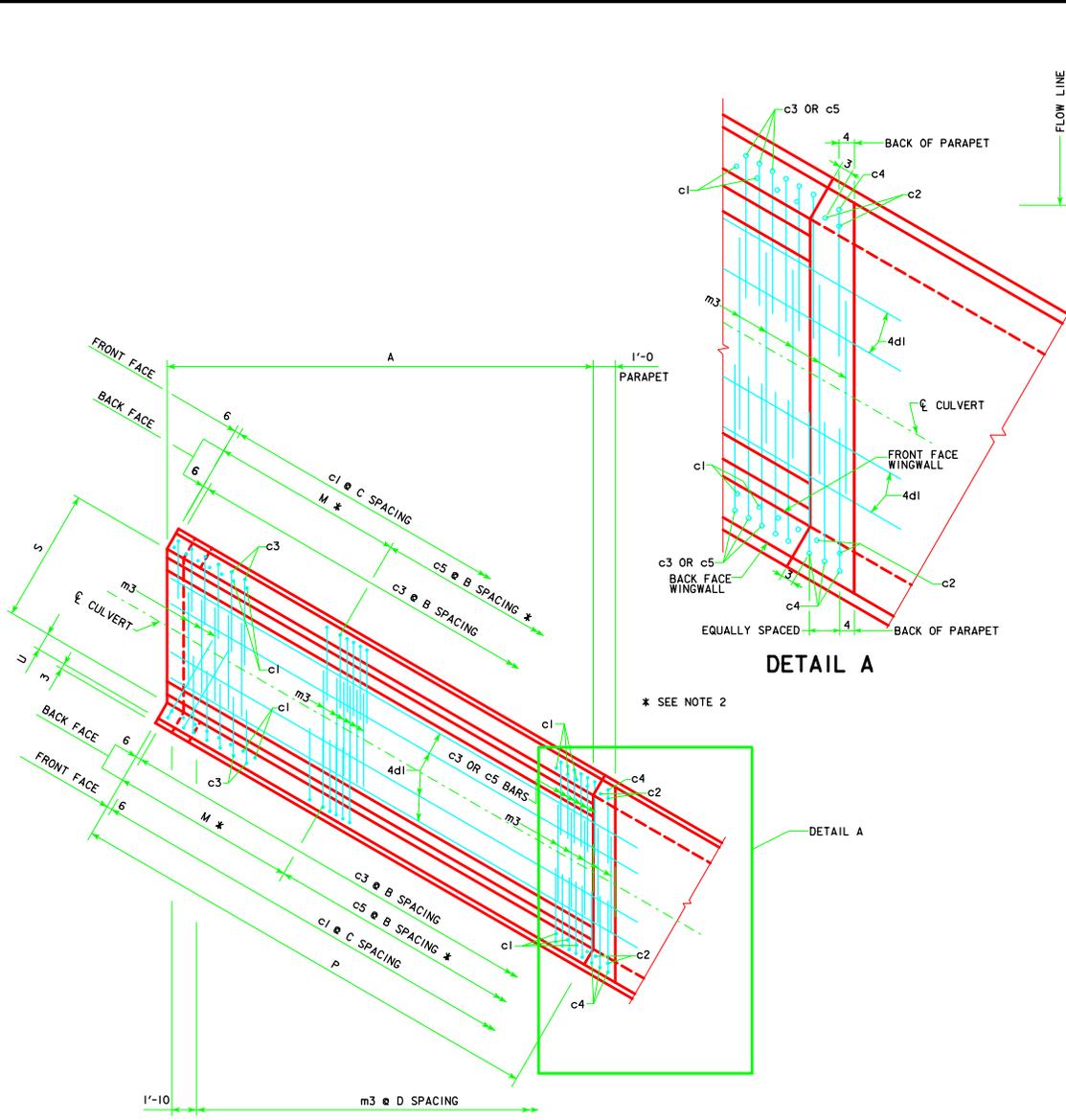
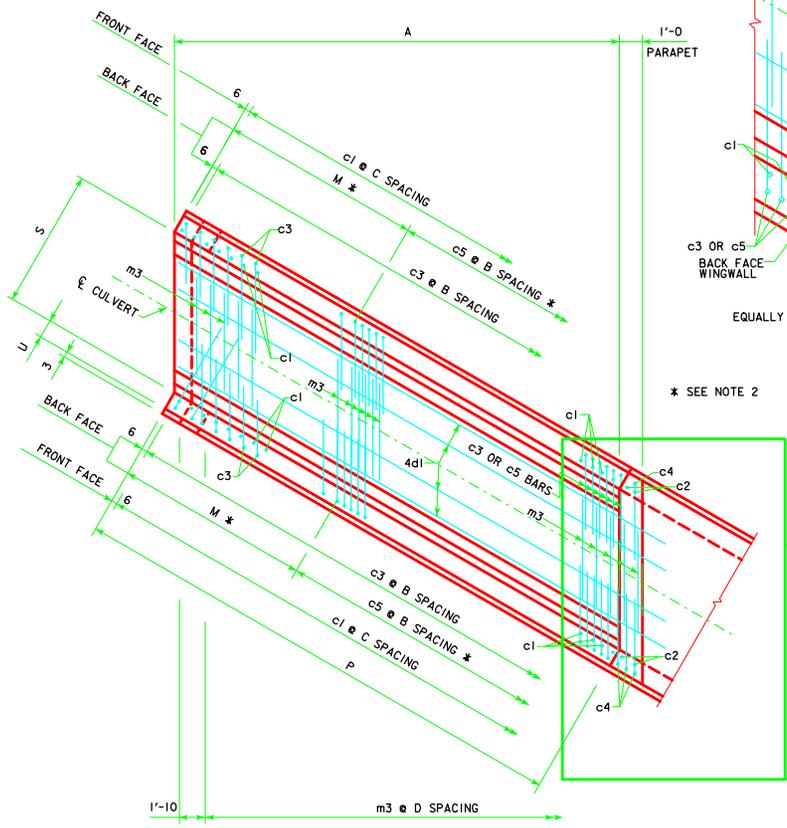


ENGLISH/DESIGNS/INCL/CULVERTS.DGN - PWH 30-3-12 - THIS SHEET ISSUED 04-12.

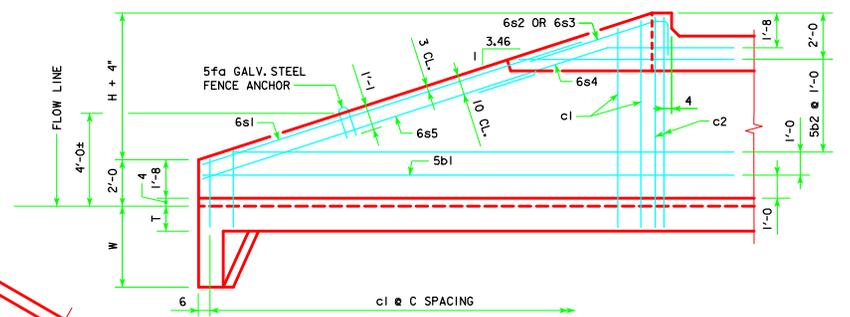


**DETAIL A**

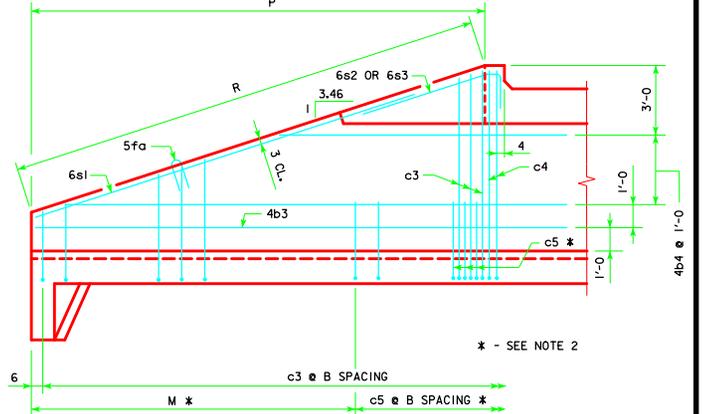
\* SEE NOTE 2



**PLAN VIEW - BOTTOM APRON REINFORCING**



**TYPICAL VIEW - FRONT FACE WINGWALL REINFORCING**



**TYPICAL VIEW - BACK FACE WINGWALL REINFORCING**

\* - SEE NOTE 2

**NOTES :**

1. BAR SPACINGS AND POSITIONS SHOWN ARE SIMILAR FOR ALL SIZES OF HEADWALLS IN THIS STANDARD.
2. NOT APPLICABLE FOR THE FOLLOWING HEADWALL SIZES: 10x5, 10x4, 8x6, 8x5, 8x4, 6x6, 6x5, 6x4, 6x3, 5x6, 5x5, 5x4, AND 5x3.
3. FOR HEADWALL DIMENSIONS AND BAR SPACING SEE DRAWING PWH 30-1-12.
4. WINGWALL BARS CONSISTENTLY REFERENCED FROM END OF WING FOR ALL WINGWALLS.
5. APRON m3 BARS ARE TO BE CENTERED ON CULVERT.
6. B.F.V. (c4) AND F.F.V. (c2) BARS ARE APPROXIMATELY 4" FROM THE BACK OF PARAPET FOR ALL HEADWALLS.

LATEST REVISION DATE  APPROVED BY BRIDGE ENGINEER <i>Thomas E. M. Donnell</i>	 <p><b>Iowa Department of Transportation</b> Highway Division</p> <p>STANDARD DESIGN - SINGLE REINFORCED CONCRETE BOX CULVERTS</p> <p><b>PARALLEL WING HEADWALLS</b></p> <p>APRIL, 2012</p> <p><b>WINGWALL ELEVATIONS &amp; BOTTOM APRON REINFORCING 30° SKEW</b></p>
	<p><b>PWH 30-3-12</b></p>