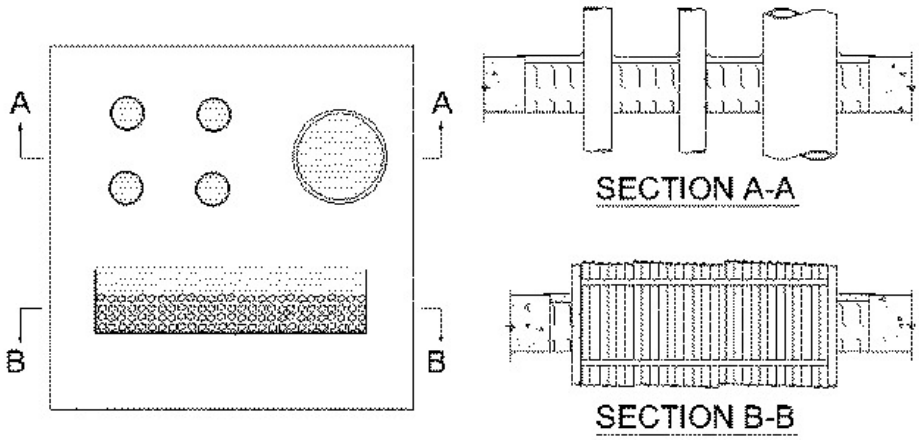
F Rating — 2 Hr
T Rating — 0 Hr



1. **Floor or Wall Assembly —** Min 4-1/2 in. thick reinforced lightweight or normal weight (100-150 pcf) concrete. Wall may also be constructed of any UL Classified **Concrete Blocks***. Max area of opening is 900 sq in. with max dimension of 30 in.
See **Concrete Blocks** (CAZT) category in the Fire Resistance Directory for names of manufacturers.

2. **Cable Tray+ —** One 24 in. wide by 4 in. deep open ladder cable tray with channel-shaped side rails formed of min. 0.091 in. galv steel or aluminum with nom 1 in. diam rungs spaced 9 in. OC. may be installed within the opening. Annular space between cable tray and periphery of opening shall be min of 1 in. to a max of 6 in. Cable tray shall be rigidly supported on both sides of the floor or wall assembly.

3. **Cables —** Aggregate cross-sectional area of cables in cable tray to be max 41 percent of the cross-sectional area of the cable tray based on the full loading depth of 4 in.. Any combination of the following types and sizes of copper conductor cables may be used:

A. Max 750 MCM power cables; THHN or THWN jacketed.

B. Max 8C, No.12 AWG multiconductor power and control cables with polyethylene insulation and polyvinyl chloride jacket.

C. Max 300 pair No. 24 AWG copper conductor communication cable with polyvinyl chloride insulation and jacket material.

D. Multiple fiber optical communication cable jacketed with polyvinyl chloride.

E. Max 25 pr/24 AWG telephone cable with polyethylene insulation and polyvinyl chloride jacket.

4. **Through-Penetrants —** A max of five pipes, conduits or tubing to be installed within the opening. The space between pipes, conduits or tubing shall be min 2 in. to max 5 in. The space between pipes, conduits or tubing and periphery of opening shall be min 2 in. to a max of 5 in. The space between pipes, conduits or tubing and cable tray shall be min 2 in. to max 5 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 10 (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.

D. **Conduit —** Nom 6 in. diam (or smaller) rigid steel conduit.

E. **Copper Tubing —** Nom 6 in. diam (or smaller) Type L (or heavier) copper tubing.

F. **Copper Pipe —** Nom 6 in. diam (or smaller) Regular (or heavier) copper pipe.

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

A. **Packing Material —** Min 4-1/2 in. thickness of 4.0 pcf mineral wool firmly packed into opening as a permanent form, flush with top surface of floor or both surfaces of wall.

B. **Fill, Void or Cavity Materials* - Caulk —** Min 1/16 in. thickness of fill material applied over mineral wool on top surface of floor or both surfaces of wall. Fill material to overlap 1/2 in. onto penetrants and floor or wall surfaces. Additional fill material to be forced into interstices of cables to max extent possible.

RECTORSEAL — Metacaulk 1200 Spray or Metacaulk 1200 Caulk Grade, MC 150+

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