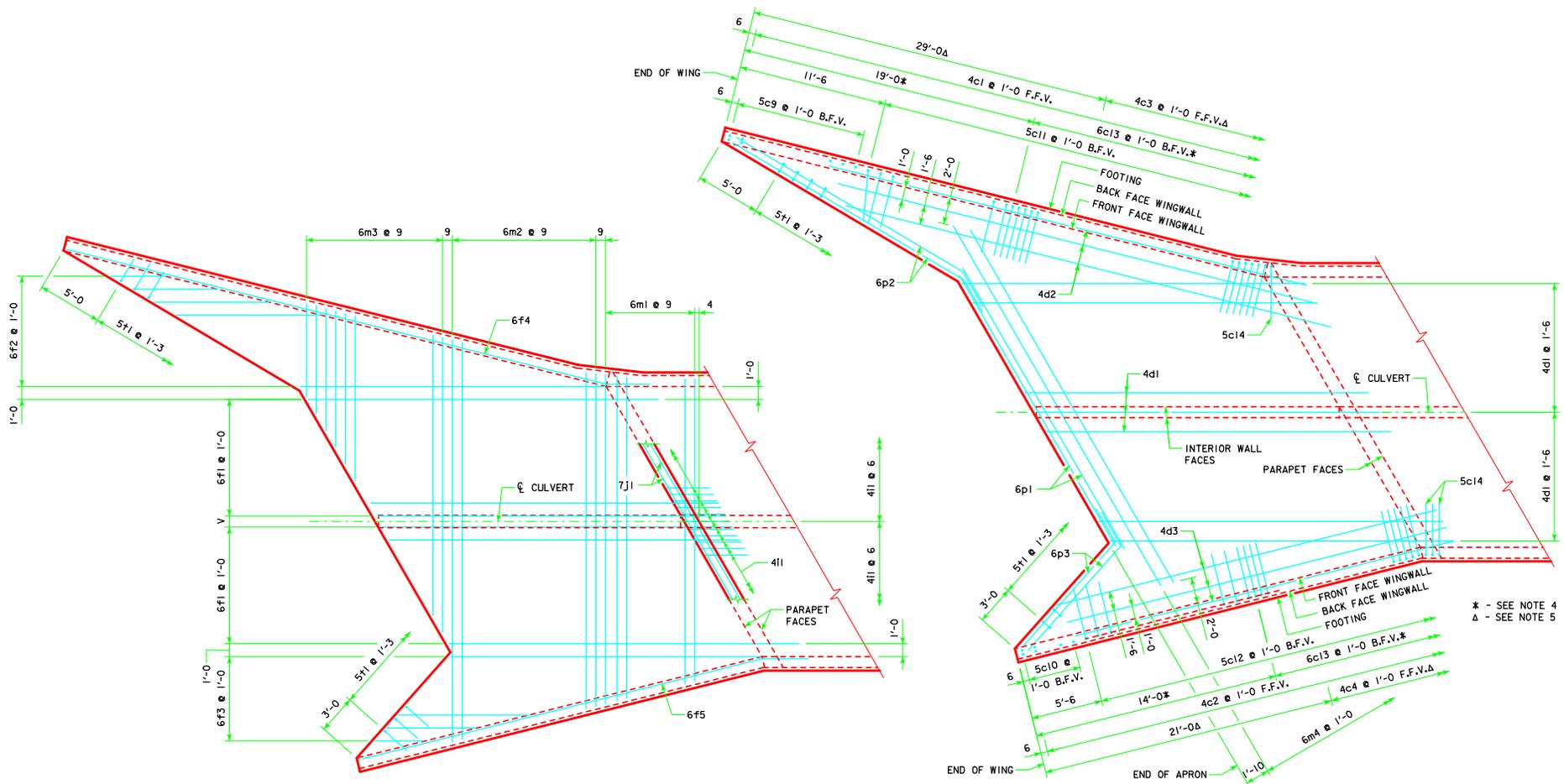


ENGLISH DESIGNED TWIN CULVERTS.DGN - TWH 30-3-12 - THIS SHEET ISSUED 04-12.



PLAN VIEW - TOP OF APRON REINFORCING BARS

PLAN VIEW - BOTTOM OF APRON REINFORCING BARS

NOTES:

1. BAR SPACINGS AND POSITIONS SHOWN ARE SIMILAR FOR ALL SIZES OF HEADWALLS IN THIS STANDARD.
2. WINGWALL BARS CONSISTENTLY REFERENCED FROM END OF WING FOR ALL HEADWALLS.
3. TOP TRANSVERSE FLOOR BARS ARE REFERENCED APPROXIMATELY 4" FROM THE BACK OF THE PARAPET FOR ALL HEADWALLS.
4. THERE ARE NO 6c13 BARS IN THE 4' & 5' HEIGHT HEADWALLS.
5. 4c3 & 4c4 BARS USED ONLY IN THE 9', 10', 11' & 12' HEIGHT HEADWALLS.
6. FOR DIMENSION TABLE SEE SHEET TWH 30-2-12.
7. FOR REINFORCING IN CURTAIN WALL SEE CURTAIN WALL DETAILS ON SHEET TWH 30-4-12.

* - SEE NOTE 4
 Δ - SEE NOTE 5

LATEST REVISION DATE APPROVED BY BRIDGE ENGINEER <i>Thomas E. M. Dwyer</i>	 Iowa Department of Transportation Highway Division STANDARD DESIGN TWIN REINFORCED CONCRETE BOX CULVERTS APRIL, 2012	
FLARED WING HEADWALLS 30° SKEW		TWH 30-3-12