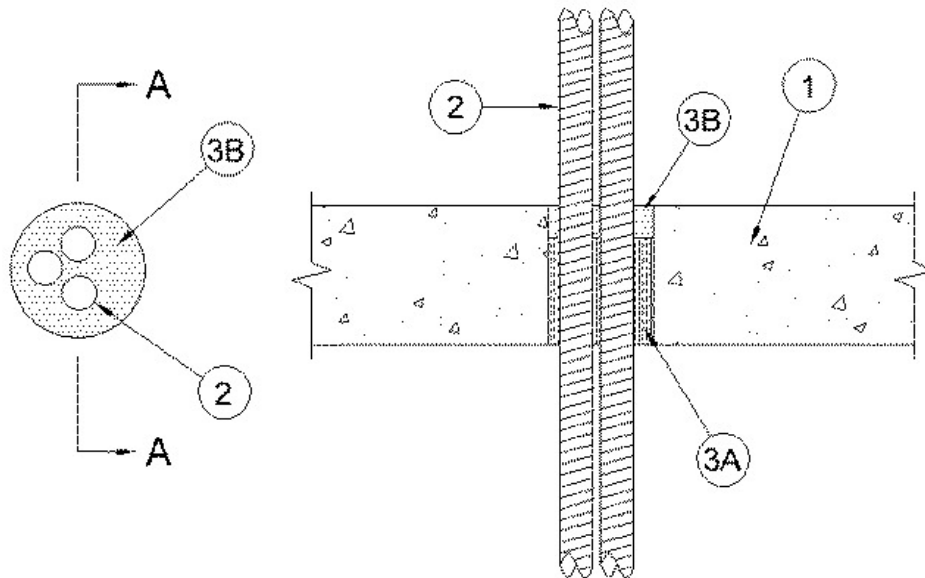


F Rating — 2 Hr  
T Rating — 1-1/2 Hr



SECTION A-A

1. **Floor or Wall Assembly** — Min 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m<sup>3</sup>) concrete floor. Min 5-1/2 in. (140 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m<sup>3</sup>) concrete wall. Wall may also be constructed of any UL Classified **Concrete Blocks\***. Max diam of opening is 4 in. (102 mm). See **Concrete Blocks** (CAZT) category in the Fire Resistance Directory for names of manufacturers.

2. **Nonmetallic Pipe** — A max of three nonmetallic penetrants may be installed within the opening. Min separation between nonmetallic penetrants is 1/2 in. (13 mm). The annular space between penetrant and periphery of opening shall be min 5/8 in. (16 mm) to max 1-3/4 in. (44 mm). Penetrants shall be rigidly supported on both sides of floor or wall assembly. Any combination of the following types and sizes of nonmetallic penetrants may be used:

A. **Electrical Nonmetallic Tubing (ENT)+** — Nom 1 in. (25 mm) diam (or smaller) **Electrical Nonmetallic Tubing**. ENT installed in accordance with the National Electrical Code (NFPA No. 70). See **Electrical Nonmetallic Tubing** (FKHU) category in the Electrical Construction Material Directory for names of manufacturers.

B. **Optical Fiber Raceways+** — Nom 1 in. (25 mm) diam (or smaller) **Optical Fiber Raceways**. Optical fiber raceway installed in accordance with the National Electrical Code (NFPA No. 70). See **Optical Fiber Raceway** (QAZM) category in the Electrical Construction Material Directory for names of manufacturers.

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

A. **Packing Material** — Min 3-1/2 in. (89 mm) thickness of min 4 pcf (64 kg/m<sup>3</sup>) mineral wool batt insulation firmly packed into opening as a permanent form. Packing material to be recessed from top surface of floor or from either surface of wall to accommodate the required thickness of fill material.

B. **Fill, Void or Cavity Material\* - Caulk** — Min 1 in. (25 mm) thickness of fill material applied within the annulus, flush with top surface of floor or with either surface of wall.

**RECTORSEAL** — [Metacaulk 350i](#)

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

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