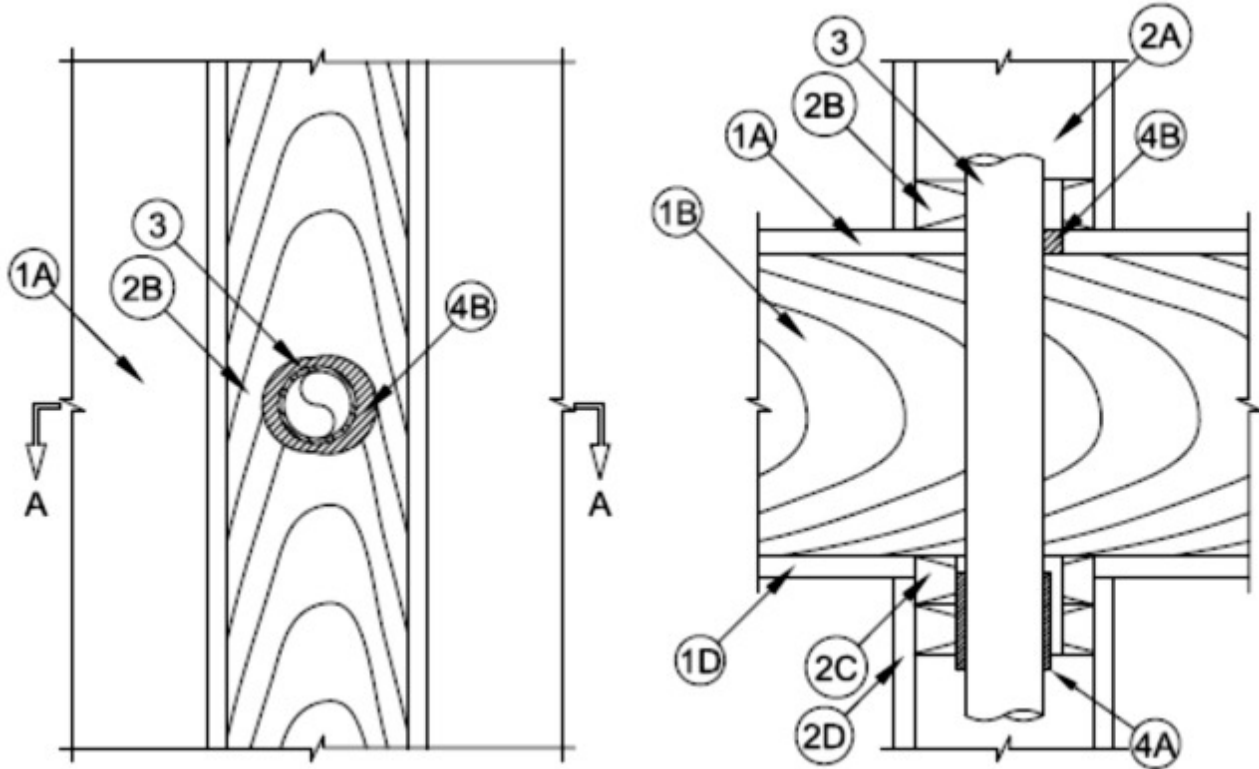


### System No. F-C-2399

October 05, 2015

| ANSI/UL1479 (ASTM E814)                     | CAN/ULC S115                                |
|---|---|
| F Rating — 1 Hr                             | F Rating — 1 Hr                             |
| T Ratings — 0 and 1 Hr (See Item 3)         | FT Ratings — 0 and 1 Hr (See Item 3)        |
| L Rating at Ambient — Less Than 1 CFM/sq ft | FH Rating — 1 Hr                            |
| L Rating at 400 F — Less Than 1 CFM/sq ft   | FTH Ratings — 0 and 1 Hr (See Item 3)       |
|   | L Rating at Ambient — Less Than 1 CFM/sq ft |
|   | L Rating at 400 F — Less Than 1 CFM/sq ft   |



System tested with a pressure differential of 2.5 Pa between the exposed and the unexposed surfaces with the higher pressure on the exposed side.

**1. Floor - Ceiling Assembly** — The 1 hr fire-rated wood joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in the individual L500 Designs in the UL Fire Resistance Directory, as summarized below:

**A. Flooring System** — Lumber or plywood subfloor with finish floor of lumber, plywood or **Floor Topping Mixture\*** as specified in the individual Floor-Ceiling Design. Max diam of floor opening is 5 in. (127 mm).

**B. Wood Joists** — Nom 10 in. (254 mm) deep (or deeper) lumber, steel or combination lumber and steel joists, trusses or **Structural Wood Members\*** with bridging as required and with ends firestopped.

**C. Gypsum Board\*** — Nom 5/8 in. (16 mm) thick as specified in the individual Floor-Ceiling Design. Wallboard secured to joists as specified in the individual Floor-Ceiling Design.

**2. Chase Wall** — The through penetrant (Item No. 3) shall be routed through wood stud/gypsum board chase wall and shall include the following construction features:

A. **Studs** — Nom 2 by 6 in. (51 by 152 mm) lumber studs.

B. **Sole Plate** — Nom 2 by 6 in. (51 by 152 mm) lumber plates. Diam of opening or length of notch-out in sole plate to be 1/2 in. (13 mm) larger than outside diam of pipe.

C. **Top Plate** — The double top plate shall consist of two nom 2 by 6 in. (51 by 152 mm) lumber plates. Diam of opening in top plate to be 1/2 in. (13 mm) larger than outside diam of pipe.

D. **Gypsum Board** — Min 1/2 in. (13 mm) thick rated gypsum board as specified in the individual Wall and Partition Design.

3. **Through Penetrants** — One nonmetallic pipe to be centered within the firestop system. The annular space between pipe and periphery of opening shall be nom 1/4 in. (6 mm). Pipe to be rigidly supported on both sides of floor assembly. The following types and sizes of nonmetallic pipes may be used:

A. **Polyvinyl Chloride (PVC) Pipe** — Nom 4 in. (102 mm) Schedule 40 solid or cellular core PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.

**The hourly T, FT and FTH Rating of the firestop system is 1 Hr for solid core PVC and 0 Hr for cellular core PVC penetrants.**

B. **Rigid Nonmetallic Conduit+ (RNC)** — Nom 4 in. (102 mm) diam (or smaller) Schedule 40 PVC conduit installed in accordance with the National Electrical Code (NFPA No. 70).

**The hourly T, FT and FTH Rating of the firestop system is 1 Hr for RNC penetrants.**

C. **Chlorinated Polyvinyl Chloride (CPVC) Pipe** — Nom 4 in. (102 mm) diam (or smaller) SDR17 CPVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.

**The hourly T, FT and FTH Rating of the firestop system is 1 Hr for CPVC penetrants.**

D. **Acrylonitrile Butadiene Styrene (ABS) Pipe** — Nom 4 in. (102 mm) diam (or smaller) Schedule 40 cellular or solid core ABS pipe for use in closed (process or supply) or vented (drain, waste or vent) piping system.

**The hourly T, FT and FTH Rating of the firestop system is 0 Hr for ABS penetrants.**

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

A. **Fill, Void or Cavity Material\*— Joint Strip** — Min two layers of 2 mm thick by 3 in. (76 mm) wide intumescent joint strip tightly wrapped around the outer circumference of the pipe with ends butted and held in place with tape. Joint strip slid into the annular space with the bottom edge of the joint strip extending 1/2 in. (13 mm) below top plate.

**RECTORSEAL** — Biostop Joint Strip or FlameSafe Joint Strip

B. **Fill, Void or Cavity Material\* — Caulk** — Min 3/4 in. (19 mm) thickness of fill material applied within annulus, flush with top surface of floor.

**RECTORSEAL** — Biostop 500+, BF 150+ or FS1900

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