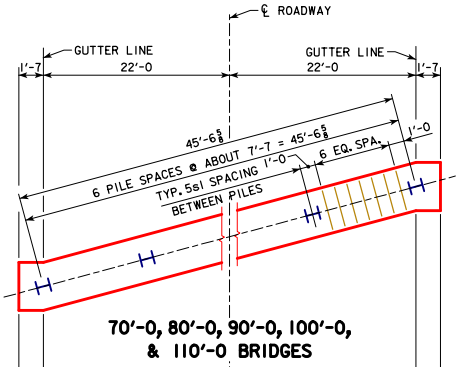
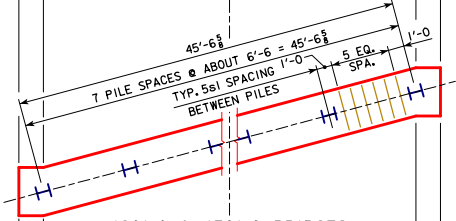


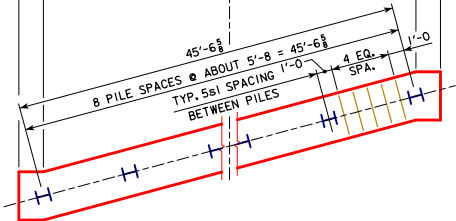
REVISED 06-13 - REVISION FOR LRFD PILE DESIGN. REVISED 10-2016 - ADDED 43" DIMENSION THAT WAS MISSING IN SECTION NORMAL TO ABUTMENT AT CENTERLINE.



**70'-0, 80'-0, 90'-0, 100'-0, & 110'-0 BRIDGES**



**120'-0 & 130'-0 BRIDGES**



**140'-0 & 150'-0 BRIDGES**

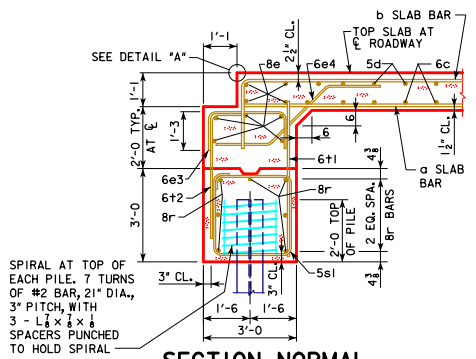
**PILE PLAN - 15° SKEW  
STEEL PILING**



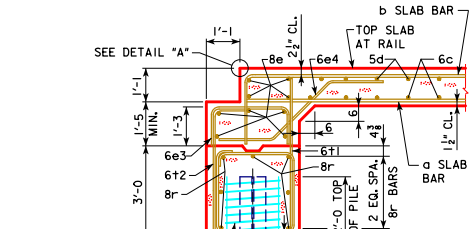
**DETAIL "A"**

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	7	7	7	7	7	8	8	9	9
PU, STRENGTH I DESIGN LOAD - KIPS	509	544	577	618	658	705	749	Δ 875	Δ 927

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



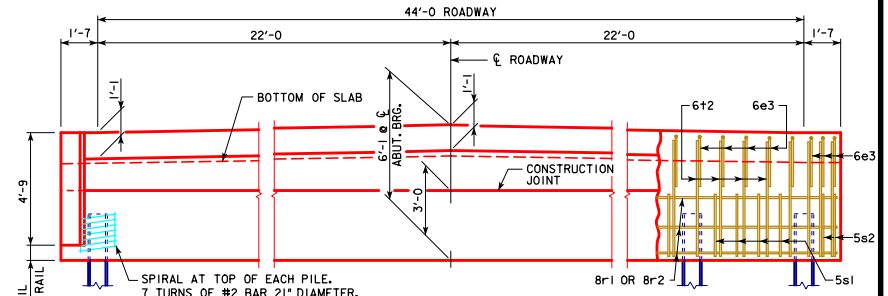
**SECTION NORMAL TO ABUTMENT AT ROADWAY**



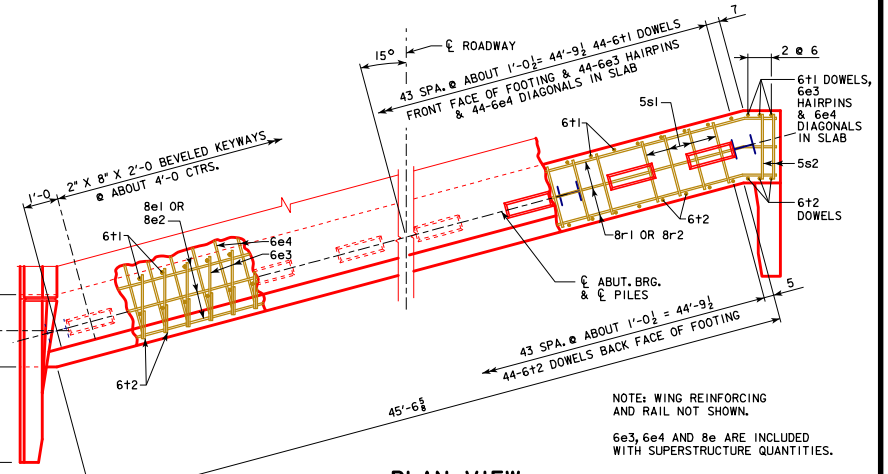
**SECTION NORMAL TO ABUTMENT AT GUTTERLINE**

**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.



**REAR ELEVATION**



**PLAN VIEW**

NOTE: THE BOTTOM OF FOOTING IS TO BE SLOPED TO COMPENSATE FOR GRADE ON THIS SKEWED ABUTMENT. THEREFORE BOTTOM OF FOOTING ELEVATIONS WILL BE REQUIRED AT EACH EXTERIOR PILE.

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

10-2016 LATEST REVISION DATE  <i>Thomas E. M. Donnell</i> APPROVED BY BRIDGE ENGINEER	
	STANDARD DESIGN - 44' ROADWAY, 3 SPAN BRIDGES <b>CONTINUOUS CONCRETE SLAB BRIDGES</b> NOVEMBER, 2006
	<b>ABUTMENT DETAILS 15° SKEW - STEEL PILING</b>

J44-40-06