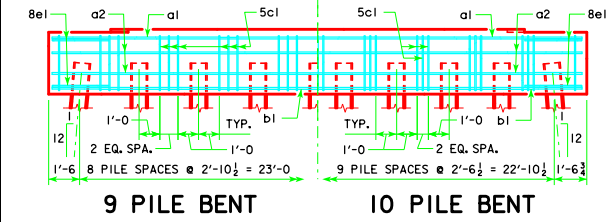
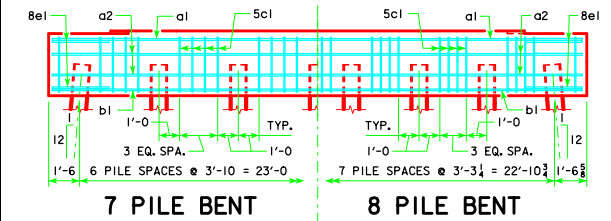
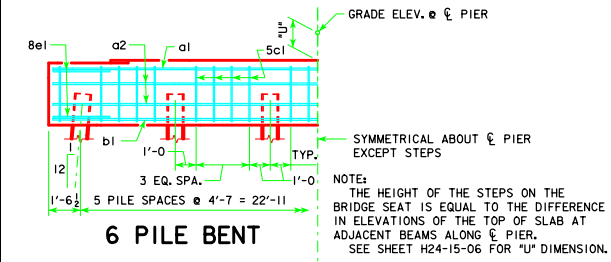
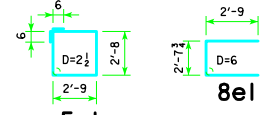
MINIMUM CLEAR DISTANCE FROM FACE OF CONCRETE TO NEAR REINFORCING BAR SHALL BE 2 INCHES UNLESS OTHERWISE NOTED OR SHOWN.

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

**REINFORCING BAR LIST AND ESTIMATED QUANTITIES - PER PILE BENT**

BAR	LENGTH	SHAPE	6 PILE BENT			7 PILE BENT			8 PILE BENT			9 PILE BENT			10 PILE BENT		
			NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT
a1	25'-8"		6	9	524	6	9	524	6	9	524	6	9	524	6	9	524
a2	25'-8"		4	8	274	4	8	274	4	8	274	4	8	274	4	8	274
b1	25'-8"		4	8	274	4	8	274	4	8	274	4	8	274	4	8	274
5c1	11'-10"		22	5	272	26	5	321	30	5	370	26	5	321	29	5	358
8e1	8'-2"		4	8	87	4	8	87	4	8	87	4	8	87	4	8	87
REINFORCING STEEL (LB.)			1431			1480			1529			1480			1517		
STRUCTURAL PILE TYPE			---			---			8.8			8.8			8.8		
CONCRETE (CY)			3			9.2			9.2			9.2			9.2		

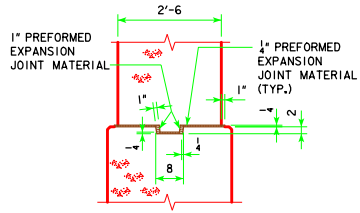
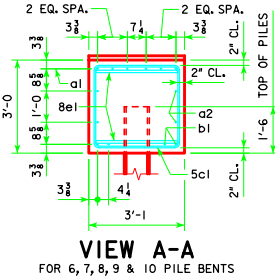
**BENT BAR DETAILS**



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

Pier 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 P <sub>u</sub> , STRENGTH I, DES. LOAD (KIPS)	NUMBER OF TRESTLE PILES	PILE SIZE	④ LRFD P <sub>u</sub> , STRENGTH I, DES. LOAD (KIPS)
138'-10"	---	---	---	6	HP10x57	142
151'-4"	---	---	---	7	HP12x53	122
163'-10"	---	---	---	7	HP10x57	128
176'-4"	---	---	---	7	HP12x53	138
188'-10"	---	---	---	8	HP10x57	121
201'-4"	---	---	---	7	HP12x53	144
213'-10"	---	---	---	8	HP12x53	126
226'-4"	---	---	---	8	HP10x57	132
243'-0"	---	---	---	9	HP10x57	130
				9	HP12x53	136
				10	HP12x53	123
				9	HP10x57	144
				10	HP12x53	129
				10	HP10x57	136

- SEE SHEET H24-17-06 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 FT<sup>3</sup> PER FOOT OF EMBEDMENT. THE CONCRETE QUANTITIES FOR TYPE 3 PILES DO NOT REQUIRE REDUCTION FOR PILE EMBEDMENT.
- SEE STANDARD PIOL FOR "K" DIMENSION.
- NOTE: P<sub>u</sub>, STRENGTH I DESIGN LOAD (KIPS) IS NOT THE VALUE USED IN THE FIELD FOR DRIVING PILES.



LATEST REVISION DATE: 05-13

APPROVED BY BRIDGE ENGINEER: *Thomas E. McQuill*

**Iowa Department of Transportation Highway Division**

STANDARD DESIGN - 24' ROADWAY, THREE SPAN BRIDGE

**PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGES**

DECEMBER, 2006

**PILE BENT PIERS**      **H24-44-06**

15° SKEW