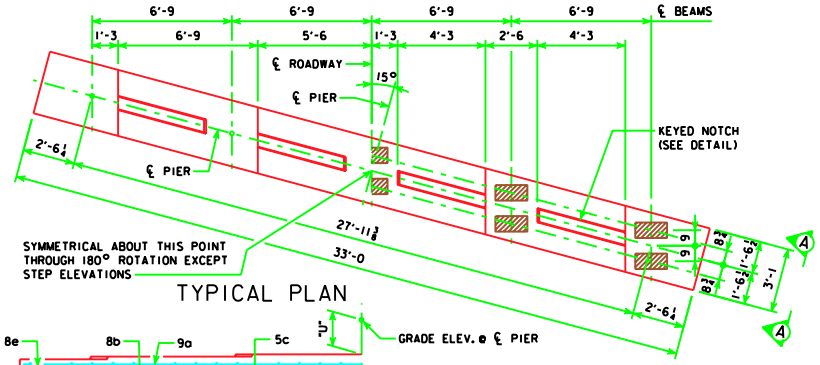
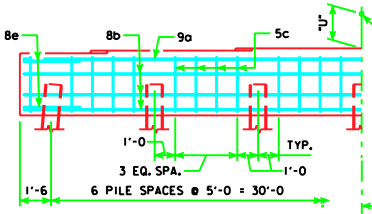


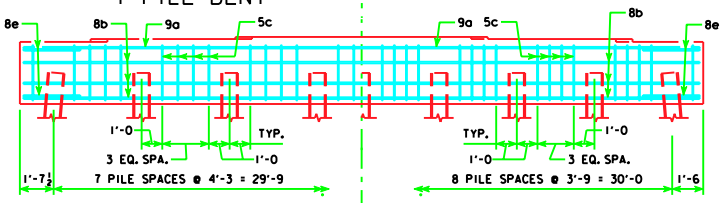
TYPICAL PLAN



7 PILE BENT

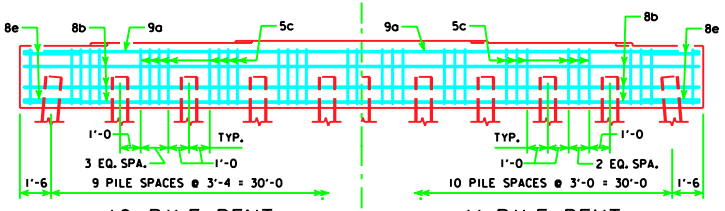
NOTE:
THE HEIGHT OF THE STEPS ON THE BRIDGE SEAT IS EQUAL TO THE DIFFERENCE IN ELEVATIONS OF THE TOP OF SLAB AT ADJACENT BEAMS ALONG ℄ PIER.
SEE SHEET H30-15-06 FOR "U" DIMENSION.

SYMMETRICAL ABOUT ℄ PIER EXCEPT STEPS



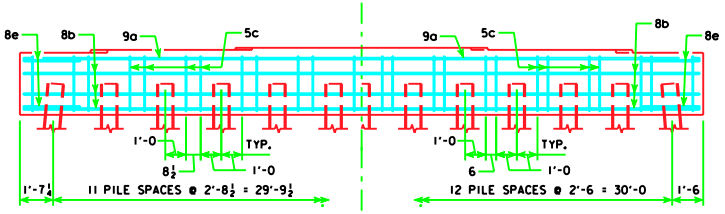
8 PILE BENT

9 PILE BENT



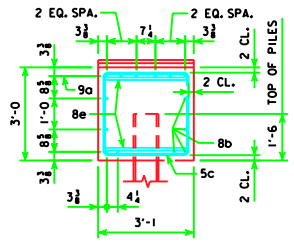
10 PILE BENT

11 PILE BENT

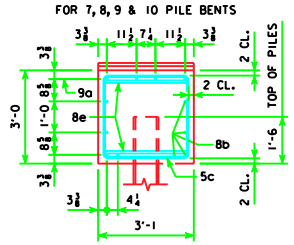


12 PILE BENT

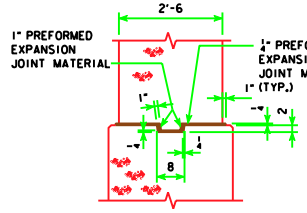
13 PILE BENT



VIEW A-A
FOR 7, 8, 9 & 10 PILE BENTS



VIEW A-A
FOR 11, 12 & 13 PILE BENTS

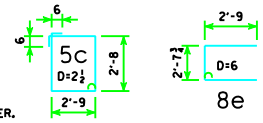


KEYED NOTCH DETAIL

REINFORCING BAR LIST AND ESTIMATED QUANTITIES - PER PILE BENT

BAR	SHAPE	7 PILE BENT NO.	LENGTH	WEIGHT	8 PILE BENT NO.	LENGTH	WEIGHT	9 PILE BENT NO.	LENGTH	WEIGHT	10 PILE BENT NO.	LENGTH	WEIGHT	11 PILE BENT NO.	LENGTH	WEIGHT	12 PILE BENT NO.	LENGTH	WEIGHT	13 PILE BENT NO.	LENGTH	WEIGHT
9a		6	32'-8	666	6	32'-8	666	6	32'-8	666	6	32'-8	666	4	32'-8	444	4	32'-8	444	4	32'-8	444
8b		8	32'-8	698	8	32'-8	698	8	32'-8	698	8	32'-8	698	8	32'-8	698	8	32'-8	698	8	32'-8	698
5c		26	11'-10	321	30	11'-10	370	34	11'-10	420	38	11'-10	469	32	11'-10	395	24	11'-10	296	26	11'-10	321
8e		4	8'-2	87	4	8'-2	87	4	8'-2	87	4	8'-2	87	4	8'-2	87	4	8'-2	87	4	8'-2	87
(4) REINFORCING STEEL (LB.)		1772			1821			1871			1920			1624			1525			1550		
STRUCTURAL (2) CONCRETE (CY)	PILE TYPE																					
	1, 2	-----			-----			11.5			11.4			11.4			11.3			11.3		
	3	11.9			11.9			11.9			11.9			11.9			-----			-----		

BENT BAR DETAILS



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

℄-℄ ABUTMENT BEARING	FRICTION BEARING PILING — PIOA TYPE 1 OR 2: NUMBER OF TRESTLE PILES AND SPACING	(1) "K" (INCHES)	DES. PILE BRG.(TONS) W/IMPACT	DES. PILE (3) BRG.(TONS) W/O IMPACT	FRICTION OR POINT BEARING PILING — PIOA TYPE 3: NUMBER OF TRESTLE PILES AND SPACING	(1) "K" (INCHES)	DES. PILE BRG.(TONS) W/IMPACT	DES. PILE (3) BRG.(TONS) W/O IMPACT
138'-10	11 PILES @ 3'-0 CTRS.	14	28	26	7 PILES @ 5'-0 CTRS.	16	44	40
	9 PILES @ 3'-9 CTRS.	16	34	32	7 PILES @ 5'-0 CTRS.	18	44	40
151'-4	11 PILES @ 3'-0 CTRS.	14	29	27	7 PILES @ 5'-0 CTRS.	16	46	43
	9 PILES @ 3'-9 CTRS.	16	36	33	7 PILES @ 5'-0 CTRS.	18	46	43
163'-10	12 PILES @ 2'-8½ CTRS.	14	29	27	7 PILES @ 5'-0 CTRS.	16	50	47
	10 PILES @ 3'-4 CTRS.	16	35	33	8 PILES @ 4'-3 CTRS.	18	44	41
176'-4	13 PILES @ 2'-6 CTRS.	14	29	27	8 PILES @ 4'-3 CTRS.	16	46	43
	11 PILES @ 3'-0 CTRS.	16	34	32	8 PILES @ 4'-3 CTRS.	18	46	43
188'-10	13 PILES @ 2'-6 CTRS.	14	30	28	8 PILES @ 4'-3 CTRS.	16	49	45
	11 PILES @ 3'-0 CTRS.	16	35	33	9 PILES @ 3'-9 CTRS.	18	43	40
201'-4	13 PILES @ 2'-6 CTRS.	16	34	32	9 PILES @ 3'-9 CTRS.	16	49	46
					10 PILES @ 3'-4 CTRS.	18	44	42
213'-10	13 PILES @ 2'-6 CTRS.	16	36	34	10 PILES @ 3'-4 CTRS.	16	46	44
					10 PILES @ 3'-4 CTRS.	18	46	44
226'-4	*13 PILES @ 2'-6 CTRS.	16	37	35	10 PILES @ 3'-4 CTRS.	16	49	46
					11 PILES @ 3'-0 CTRS.	18	44	42
243'-0	-----	-----	-----	-----	11 PILES @ 3'-0 CTRS.	16	46	44
					11 PILES @ 3'-0 CTRS.	18	46	44

(1) SEE STANDARD PIOA FOR "K" DIMENSION.

(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) FOR ESTIMATING PILE LENGTHS AND FOR DETERMINING ACTUAL PILE LENGTHS IN FIELD.

(4) SEE SHEET H30-17-06 FOR STEP REINFORCING STEEL QUANTITY AND DETAILS.

* TYPE 2 ONLY.

PILE BENT NOTES:

THESE PIER BENTS ARE DESIGNED FOR USE WITH STANDARD H30-06 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGES IN LOCATIONS WHERE ICE AND DRIFT CONDITIONS ARE NOT SEVERE.

PIER PILES ARE TO BE DRIVEN TO THE DESIGN BEARING VALUE W/O IMPACT.

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

DETAILS SHOWN FOR CONCRETE PILES. FOR ORIENTATION OF STEEL PILES, SEE STANDARD PIOA.

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

LATEST REVISION DATE

APPROVED BY BRIDGE ENGINEER

Iowa Department of Transportation
Highway Division

STANDARD DESIGN - 30' ROADWAY, THREE SPAN BRIDGES

PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGES

HL93 SUPERSTRUCTURE DECEMBER, 2006 HS25 SUBSTRUCTURE

PILE BENT DETAILS
15° SKEW

H30-46-06