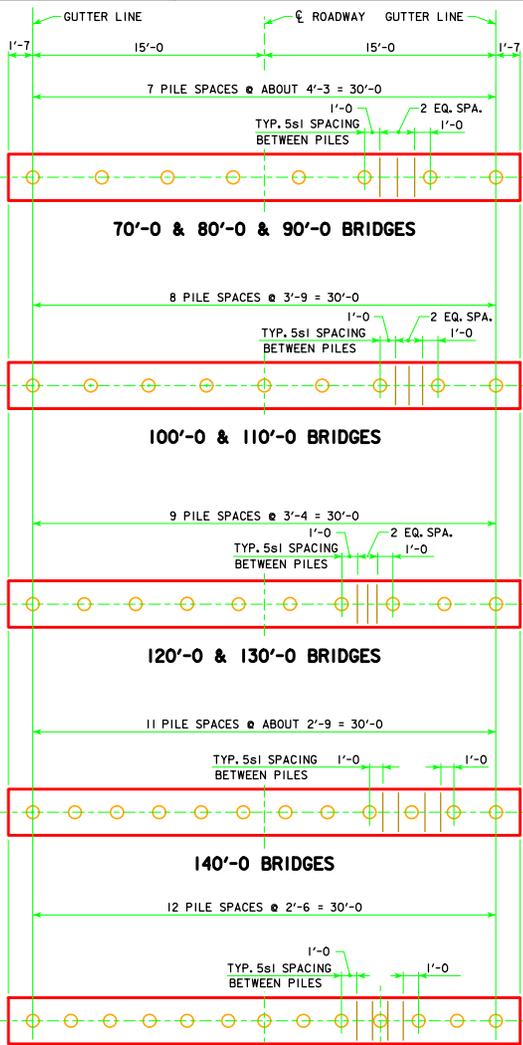
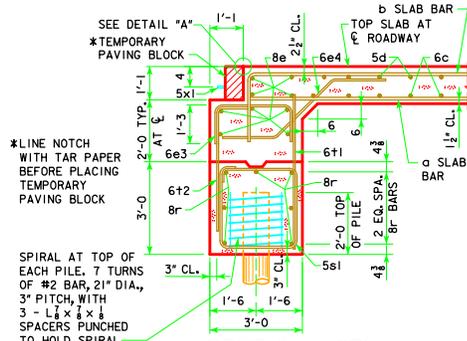


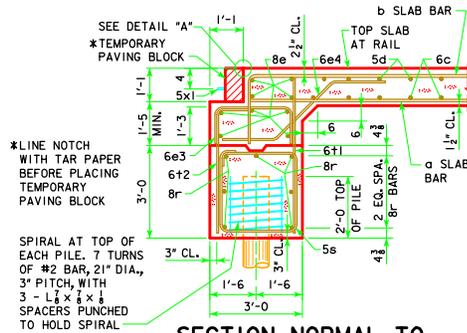
REVISED 06-13 - REVISION FOR LRFD PILE DESIGN.



**PILE PLAN - 0° SKEW WOOD PILING**



**SECTION NORMAL TO ABUTMENT AT CL**



**SECTION NORMAL TO ABUTMENT AT GUTTERLINE**

**ABUTMENT NOTES:**

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

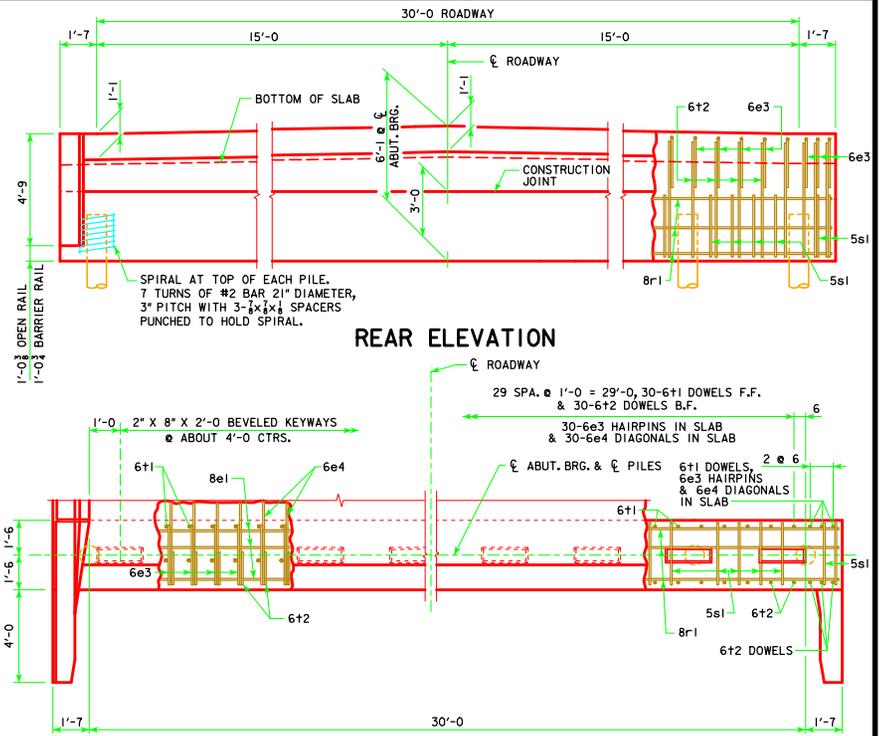
DETAILS ON THIS SHEET ARE TO BE USED ONLY WHEN ABUTMENTS ARE PLACED ON TIMBER PILES.

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

TIMBER PILES SHALL BE DRIVEN TO FULL PENETRATION IF PRACTICABLE BUT IN NO CASE TO A BEARING VALUE LESS THAN SHOWN IN DESIGN PLANS. TIMBER PILES SHALL NOT BE DRIVEN TO MORE THAN 160 TONS.

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.



**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                           | 8      | 8      | 8      | 9       | 9       | 10      | 10      | 12      | 13      |
| PU, STRENGTH I DESIGN LOAD - KIPS         | 377    | 402    | 426    | 456     | 485     | 519     | 551     | 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.



**DETAIL "A"**

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

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

**J30-27-06**