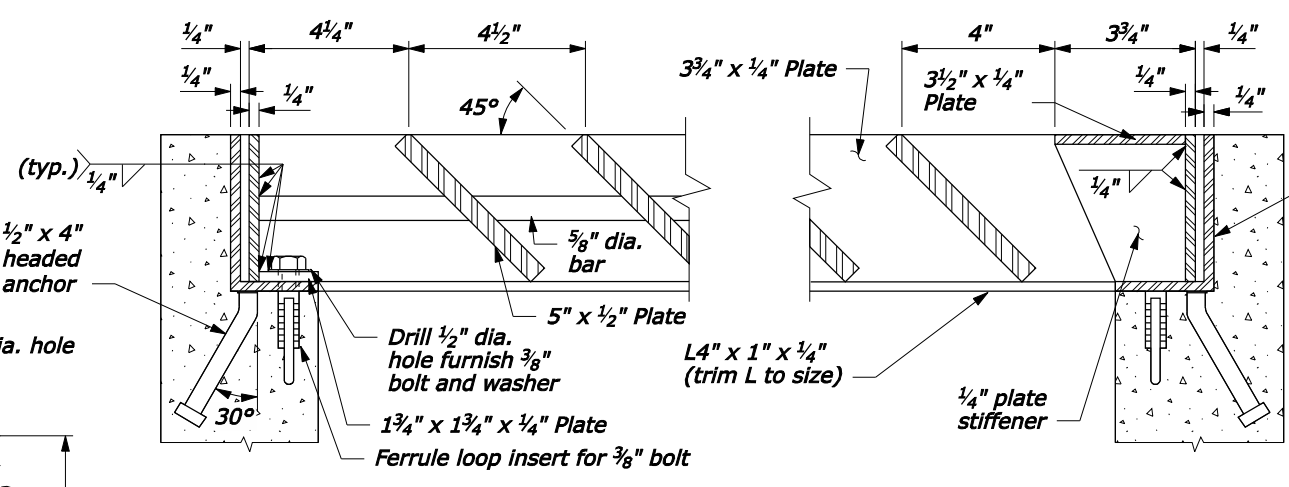
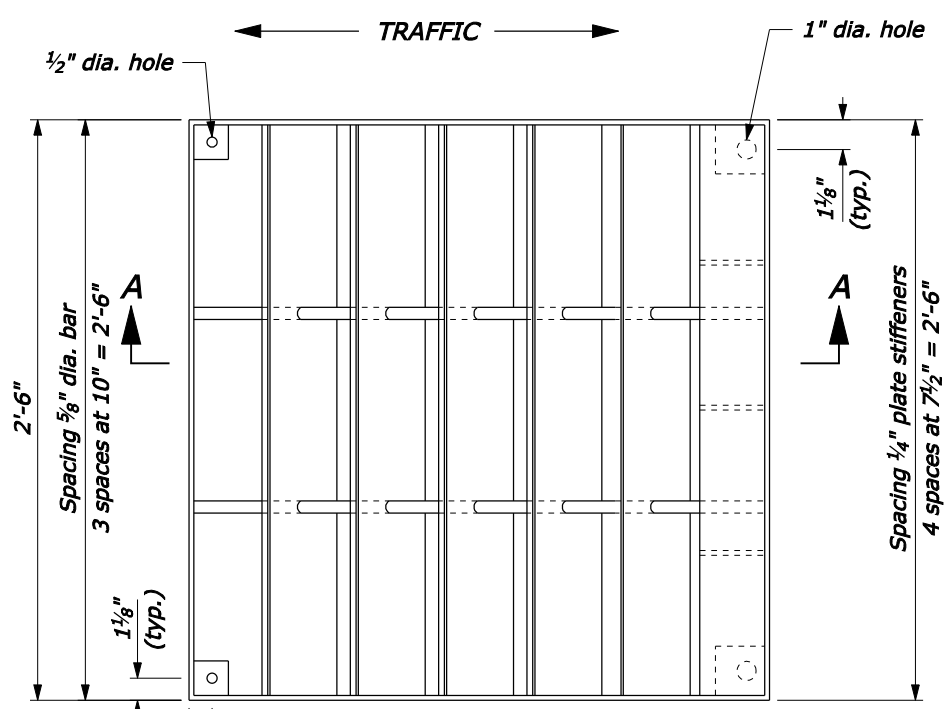


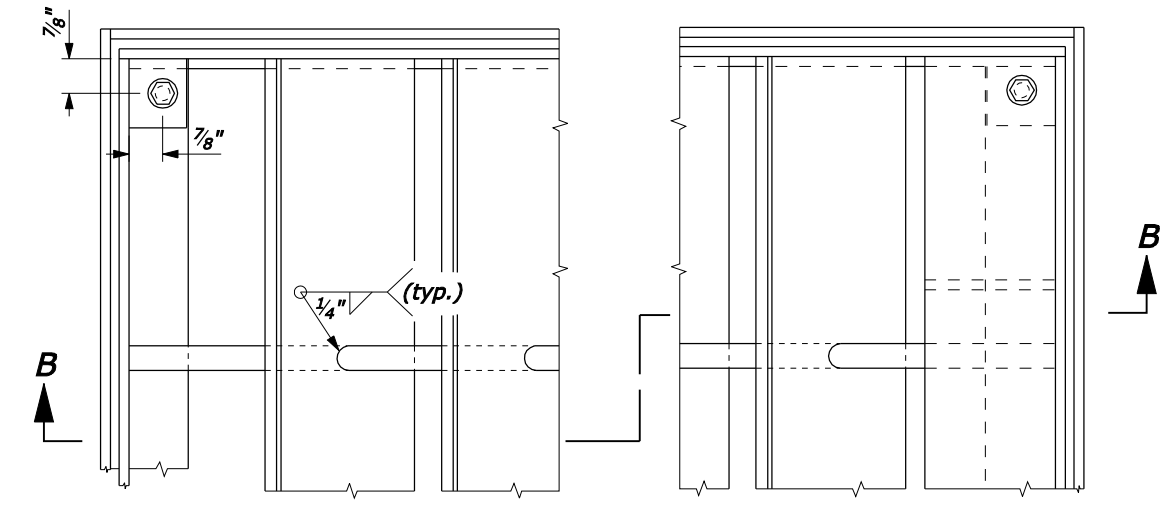
**SECTION A-A**



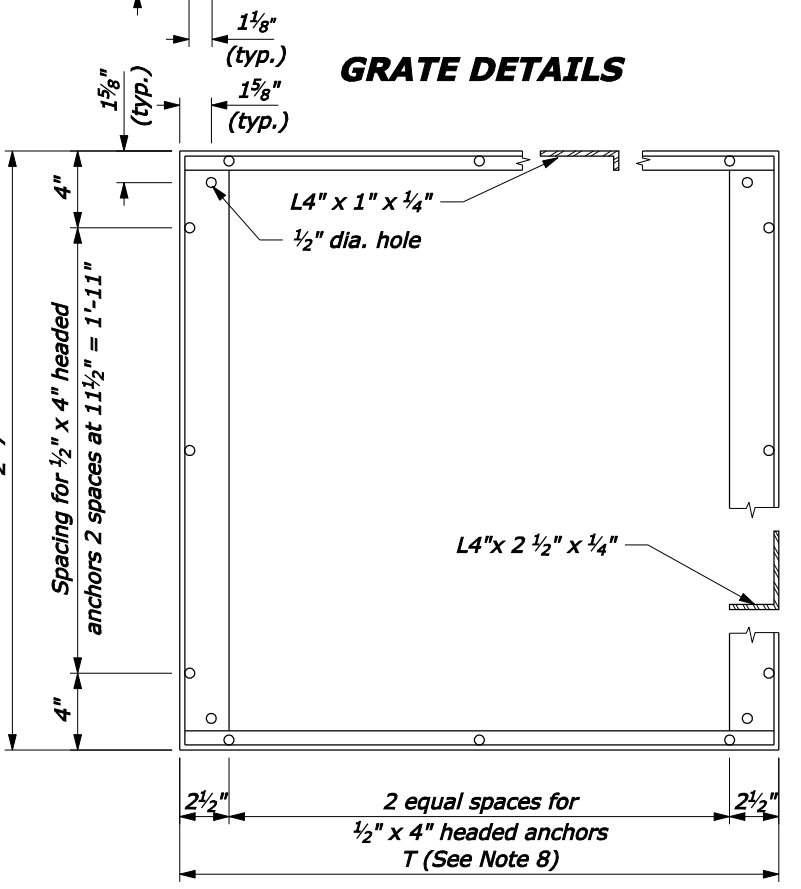
**SECTION B-B**



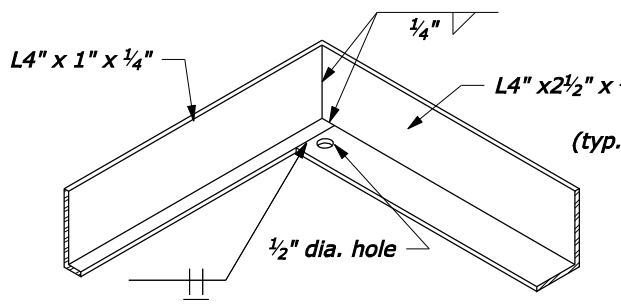
**GRATE DETAILS**



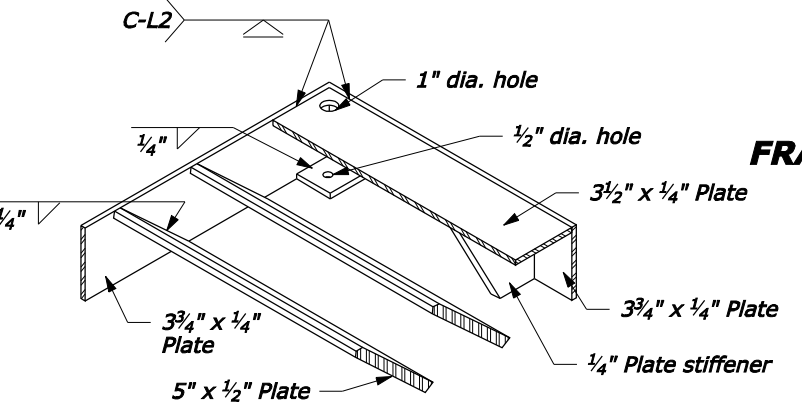
**FRAME AND GRATE DETAILS**



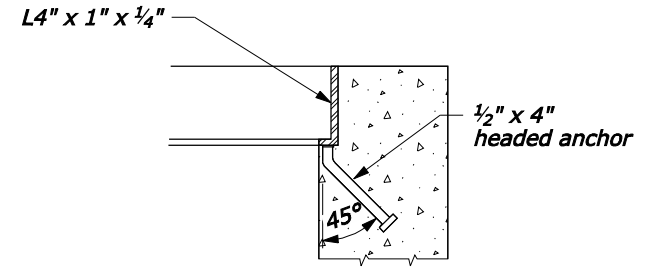
**FRAME DETAIL**



**FRAME CORNER DETAIL**



**GRATE CORNER DETAIL**



**FRAME ANCHOR DETAIL**

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION FEDERAL LANDS HIGHWAY	
U.S. CUSTOMARY STANDARD	
<b>METAL FRAME AND GRATE TYPE A</b>	
STANDARD APPROVED FOR USE 6/2005	STANDARD 604-2
REVISED:	

- NOTE:**
- STRUCTURAL STEEL:** AASHTO M 183 (ASTM A 36M).
  - BOLTS & WASHERS:** ASTM A 307, Galvanized.
  - THREADED CONCRETE ANCHORS:** Ferrule loop inserts for 3/8" bolt or approved equal.
  - HEADED CONCRETE ANCHORS:** Weld to frame with a full penetration butt weld.
  - 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.
  - Estimated weight, frame and grate (2'-6" x 2'-6") 215 lbs. Increase or decrease weight by 28 lbs for each 4 1/2" increment.
  - Number of plates varies according to pipe diameter. See Standard 604-1.
  - See Standard 604-1 for dimensions of T.

NO SCALE

01-Nov-2007 11:33 AM  
 Rpt://198.145.186.2/std.plt/est60402.dgn [US Customary]