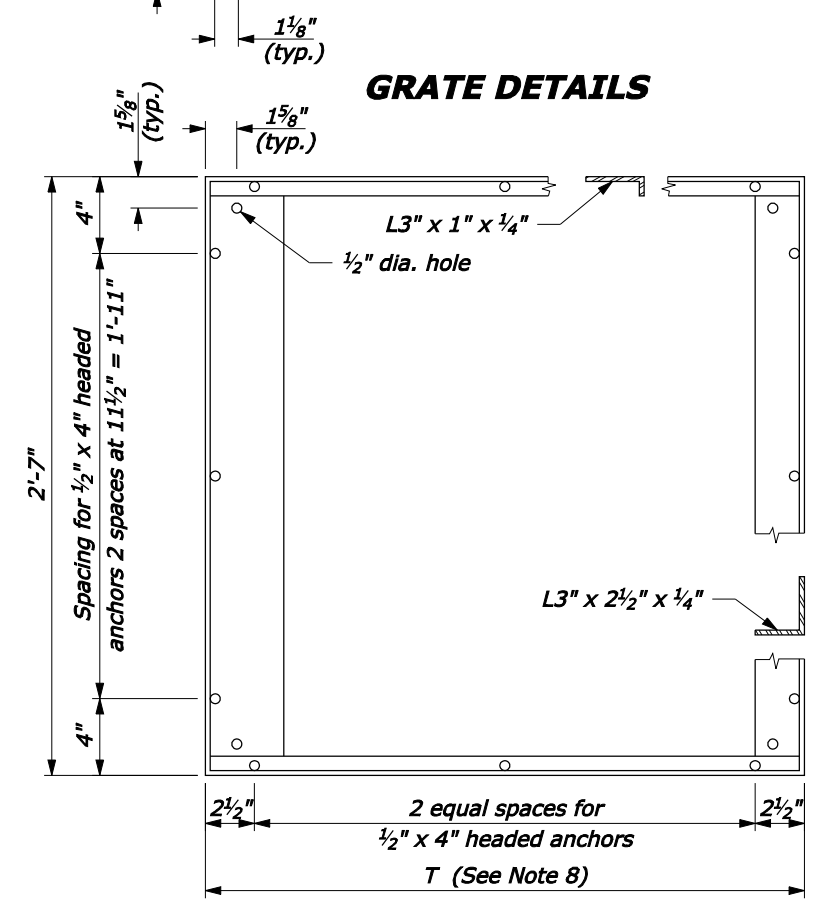
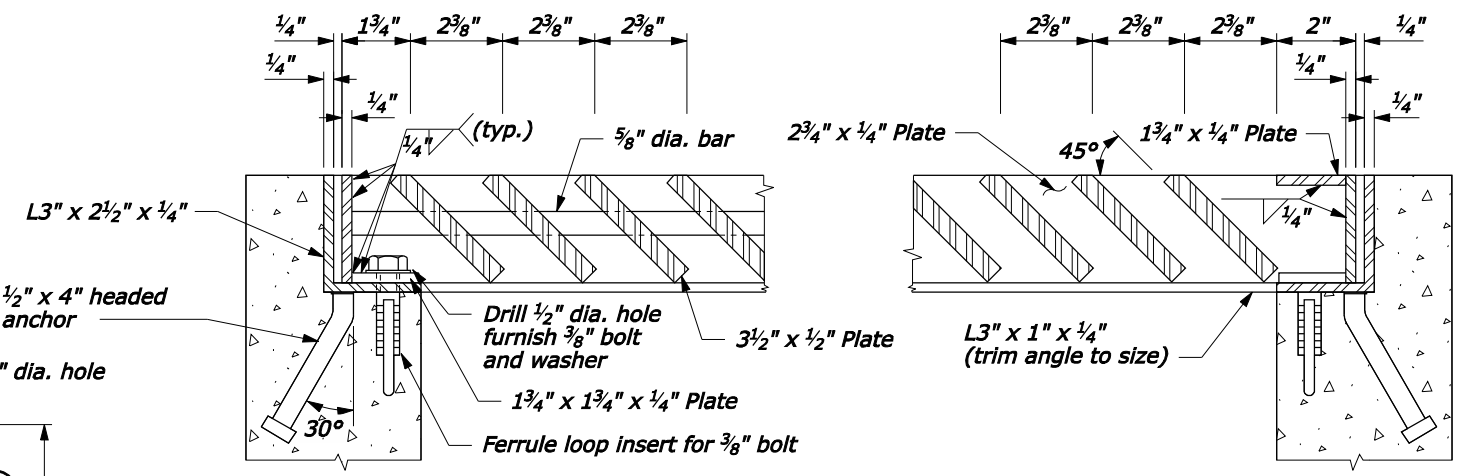


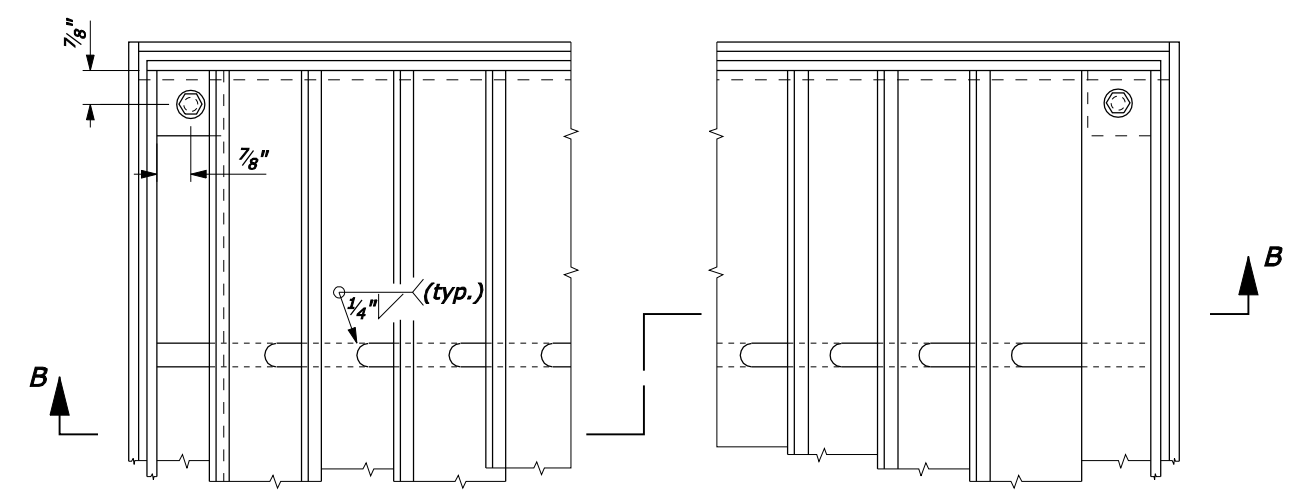
GRATE DETAILS



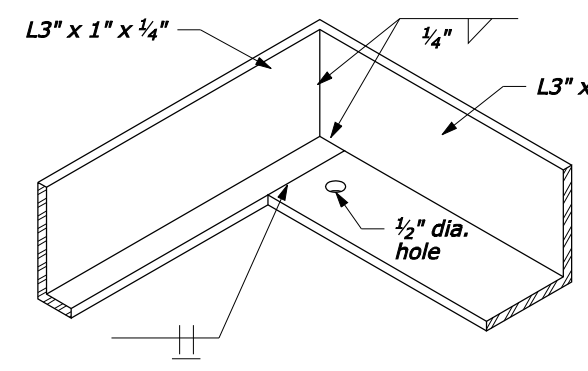
FRAME DETAIL



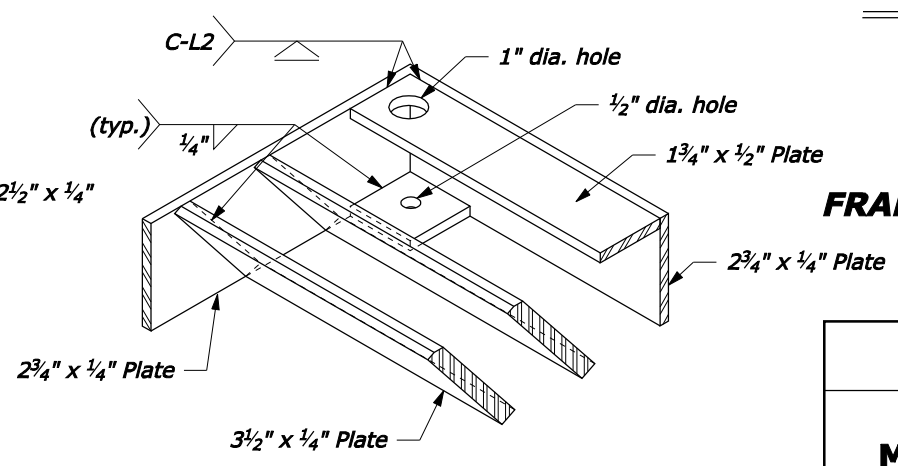
SECTION B-B



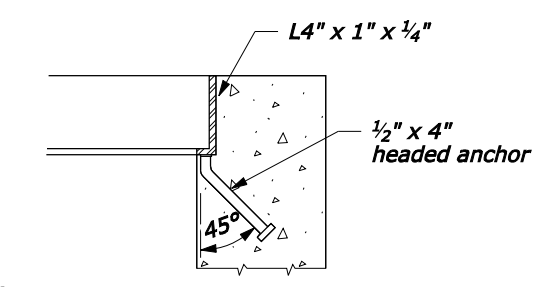
FRAME AND GRATE DETAILS



FRAME CORNER DETAIL



GRATE CORNER DETAIL NO SCALE



FRAME ANCHOR DETAIL

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION FEDERAL LANDS HIGHWAY	
U.S. CUSTOMARY STANDARD	
METAL FRAME AND GRATE TYPE B	
STANDARD APPROVED FOR USE 6/2005 REVISED: 6/2007	STANDARD 604-3

NOTE:

1. STRUCTURAL STEEL: AASHTO M 183 (ASTM A 36M).
2. BOLTS & WASHERS: ASTM A 307, Galvanized.
3. THREADED CONCRETE ANCHORS: Ferrule loop inserts for $\frac{3}{8}$ " bolt or approved equal.
4. HEADED CONCRETE ANCHORS: Weld to frame with a full penetration butt weld.
5. WELDING: Weld in conformance with the Standard Specifications. Unless otherwise indicated seal weld all joints with a minimum size fillet weld, based on material thickness. Grind smooth all contact surfaces. FINISH: Galvanized after fabrication.
6. Estimated weight, frame and grate (2'-6" x 2'-6") 238 lbs. Increase or decrease weight by 19 lbs for each $2\frac{3}{8}$ " increment.
7. Number of plates varies according to pipe diameter. See Standard 604-1.
8. See Standard 604-1 for dimensions of T.