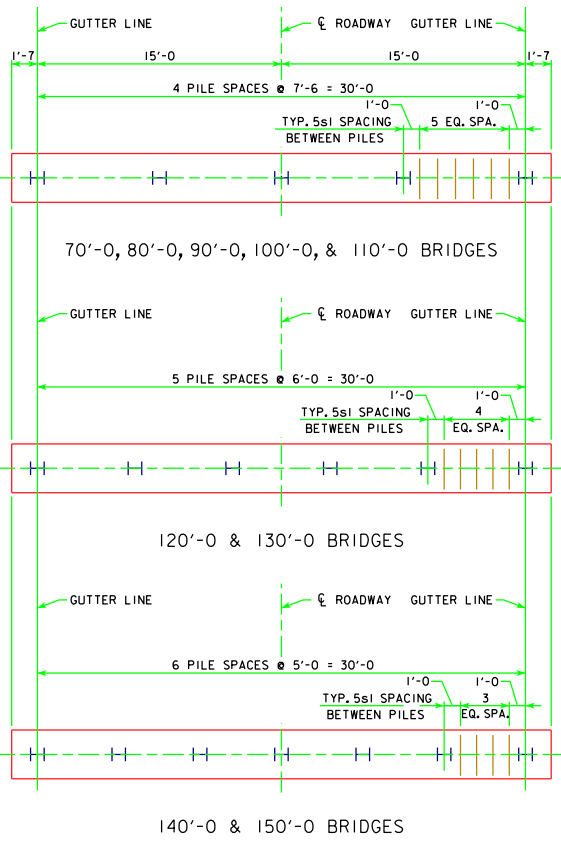


REVISED 12-08 - REVISED SHEET FOR NEW PAVING NOTCH, DESIGN FOR HL-93 LOADING.



PILE PLAN - 0° SKEW STEEL PILING

ABUTMENT NOTES:

ALL PILING HP 10 X 42.

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

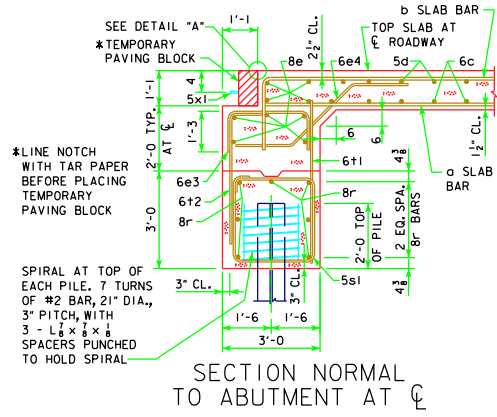
DETAILS ON THIS SHEET ARE TO BE USED ONLY WHEN ABUTMENTS ARE PLACED ON STEEL PILES. IF ROCK IS ENCOUNTERED CLOSER THAN 12' BELOW ABUTMENT FOOTING, SPECIAL ANALYSIS MAY BE REQUIRED.

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

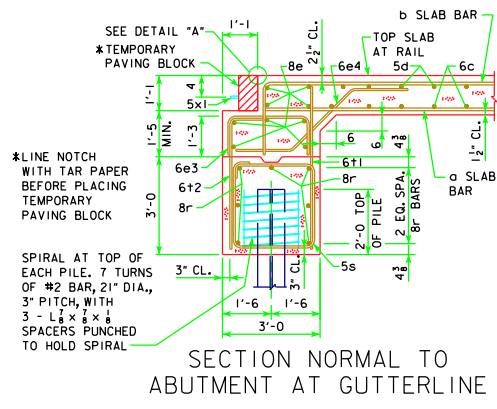
STEEL PILING USED AS FRICTION PILE SHALL BE DRIVEN TO FULL PENETRATION IF PRACTICABLE BUT IN NO CASE TO A BEARING VALUE LESS THAN THE PILE BEARING REQUIRED FOR EACH BRIDGE LENGTH AS SHOWN ON THIS SHEET.

ALL REINFORCING STEEL IS TO BE GRADE 60.

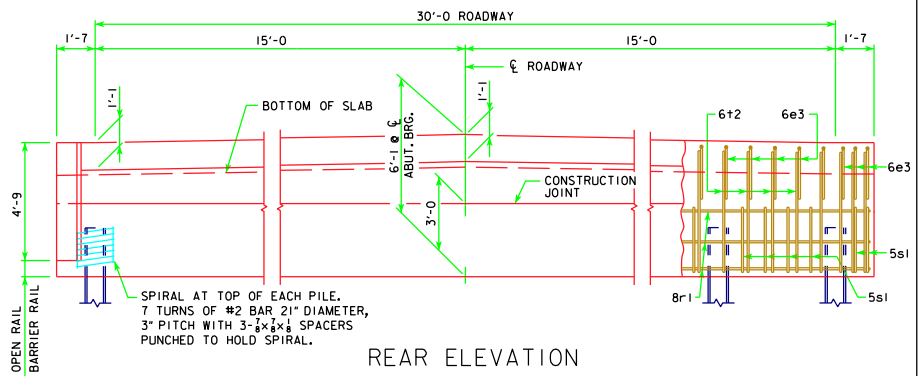
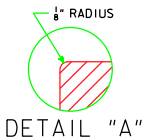
ABUTMENT PILING WAS DESIGNED FOR HL-93 LOADING WITH AN ALLOWANCE FOR 20 LBS. PER SQ. FT. FUTURE WEARING SURFACE.



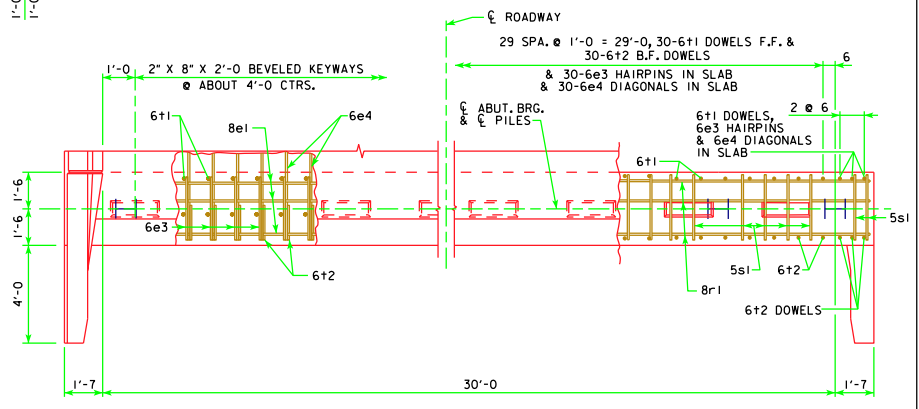
SECTION NORMAL TO ABUTMENT AT CL



SECTION NORMAL TO ABUTMENT AT GUTTERLINE



REAR ELEVATION



PLAN VIEW

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

REACTION, PILE NUMBER & BEARING										
BRIDGE LENGTH	70'-0	80'-0	90'-0	100'-0	110'-0	120'-0	130'-0	140'-0	150'-0	
REACTION - KIPS	282	299	315	335	355	387	400	Δ 458	Δ 484	
BEARING - TONS	29	30	32	34	36	32	34	33	35	
PILING - NUMBER	5	5	5	5	5	6	6	7	7	
STRENGTH I REACTION - KIPS	377	402	426	456	485	519	551	Δ 646	Δ 684	

Δ INCLUDES IMPACT

LATEST REVISION DATE

12-08

APPROVED BY BRIDGE ENGINEER

Thomas C. McQuinn

Iowa Department of Transportation
Highway Division

STANDARD DESIGN - 30' ROADWAY, 3 SPAN BRIDGES

CONTINUOUS CONCRETE
SLAB BRIDGES

NOVEMBER, 2006

ABUTMENT DETAILS

0° SKEW - STEEL PILING

J30-34-06