

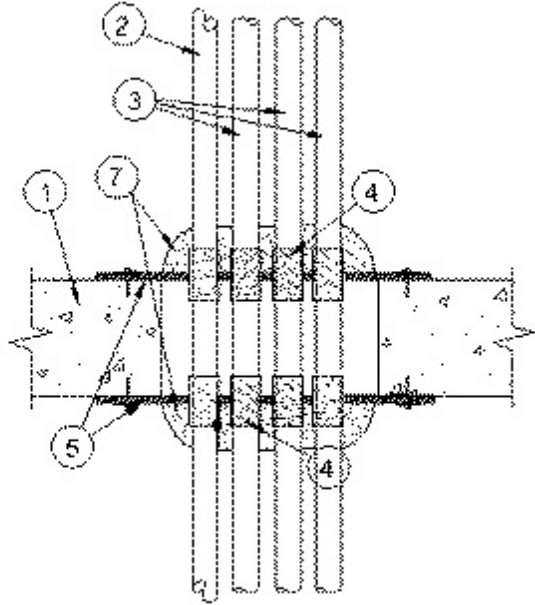
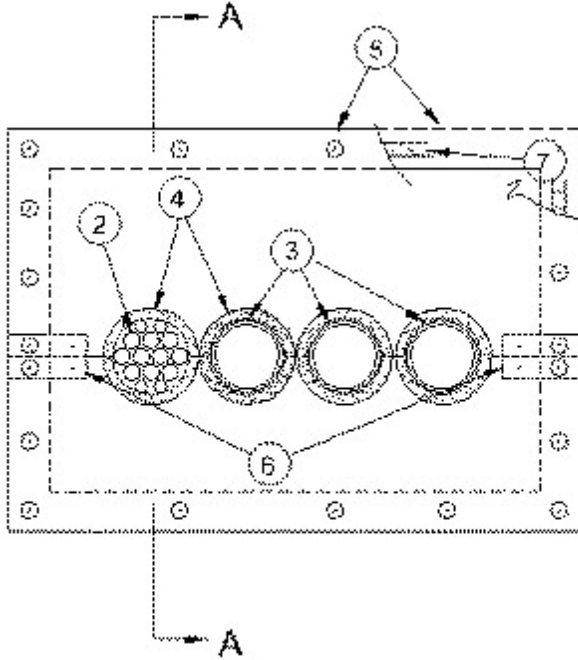


# System No. C-AJ-8122

July 17, 2006

F Ratings — 2 and 4 Hr (See Item 5)

T Ratings — 0 and 2 Hr (See Items 3 and 5)



SECTION A-A

**1. Floor or Wall Assembly** — Min 4-1/2 in. thick lightweight or normal weight (100-150 pcf) concrete. Wall may also be constructed of any UL Classified **Concrete Blocks\***. Max area of opening 900 sq in. with max dimension 30 in.

See **Concrete Blocks** (CAZT) category in the Fire Resistance Directory for names of manufacturers.

**2. Cables** — Aggregate cross-sectional area of cables in bundle not to exceed nom 12-1/2 sq in. (4 in. diam bundle). The space between cables and periphery of opening shall be min 1 in. Any combination of the following types and sizes of cables may be used:

- A. Max 750 kcmil power cables; THHN or THWN jacketed
- B. Max 8C, No.12 AWG multiconductor power and control cables; jacketed.
- 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.

When any of the above metallic penetrants are used, T Rating is 0 hr.

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

**3. Through-Penetrants** — A max of three pipes or conduits installed within the opening. Pipes or conduits installed along the same center line (as Item 2 if used) so that only one seam will exist in the composite sheet. The space between pipes or conduits, pipes or conduit and cables, and between pipes or conduits and periphery of opening shall be min 1 in. The

following types and sizes of metallic pipes or conduits may be used:

- A. **Steel Pipe** Nom 6 in. diam (or smaller) Schedule 10 (or heavier) steel pipe.
- B. **Iron Pipe** Nom 6 in. diam (or smaller) cast or ductile iron pipe.
- C. **Conduit** Nom 6 in. diam (or smaller) steel electrical metallic tubing.
- D. **Conduit** Nom 6 in. diam (or smaller) rigid steel conduit.

When any of the above metallic penetrants are used, T Rating is 0 hr.

4. **Fill, Void or Cavity Materials\* — Putty** — Nom 2 in. wide by 1/8 in. thick putty strips installed to tightly follow the contour of the through-penetrants around the entire perimeter. Adjoining lengths of putty strips butt seamed together by hand. One layer of putty required on each side of floor or wall assembly installed to project approx 1 in. beyond each face of the composite sheet (Item 5) on both sides of floor or wall assembly.

**RECTORSEAL** — Biostop Fire Rated Putty

5. **Fill, Void or Cavity Materials\* — Composite Sheet** —Rigid aluminum foil-faced intumescent sheet with steel mesh and galv steel sheet backer. Sheets cut to tightly follow the contour of the cable bundle and/or through-penetrants. Sheets cut to lap a min of 2 in. onto floor or wall surfaces. When sheet installed on both sides of the floor or wall assembly, F Rating is 4 hr. As an option for penetrants through floors, the sheet may be installed on only the top surface of the floor to attain a 2 hr F Rating and a 0 hr T Rating. When sheet is installed on only the top surface of the floor, the putty (Items 4 and 7) fill material is also required to be installed on only the top surface of the floor. Sheet to be installed with the galv steel sheet backer exposed (aluminum foil facing against floor or wall surface) and secured to floor or wall surface with min 3/16 in. diam by 1-1/4 in. long steel anchor screws, in conjunction with min 1-1/4 in. diam steel fender washers. Max spacing of fasteners not to exceed 6 in. with additional fasteners located on each side of butted seams or slits made to permit installation of the sheet around the cable tray.

**RECTORSEAL** — Biostop Composite Sheet

6. **Steel Cover Strip** — Min 2 in. wide strip of min 0.021 in. thick (26 ga) galv steel centered over entire length of the butted seam or slit made in the composite sheet (Item 5). Prior to installation of the steel strip, the seam or slit in the composite sheet shall be covered with a nom 1/2 by 1/8 in. thick strip of putty, 1/2 in. wide by 1/16 thick joint strip or 1/2 in. bead of sealant (Item 7). Steel cover strip secured to galv steel sheet backer of composite sheet with steel sheet metal screws or steel rivets spaced max 3 in. OC on each side of seam or slit..

7. **Fill, Void or Cavity Materials\*** — One layer of 1/2 by 1/8 in. thick putty strips or 1/2 in. wide by 1/16 in. thick joint strip or 1/2 in. diam bead of caulk positioned under composite sheet around entire perimeter of through opening and under steel cover strip. Generous application of putty (1 in. wide by 2 in. high dome) to be applied around the penetrating items at their egress from the intumescent sheet on both sides of the floor or wall assembly. When annular space between cable bundle and penetrant or between penetrants in less than 2 in., space between cable bundle and penetrant or between penetrants shall be filled to a min. height of 2 in. above floor or wall.

**RECTORSEAL** — Biostop Fire Rated Putty

**RECTORSEAL** — Biostop Joint Strip

**RECTORSEAL** — Biostop 500+

\*Bearing the UL Classification Mark