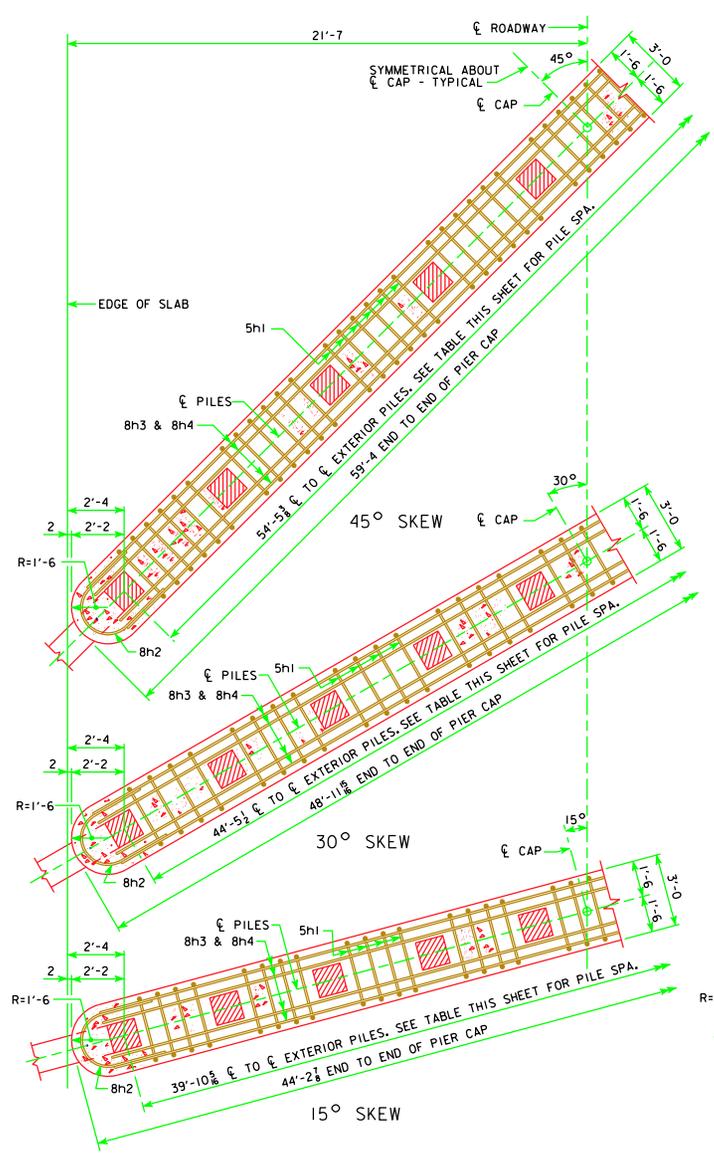
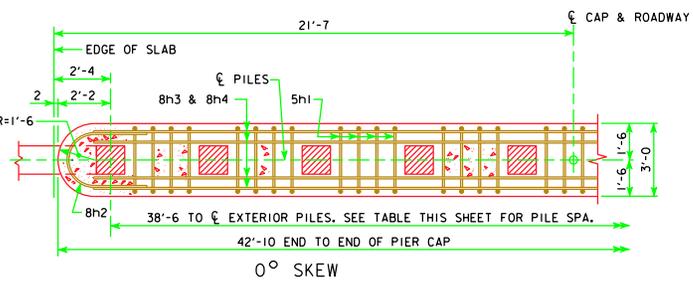


REVISED 03-09 - CHANGED PILE STANDARD FROM P10A TO P10L IN NOTE 4.



HALF SECTION BELOW SLAB
 NOTE: NUMBER OF PILES AND STIRRUPS SHOWN ARE FOR A 70'-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'-3	9 SPA. @ ABOUT 4'-3	9 SPA. @ ABOUT 4'-3	10 SPA. @ ABOUT 3'-10	11 SPA. @ 3'-6	13 SPA. @ ABOUT 2'-11	14 SPA. @ ABOUT 2'-9	15 SPA. @ ABOUT 2'-7	15 SPA. @ ABOUT 2'-7
15° SKEW	9 SPA. @ ABOUT 4'-5	9 SPA. @ ABOUT 4'-5	9 SPA. @ ABOUT 4'-5	10 SPA. @ ABOUT 4'-0	11 SPA. @ ABOUT 3'-7	13 SPA. @ ABOUT 3'-0	14 SPA. @ ABOUT 2'-10	15 SPA. @ ABOUT 2'-8	15 SPA. @ ABOUT 2'-8
30° SKEW	9 SPA. @ ABOUT 4'-11	9 SPA. @ ABOUT 4'-11	9 SPA. @ ABOUT 4'-11	10 SPA. @ ABOUT 4'-5	11 SPA. @ ABOUT 4'-1	13 SPA. @ ABOUT 3'-5	14 SPA. @ ABOUT 3'-2	15 SPA. @ ABOUT 3'-0	15 SPA. @ ABOUT 3'-0
45° SKEW	9 SPA. @ ABOUT 6'-1	9 SPA. @ ABOUT 6'-1	9 SPA. @ ABOUT 6'-1	10 SPA. @ ABOUT 6'-5	11 SPA. @ ABOUT 4'-11	13 SPA. @ ABOUT 4'-2	14 SPA. @ ABOUT 3'-11	15 SPA. @ ABOUT 3'-8	15 SPA. @ ABOUT 3'-8
① REACTION	547 KIPS	611 KIPS	685 KIPS	766 KIPS	846 KIPS	942 KIPS	1036 KIPS	1136 KIPS	1248 KIPS
② STRENGTH I REACTION	726 KIPS	810 KIPS	908 KIPS	1014 KIPS	1118 KIPS	1242 KIPS	1365 KIPS	1494 KIPS	1638 KIPS
① BEARING-TONS	28	31	35	35	36	34	35	36	39
②③ BEARING-TONS	25	28	32	33	33	32	33	34	38
④ PILING (NO.)	10	10	10	11	12	14	15	16	16

- 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.

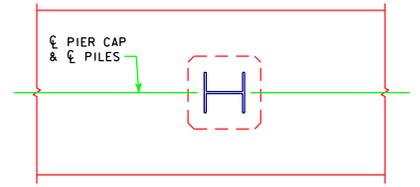
THE PIER PILES ARE TO BE DRIVEN TO FULL PENETRATION, IF PRACTICABLE, BUT IN NO CASE TO A BEARING VALUE LESS THAN THE PILE BEARING REQUIRED FOR EACH BRIDGE LENGTH AS SHOWN ON THIS SHEET. ADDITIONAL DRIVING CAPACITY MAY BE REQUIRED THROUGH SCOURABLE LAYERS. REFER TO GENERAL PLAN NOTES FOR ADDITIONAL INFORMATION.

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 LBS. PER SQ. FT. FUTURE WEARING SURFACE.



PIER ORIENTATION DETAIL FOR TYPE 3 TRESTLE BENT PILES

LATEST REVISION DATE	 APPROVED BY BRIDGE ENGINEER	 Iowa Department of Transportation Highway Division	STANDARD DESIGN - 40' ROADWAY, 3 SPAN BRIDGES CONTINUOUS CONCRETE SLAB BRIDGES NOVEMBER, 2006
			MONOLITHIC PIER CAP DETAILS ALL BRIDGES