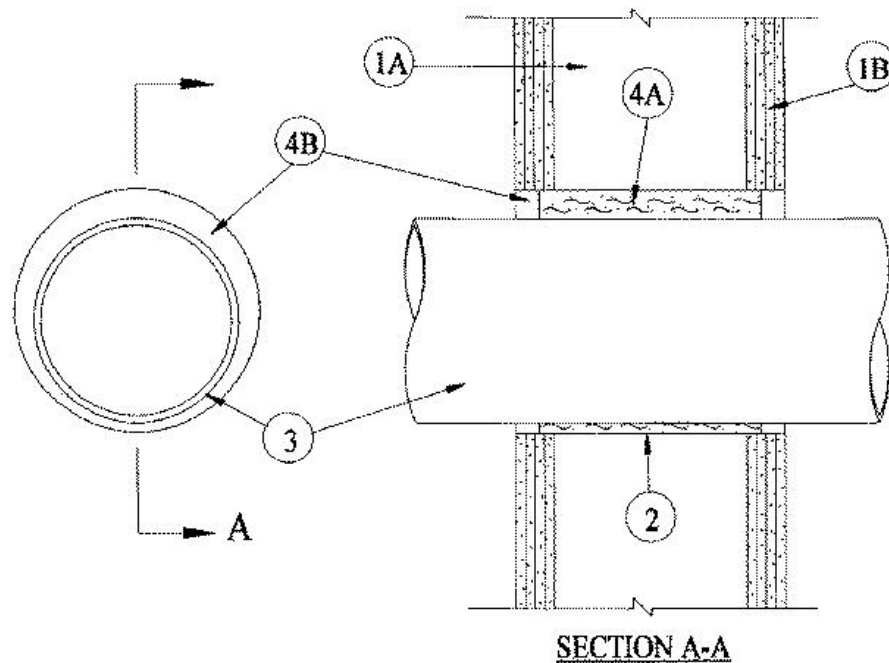


F Ratings — 3 and 4 Hr (See Item 1)  
T Rating — 1/2 Hr



1. **Wall Assembly** — The 3 or 4 hr fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:

A. **Studs** — Wall framing shall consist of steel channel studs. Steel studs to be min 1-5/8 in. wide and spaced max 24 in. OC.

B. **Gypsum Board\*** — Multiple layers of min 1/2 in. thick gypsum wallboard. The gypsum wallboard type, thickness, number of layers and orientation shall be as specified in the individual Wall and Partition Design. Max diam of opening is 12-3/4 in.

2. **Steel Wire Mesh** — Cylindrical sleeve fabricated from No. 8 steel wire mesh and having a min 3 in. lap along the longitudinal seam. Length of steel mesh to be 1 in. less than thickness of wall. Steel wire mesh to be centered and formed to fit periphery of through opening.

3. **Through Penetrants** — One metallic pipe, conduit or tubing to be installed either concentrically or eccentrically within the firestop system. The annular space between pipes, conduits or tubing and periphery of opening shall be min 1/2 in. to max 1-1/2 in. Pipe, conduit or tubing to be rigidly supported on both sides of floor or wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:

A. **Steel Pipe** — Nom 10 in. diam (or smaller) Schedule 40 (or heavier) steel pipe.

B. **Iron Pipe** — Nom 10 in. diam (or smaller) cast or ductile iron pipe.

C. **Conduit** — Nom 4 in. diam (or smaller) steel electrical metallic tubing or nom 6 in. diam (or smaller) steel conduit.

D. **Copper Tubing** — Nom 4 in. diam (or smaller) Type L (or heavier) copper tubing.

E. **Copper Pipe** — Nom 4 in. diam (or smaller) Regular (or heavier) copper pipe.

4. **Firestop System** — The firestop system shall consist of the following:

A. **Packing Material** — Min 3-1/8 in. thickness of min 4 pcf mineral wool batt insulation firmly packed into opening as a permanent form. Packing material to be recessed from both surfaces of wall as required to accommodate the required thickness of fill material.

B. **Fill, Void or Cavity Material\*** — **Caulk** — Min 1-1/4 in. thickness of fill material applied within the annulus, flush with both surfaces of wall.

**RECTORSEAL** — [Metacaulk 1000](#)



---

\*,+ Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

Reprinted from the Online Certifications Directory with permission from UL. ©UL LLC