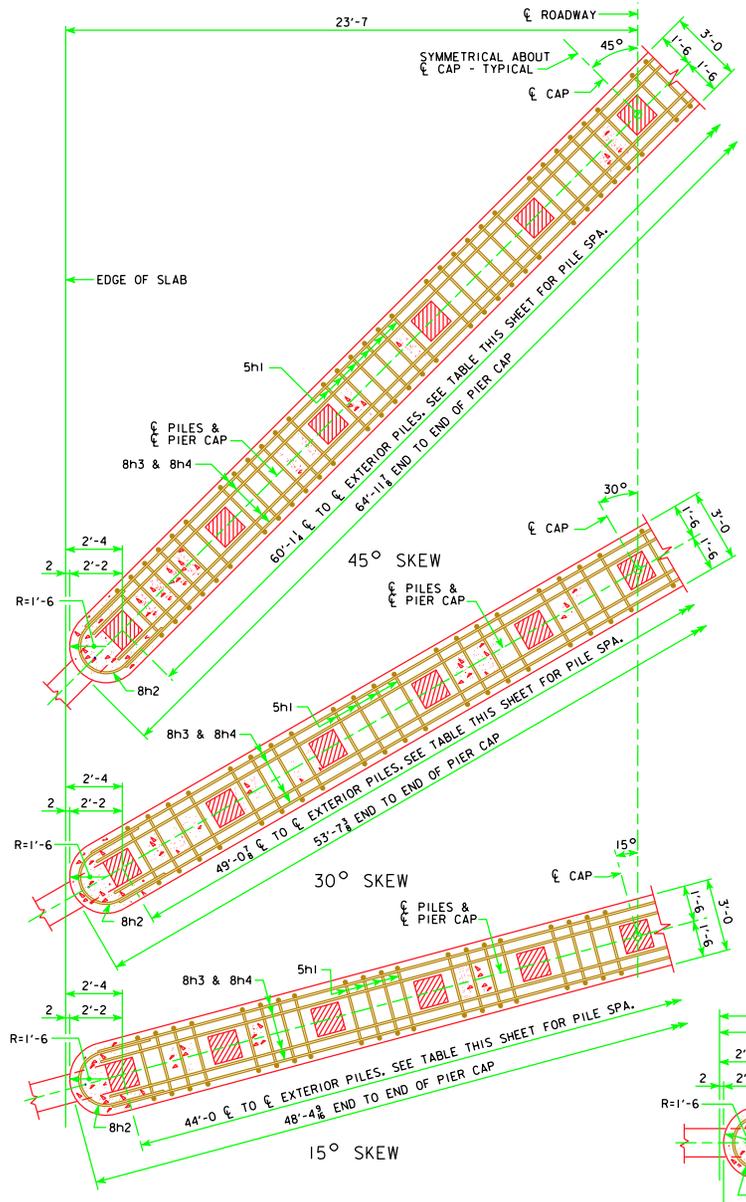
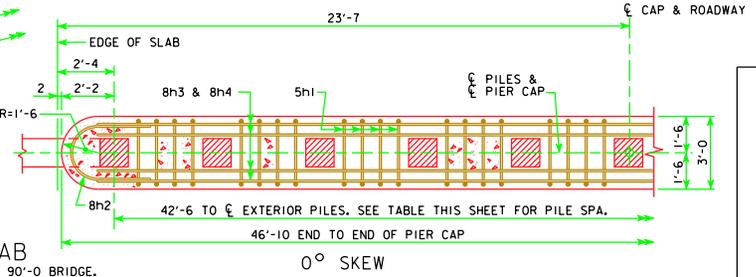


REVISED 03-09 - CHANGED PILE STANDARD FROM P10A TO P10L IN NOTE 4.



HALF SECTION BELOW SLAB
 NOTE: NUMBER OF PILES AND STIRRUPS SHOWN ARE FOR A 90'-0 BRIDGE.
 CAP DIMENSIONS ARE TYPICAL FOR ALL BRIDGES.



REACTION, PILE SPACING, NUMBER AND BEARING									
BRIDGE LENGTH	70'-0	80'-0	90'-0	100'-0	110'-0	120'-0	130'-0	140'-0	150'-0
0° SKEW	9 SPA. @ ABOUT 4'-9	9 SPA. @ ABOUT 4'-9	10 SPA. @ 4'-3	11 SPA. @ ABOUT 3'-10	12 SPA. @ ABOUT 3'-6	13 SPA. @ ABOUT 3'-3	15 SPA. @ 2'-10	16 SPA. @ ABOUT 2'-8	17 SPA. @ 2'-6
15° SKEW	9 SPA. @ ABOUT 4'-11	9 SPA. @ ABOUT 4'-11	10 SPA. @ ABOUT 4'-5	11 SPA. @ 4'-0	12 SPA. @ 3'-8	13 SPA. @ ABOUT 3'-5	15 SPA. @ ABOUT 2'-11	16 SPA. @ 2'-9	17 SPA. @ ABOUT 2'-7
30° SKEW	9 SPA. @ ABOUT 5'-5	9 SPA. @ ABOUT 5'-5	10 SPA. @ ABOUT 4'-11	11 SPA. @ ABOUT 4'-6	12 SPA. @ ABOUT 4'-1	13 SPA. @ ABOUT 3'-9	15 SPA. @ ABOUT 3'-3	16 SPA. @ ABOUT 3'-1	17 SPA. @ ABOUT 2'-11
45° SKEW	9 SPA. @ ABOUT 6'-8	9 SPA. @ ABOUT 6'-8	10 SPA. @ ABOUT 6'-0	11 SPA. @ ABOUT 5'-6	12 SPA. @ ABOUT 5'-0	13 SPA. @ ABOUT 4'-7	15 SPA. @ ABOUT 4'-0	16 SPA. @ ABOUT 3'-9	17 SPA. @ ABOUT 3'-6
① REACTION	575 KIPS	643 KIPS	723 KIPS	811 KIPS	897 KIPS	1000 KIPS	1103 KIPS	1211 KIPS	1332 KIPS
② STRENGTH I REACTION	762 KIPS	852 KIPS	956 KIPS	1070 KIPS	1182 KIPS	1317 KIPS	1449 KIPS	1588 KIPS	1745 KIPS
① BEARING-TONS	29	33	33	34	35	36	35	36	37
②③ BEARING-TONS	27	30	31	32	33	34	33	34	36
④ PILING (NO.)	10	10	11	12	13	14	16	17	18

- ① VALUE INCLUDES DEAD LOAD (PIER CAP WEIGHT IS BASED ON 45° SKEW), LIVE LOAD AND LIVE LOAD IMPACT.
- ② VALUE INCLUDES DEAD LOAD (PIER CAP WEIGHT IS BASED ON 45° SKEW), AND LIVE LOAD, WITHOUT IMPACT.
- ③ FOR ESTIMATING PILE LENGTHS AND FOR DETERMINING ACTUAL PILE LENGTHS IN FIELD.
- ④ USE PILES AS SHOWN ON P10L STANDARD PILE DRAWING. TYPE, SIZE, AND LENGTH OF PILES SHALL BE SPECIFIED ON THE PLAN, THE LARGER PILE SIZE SHOWN ON P10L STANDARD PILE DRAWING SHALL BE USED IF EITHER THE ACTUAL "H" DIMENSION OR THE REQUIRED BEARING EXCEEDS THE MAXIMUM "H" OR MAXIMUM BEARING CAPACITY SHOWN FOR THE PILE.

PIER NOTES:

ALL MONOLITHIC PIER CAP REINFORCING AND CONCRETE IS INCLUDED IN SUPERSTRUCTURE ESTIMATE OF QUANTITIES.

THE MINIMUM CLEAR DISTANCE FROM THE FACE OF THE CONCRETE TO NEAR REINFORCING BAR IS TO BE 2" UNLESS OTHERWISE NOTED OR SHOWN.

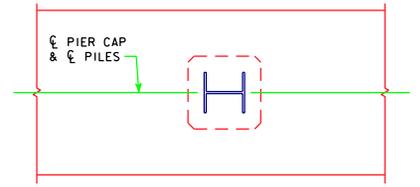
THE PIER PILES ARE TO BE DRIVEN TO FULL PENETRATION, IF PRACTICABLE, BUT IN NO CASE TO A BEARING VALUE LESS THAN THE PILE BEARING REQUIRED FOR EACH BRIDGE LENGTH AS SHOWN ON THIS SHEET. ADDITIONAL DRIVING CAPACITY MAY BE REQUIRED THROUGH SCOURABLE LAYERS. REFER TO GENERAL PLAN NOTES FOR ADDITIONAL INFORMATION.

CAP STEEL AS DETAILED ON P10L STANDARD PILE DRAWING IS REQUIRED FOR MONOLITHIC PIER CAPS.

THE CONCRETE QUANTITIES ARE BASED ON THE USE OF TYPE 3 PILING. IF TYPE 1 OR TYPE 2 IS USED, THE CONCRETE QUANTITIES MAY BE ADJUSTED TO ACCOUNT FOR THE CONCRETE DISPLACED BY THE PILING.

ALL REINFORCING STEEL IS TO BE GRADE 60.

PIER PILING WAS DESIGNED FOR HL-93 LOADING WITH AN ALLOWANCE FOR 20 PSF FUTURE WEARING SURFACE.



PILE ORIENTATION DETAIL FOR TYPE 3 TRESTLE BENT PILES

03-09 LATEST REVISION DATE APPROVED BY BRIDGE ENGINEER [Signature]	<p>Iowa Department of Transportation Highway Division</p>
	STANDARD DESIGN - 44' ROADWAY, 3 SPAN BRIDGES CONTINUOUS CONCRETE SLAB BRIDGES NOVEMBER, 2006
MONOLITHIC PIER CAP DETAILS ALL BRIDGES	
J44-25-06	