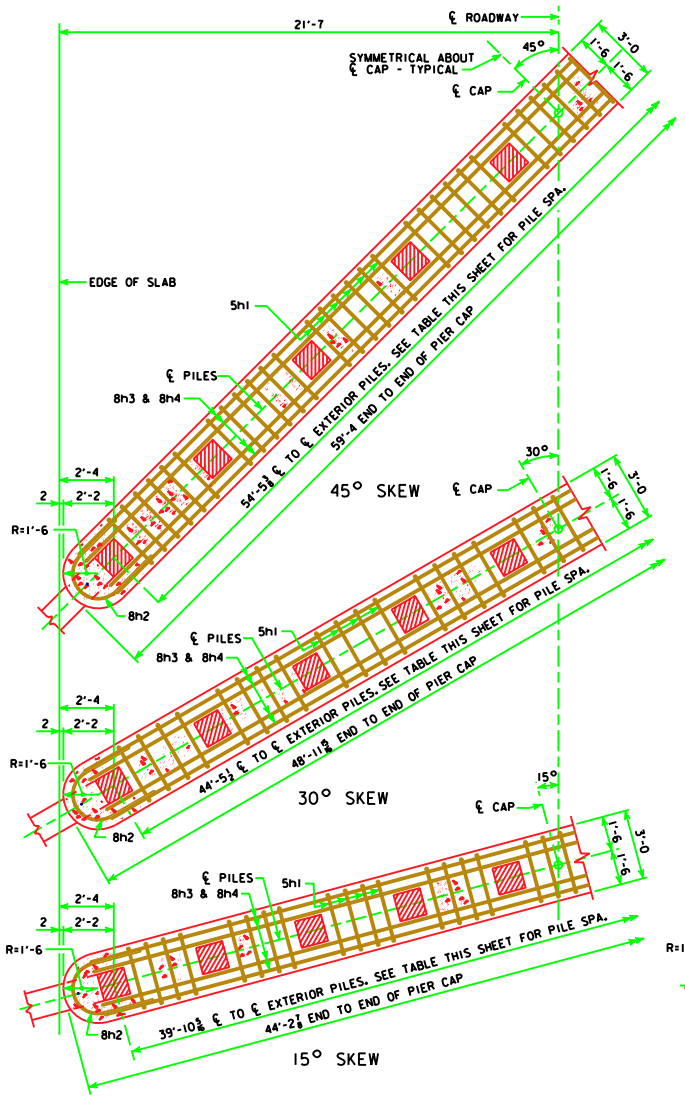

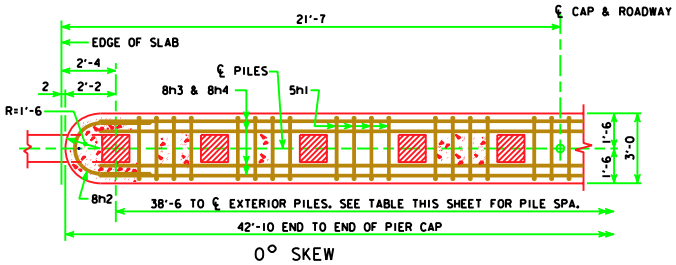

HALF SECTION BELOW SLAB

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	12 SPA. @ ABOUT 3'-2	13 SPA. @ ABOUT 2'-11	15 SPA. @ ABOUT 2'-6	15 SPA. @ ABOUT 2'-6
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	12 SPA. @ ABOUT 3'-4	13 SPA. @ ABOUT 3'-0	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	12 SPA. @ ABOUT 3'-8	13 SPA. @ ABOUT 3'-5	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 5'-5	11 SPA. @ ABOUT 4'-11	12 SPA. @ ABOUT 4'-6	13 SPA. @ ABOUT 4'-2	15 SPA. @ ABOUT 3'-7	15 SPA. @ ABOUT 3'-7
① REACTION	545 KIPS	605 KIPS	676 KIPS	754 KIPS	830 KIPS	921 KIPS	1010 KIPS	1103 KIPS	1210 KIPS
① BEARING-TONS	28	31	34	35	35	36	36	35	38
②③ BEARING-TONS	25	28	31	32	32	33	34	33	36
* PILING (NO.)	10	10	10	11	12	13	14	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.

* USE PILES AS SHOWN ON PIOA STANDARD PILE DRAWING. TYPE, SIZE, AND LENGTH OF PILES SHALL BE SPECIFIED ON THE PLAN. THE LARGER PILE SIZE SHOWN ON PIOA 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.

CAP STEEL AS DETAILED ON PIOA 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 HS25 LOADING WITH AN ALLOWANCE FOR 20 LBS. PER SQ. FT. FUTURE WEARING SURFACE.

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

J40-25-06