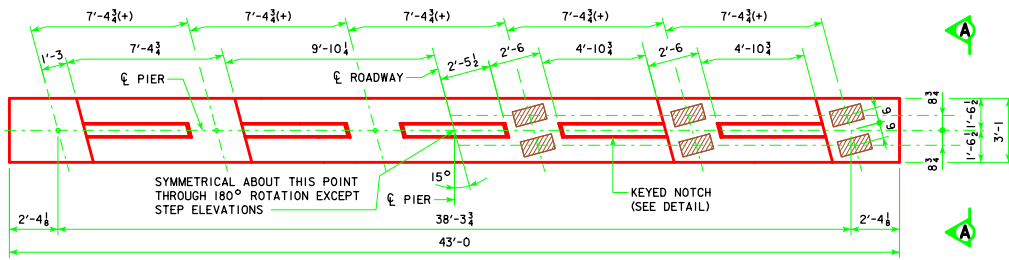
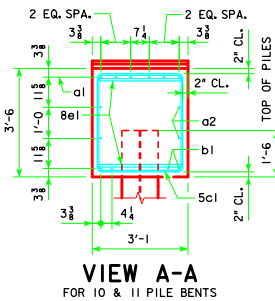
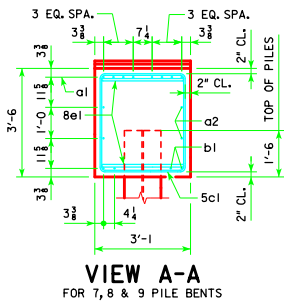
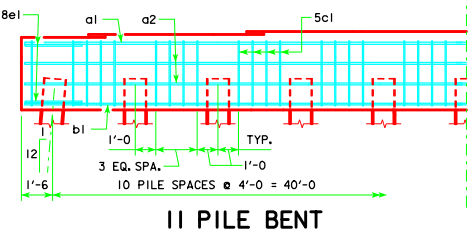
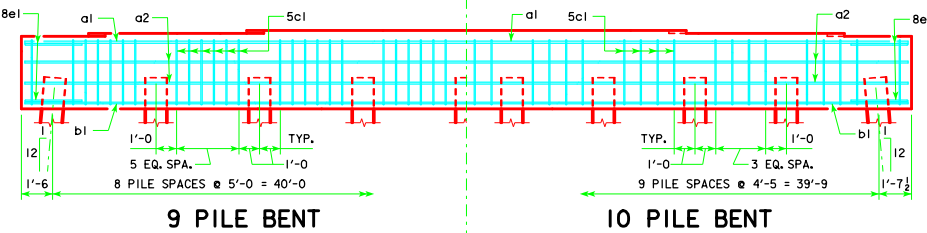
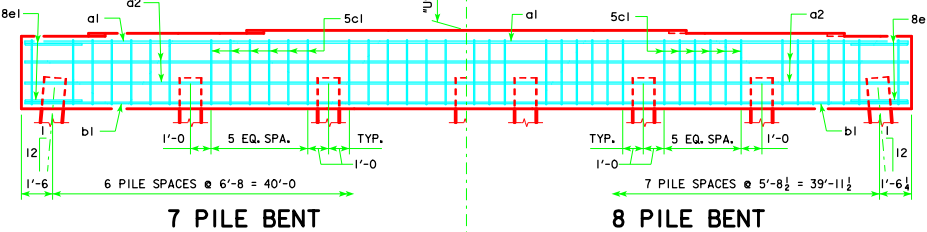


REVISED 05-13 - REVISION FOR LRFD PILE DESIGN.



**TYPICAL PLAN**

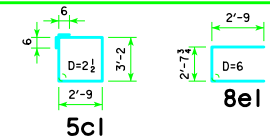
**NOTE:**  
THE HEIGHT OF THE STEPS ON THE BRIDGE SEAT IS EQUAL TO THE DIFFERENCE IN ELEVATIONS OF THE TOP OF SLAB AT ADJACENT BEAMS ALONG PIER.  
SEE SHEET H40-15-06 FOR "A" DIMENSION.



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

BAR	LENGTH	SHAPE	7 PILE BENT			8 PILE BENT			9 PILE BENT			10 PILE BENT			11 PILE BENT		
			NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT
a1	42'-8		8	9	1161	8	9	1161	8	9	1161	6	9	870	6	9	870
a2	42'-8		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
5c1	12'-10		38	5	509	44	5	589	50	5	669	38	5	509	42	5	562
8e1	8'-2		4	8	87	4	8	87	4	8	87	4	8	87	4	8	87
<b>REINFORCING STEEL (LB.)</b>			2793			2873			2953			2502			2555		
<b>STRUCTURAL CONCRETE (CY)</b>			3			3			3			3			3		

**BENT BAR DETAILS**



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

**FRICTION OR POINT BEARING PILING**

PILTYPE	PILOT TYPE 3	
	NUMBER OF TRESTLE PILES	PILE
138'-10	7	HP14x73
138'-10	7	HP14x89
151'-4	7	HP14x73
151'-4	7	HP14x89
163'-10	8	HP14x73
163'-10	7	HP14x89
176'-4	8	HP14x73
176'-4	7	HP14x89
188'-10	9	HP14x73
188'-10	7	HP14x89
201'-4	9	HP14x73
201'-4	8	HP14x89
213'-10	10	HP14x73
213'-10	8	HP14x89
226'-4	10	HP14x73
226'-4	9	HP14x89
243'-0	11	HP14x73
243'-0	9	HP14x89

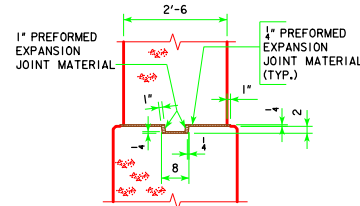
**PILE BENT NOTES:**

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

FOR DETAILS OF TRESTLE PILES, 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.



- ① SEE SHEET H40-17-06 FOR STEP REINFORCING STEEL QUANTITIES AND DETAILS.
- ② FOR DETERMINING ACTUAL PILE LENGTHS IN FIELD.
- ③ 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  
05-13  
APPROVED BY BRIDGE ENGINEER  
Nathan E. Mc Donald

**Iowa Department of Transportation**  
Highway Division

STANDARD DESIGN - 40' ROADWAY, THREE SPAN BRIDGE  
**PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGES**  
AUGUST, 2009

**PILE BENT PIERS**  
HP14 PILES  
15° SKEW

**H40-50-06**