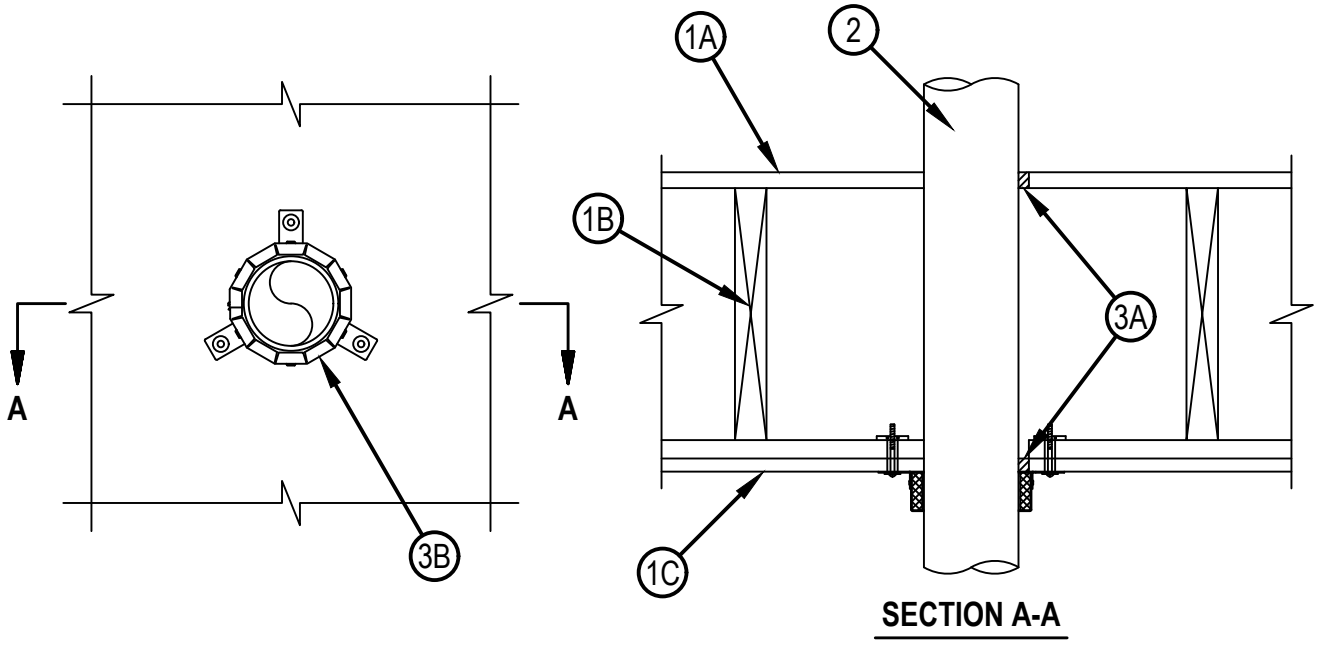
Classified by
Underwriters Laboratories, Inc.
to CAN/ULC-S115

System No. F-C-2011

F Rating — 1 Hr
FT Rating — 1 Hr
FH Rating — 0 Hr
FTH Rating — 0 Hr

CANADA ONLY

FC 2011



SECTION A-A

System tested with a pressure differential of 50 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 solid or trussed lumber joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in individual L500 Series Floor-Ceiling Designs in the UL Fire Resistance Directory. The general construction details of the floor-ceiling assembly are 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 127 mm (5 in.).
   B. Wood Joists — Nom 51 by 254 mm (2 by 10 in.) lumber joists spaced 406 mm (16 in.) OC with nom 25 by 76 mm (1 by 3 in.) lumber bridging and with ends firestopped. As an alternate to lumber joists, nom 254 mm (10 in.) deep (or deeper) lumber, steel or combination lumber and steel joists, trusses or Structural Wood Members* with bridging as required with ends firestopped.
   C. Gypsum Board* — Nom 122 cm (4 ft) wide by 16 mm (5/8 in.) thick as specified in the individual Floor-Ceiling Design. Max diam of ceiling opening is 127 mm (5 in.).

1.1. Chase Wall — (Not shown, Optional) — The through penetrant (Item No. 2) may be routed through a single, double or staggered wood stud/gypsum board chase wall and shall include the following construction features:
   A. Studs — Nom 51 by 102 or 51 by 152 mm (2 by 4 or 2 by 6 in.) lumber studs.
   B. Sole Plate — Nom 51 by 102 or 51 by 152 mm (2 by 4 or 2 by 6 in.) lumber studs. Max diam of opening is 127 mm (5 in.).
   C. Top Plate — The double top plate shall consist of two nom 51 by 102 or 51 by 152 mm (2 by 4 or 2 by 6 in.) lumber plates. Max diam of opening is 127 mm (5 in.).
   D. Gypsum Board* — Min 13 mm (1/2 in.) rated or non-rated gypsum board.
   E. Steel Straps — (Not shown) — Steel straps to be used when top plates are discontinuous and shall meet the structural requirements of the wall. Min 38 mm (1-1/2 in.) wide by 20 gauge (or heavier) galvanized steel straps used to bridge opening on both sides of wall at double top plate when top plate is discontinuous at opening. Steel straps to be cut to overlap a min of 51 mm (2 in.) onto top plate on each side of opening and secured to top plates with a min of two nails or screws on each side of opening on both sides of wall.

2. Through Penetrants — One nonmetallic pipe to be installed approx midway between wood joists and installed either eccentrically or concentrically within the firestop system. Diam of openings hole-sawed through flooring system and through gypsum board ceiling to be nom 13 mm (1/2 in.) larger than the outside diam of through-penetrant. The annular space between the through penetrant and the periphery of the opening shall be a min. 0 in. (point contact) to a max of 13 mm (1/2 in.). Pipe to be rigidly supported on both sides of the floor-ceiling assembly. The following types and sizes of nonmetallic pipes may be used:
   A. Polyvinyl Chloride (PVC) Pipe — Nom 102 mm (4 in.) diam (or smaller) Schedule 40 cellular or solid core PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.
   B. Acrylonitrile Butadiene Styrene (ABS) Pipe — Nom 102 mm (4 in.) 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 systems.
   C. Chlorinated Polyvinyl Chloride (CPVC) Pipe — Nom 102 mm (4 in.) diam (or smaller) SDR11 or SDR13.5 CPVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.
   D. Chlorinated Polyvinyl Chloride (CPVC) Pipe — Nom 102 mm (4 in.) diam (or smaller) SDR 11 CPVC for use in closed (process or supply) piping systems.
   IPEX INC — AquaRise
   E. XFR Polyvinyl Chloride (PVC) Pipe — Nom 102 mm (4 in.) diam (or smaller) Schedule 40 XFR-PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping system.
3. Firestop System — The firestop system shall consist of the following:
   A. Fill, Void or Cavity Material* — Sealant — Min 19 mm (3/4 in.) thickness of fill material applied within the annulus, flush with top surface of floor or sole plate. Min 16 mm (5/8 in.) thickness of fill material applied within annulus, flush with underside of gypsum board ceiling or lower top plate.
   HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 606 or FS-ONE MAX Intumescent Sealant

   Note: CP 606 not suitable for use with CPVC pipes

   When Through-Penetrant Item 2E is used in the firestop system, the FS-ONE MAX Intumescent Sealant must be used.

   B. Firestop Device* — Galvanized steel collar lined with an intumescent material sized to fit the specific diam of through-penetrant. Device shall be installed around the through-penetrant in accordance with the accompanying installation instructions. Collar to be installed and latched around the pipe and secured to bottom surface of gypsum board ceiling using the anchor hooks provided with the collar. (Minimum 2 anchor hooks for 38 and 51 mm (1-1/2 and 2 in.) diam pipes, 3 anchor hooks for 76 and 102 mm (3 and 4 in.) diam pipes.) The anchor hooks are to be secured to the gypsum board ceiling with 5 mm (3/16 in.) diam by 64 mm (2-1/2 in.) long toggle bolts along with min 32 mm (1-1/4 in.) diam steel washers or to lower top plate with 38 mm (1-1/2 in.) long wood screws along with min 32 mm (1-1/4 in.) diam steel washers.
   HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP643 50/1.5"N, CP643 63/2"N, CP643 90/3"N, CP643 110/4"N Firestop Collar

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