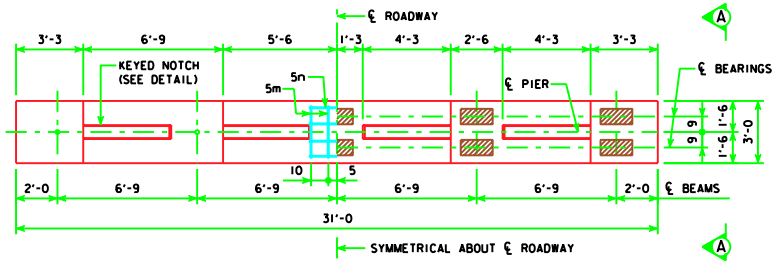
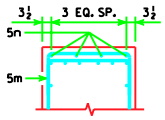
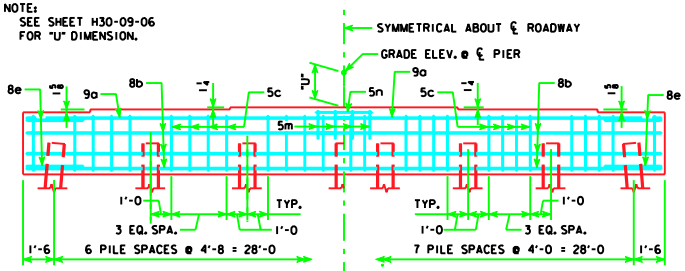


TYPICAL PLAN



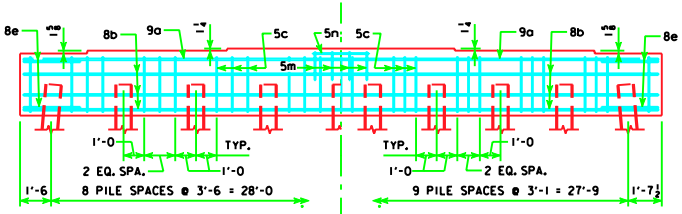
5m & 5n BAR LAYOUT

NOTE:
SEE SHEET H30-09-06 FOR "U" DIMENSION.



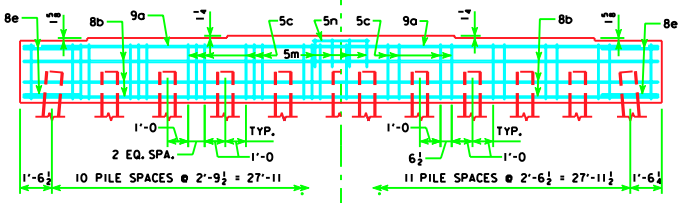
7 PILE BENT

8 PILE BENT



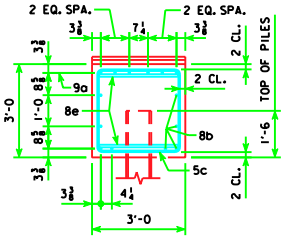
9 PILE BENT

10 PILE BENT

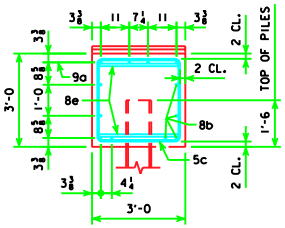


11 PILE BENT

12 PILE BENT



VIEW A-A
FOR 7, 8, 9, 10 & 11 PILE BENTS

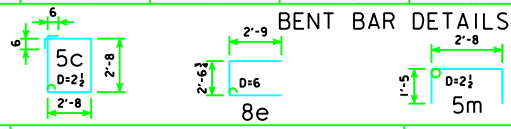


VIEW A-A
FOR 12 PILE BENTS

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
9a		6	30'-8	626	6	30'-8	626	6	30'-8	626	6	30'-8	626	6	30'-8	626	4	30'-8	417
8b		8	30'-8	655	8	30'-8	655	8	30'-8	655	8	30'-8	655	8	30'-8	655	8	30'-8	655
5c		26	11'-8	316	30	11'-8	365	26	11'-8	316	29	11'-8	353	32	11'-8	389	24	11'-8	292
8e		4	8'-1	86	4	8'-1	86	4	8'-1	86	4	8'-1	86	4	8'-1	86	4	8'-1	86
5m		4	5'-6	23	4	5'-6	23	4	5'-6	23	4	5'-6	23	4	5'-6	23	4	5'-6	23
5n		4	2'-8	11	4	2'-8	11	4	2'-8	11	4	2'-8	11	4	2'-8	11	4	2'-8	11
REINFORCING STEEL (LB.)		1717			1766			1717			1754			1790			1484		
STRUCTURAL CONCRETE (CY) ②	PILE TYPE																		
	1, 2	-----			-----			10.4			10.4			10.3			10.3		
	3	10.8			10.8			10.8			10.8			10.8			-----		

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 BRG.(TONS) W/O IMPACT ③	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 BRG.(TONS) W/O IMPACT ③
138'-10	10 PILES @ 3'-1 CTRS.	14	30	28	7 PILES @ 4'-8 CTRS.	16	43	40
	9 PILES @ 3'-6 CTRS.	16	34	31	7 PILES @ 4'-8 CTRS.	18	43	40
151'-4	11 PILES @ 2'-9½ CTRS.	14	29	27	7 PILES @ 4'-8 CTRS.	16	45	42
	9 PILES @ 3'-6 CTRS.	16	35	33	7 PILES @ 4'-8 CTRS.	18	45	42
163'-10	12 PILES @ 2'-6½ CTRS.	14	29	27	7 PILES @ 4'-8 CTRS.	16	49	46
	10 PILES @ 3'-1 CTRS.	16	35	32	8 PILES @ 4'-0 CTRS.	18	43	40
176'-4	12 PILES @ 2'-6½ CTRS.	14	30	28	8 PILES @ 4'-0 CTRS.	16	45	42
	10 PILES @ 3'-1 CTRS.	16	36	34	8 PILES @ 4'-0 CTRS.	18	45	42
188'-10	12 PILES @ 2'-6½ CTRS.	14	32	30	8 PILES @ 4'-0 CTRS.	16	48	45
	11 PILES @ 2'-9½ CTRS.	16	35	33	9 PILES @ 3'-6 CTRS.	18	43	40
201'-4	*12 PILES @ 2'-6½ CTRS.	16	37	34	9 PILES @ 3'-6 CTRS.	16	49	46
					10 PILES @ 3'-1 CTRS.	18	44	41
213'-10	*12 PILES @ 2'-6½ CTRS.	16	38	36	10 PILES @ 3'-1 CTRS.	16	46	43
					10 PILES @ 3'-1 CTRS.	18	46	43
226'-4	-----	-----	-----	-----	10 PILES @ 3'-1 CTRS.	16	48	45
					11 PILES @ 2'-9½ CTRS.	18	44	41
243'-0	-----	-----	-----	-----	10 PILES @ 3'-1 CTRS.	16	50	47
					11 PILES @ 2'-9½ CTRS.	18	46	43

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.

* TYPE 2 ONLY.

PILE BENT NOTES:

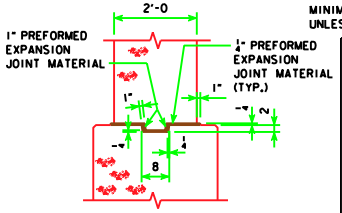
THESE PIER BENTS ARE DESIGNED FOR USE WITH STANDARD H30-06 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGES IN LOCATIONS WHERE ICE AND DRIFT CONDITIONS ARE NOT SEVERE.

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.



KEYED NOTCH DETAIL

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
0° SKEW

H30-45-06