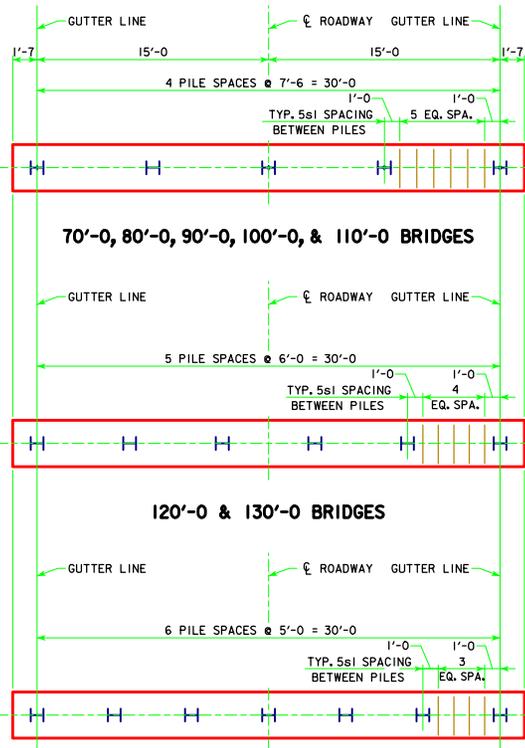


REVISED 06-13 - REVISION FOR LRFD PILE DESIGN.



**PILE PLAN - 0° SKEW
STEEL PILING**

ABUTMENT NOTES:

ALL PILING HP10x42.

THE CONCRETE AND REINFORCING STEEL FOR THE WINGS IS INCLUDED WITH THE SUPERSTRUCTURE.

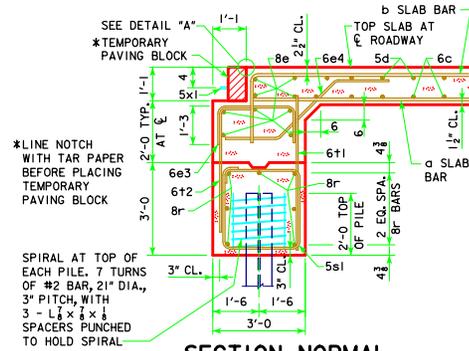
DETAILS ON THIS SHEET ARE TO BE USED ONLY WHEN ABUTMENTS ARE PLACED ON STEEL PILES. IF ROCK IS ENCOUNTERED CLOSER THAN 12" BELOW ABUTMENT FOOTING, SPECIAL ANALYSIS MAY BE REQUIRED.

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

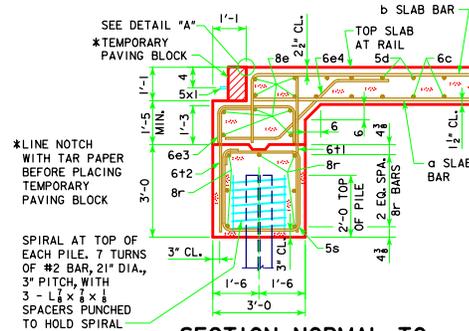
STEEL ABUTMENT PILES SHALL BE DRIVEN TO FULL PENETRATION IF PRACTICABLE BUT IN NO CASE TO A BEARING VALUE LESS THAN SHOWN IN DESIGN PLANS.

ALL REINFORCING STEEL IS TO BE GRADE 60.

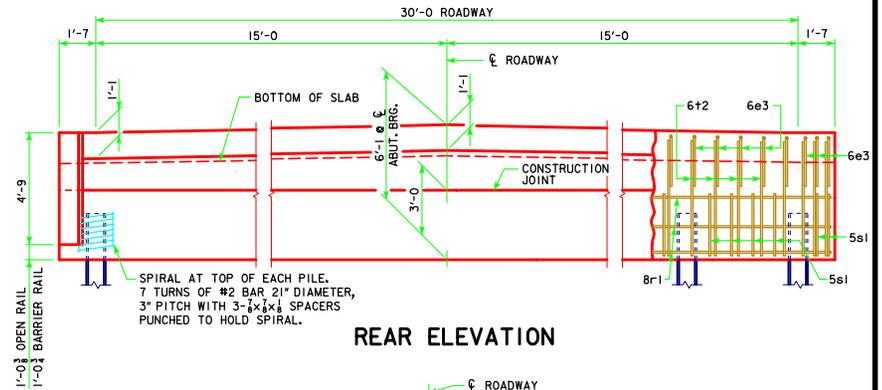
ABUTMENT PILING WAS DESIGNED FOR HL-93 LOADING WITH AN ALLOWANCE FOR 20 LBS. PER SQ. FT. FUTURE WEARING SURFACE.



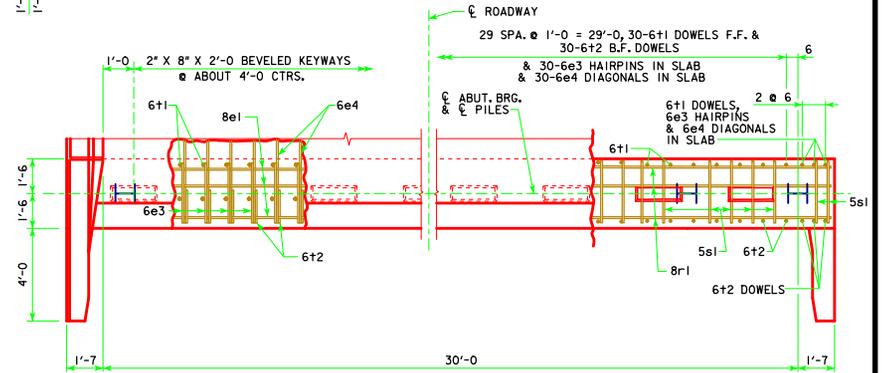
SECTION NORMAL TO ABUTMENT AT CL



SECTION NORMAL TO ABUTMENT AT GUTTERLINE



REAR ELEVATION



PLAN VIEW

NOTE: WING REINFORCING AND RAIL NOT SHOWN.
6e3, 6e4, AND 8e1 ARE INCLUDED WITH SUPERSTRUCTURE QUANTITIES.

NUMBER OF PILES AND ABUTMENT DESIGN LOADS									
BRIDGE LENGTH	70'-0	80'-0	90'-0	100'-0	110'-0	120'-0	130'-0	140'-0	150'-0
PILING - NUMBER	5	5	5	5	5	6	6	7	7
PU, STRENGTH I DESIGN LOAD - KIPS	377	402	426	456	485	519	561	Δ 646	Δ 684

Δ INCLUDES DYNAMIC LOAD ALLOWANCE
NOTE: PU, STRENGTH I DESIGN LOAD (KIPS) IS NOT THE VALUE USED IN THE FIELD FOR DRIVING PILES.

LATEST REVISION DATE
06-13
APPROVED BY BRIDGE ENGINEER
Thomas E. M. Dwyer

**Iowa Department of Transportation
Highway Division**

STANDARD DESIGN - 30' ROADWAY, 3 SPAN BRIDGES

**CONTINUOUS CONCRETE
SLAB BRIDGES**

NOVEMBER, 2006

**0° ABUTMENT DETAILS
SKEW - STEEL PILING**

J30-34-06