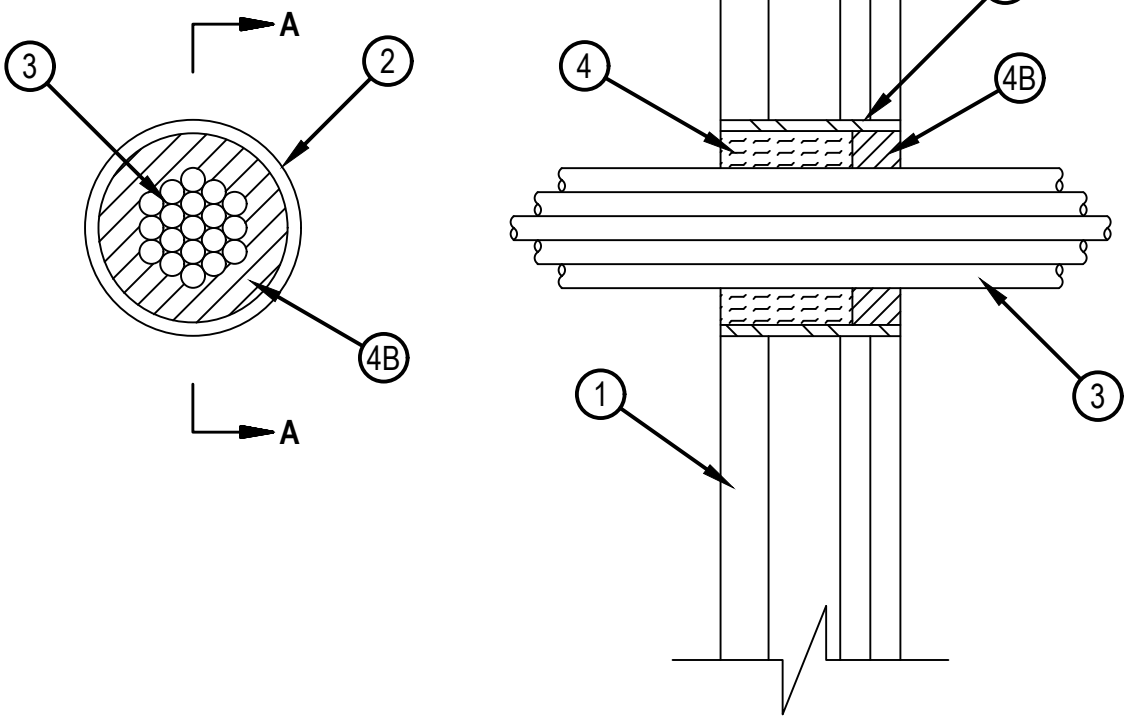
Classified by
Underwriters Laboratories, Inc.
to UL 1479 and CAN/ULC-S115

System No. W-L-3161

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Rating — 1 and 2 Hr (See Items 1 and 4)	F Rating — 1 and 2 Hr (See Items 1 and 4)
T Rating — 0 Hr	FT Rating — 0 Hr
	FH Rating — 1 and 2 Hr (See Items 1 and 4)
	FTH Rating — 0 Hr



SECTION A-A

System No. W-L-3161

1. Wall Assembly — The 1 or 2 Hr fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner described in the individual U400, V400 or W400 Series Wall or Partition Design in the UL Fire Resistance Directory and shall include the following construction features:
   A. Studs — “C-H” or "C-T" shaped studs 1-5/8 in. (41 mm) wide by 2-1/2 in. (64 mm) deep, fabricated from 25 MSG galv steel, spaced max 24 in. (610 mm) OC.
   B. Gypsum Board* — One layer of nom 1 in. (25 mm) thick, 24 in. (610 mm) wide gypsum liner and one or two layers of nom 5/8 in. (16 mm) thick, 4 ft. (1.2 m) wide gypsum board with square or tapered edges. The 5/8 in. (16 mm) thick gypsum board type, number of layers, fastener type and sheet orientation shall be as specified in the individual Wall and Partition Design. Max diam of opening is 4 in. (102 mm)

1A. Wall Assembly — As an alternate to the above wall assembly, the 1 or 2 Hr fire rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300, U400, V400 or W400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
   A. Studs — Wall framing may consist of either wood studs or steel channel studs. Steel studs to be min 2-1/2 in. (64 mm) wide and spaced max 24 in. (610 mm) OC. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC.
   B. Gypsum Board* — Thickness, type, number of layers and fasteners as required in the individual Wall and Partition Design. Max diam of opening is 4 in. (102 mm).

The hourly F, FH Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.

2. Metallic Sleeve — Max 4 in. (102 mm) diam cylindrical sleeve fabricated from min 0.016 in. (0.41 mm) thick (28 gauge) galv sheet steel and having a min 1 in. (25 mm) lap along the longitudinal seam. Length of steel sleeve to be equal to thickness of wall. Sleeve installed by coiling the sheet steel to a diam smaller than the through opening, inserting the coil through the opening and releasing the coil to let it uncoil against the circular cutouts in the gypsum board layers. Sleeve may also be formed of No. 8 steel wire mesh having a min 1 in. (25 mm) lap along the longitudinal seam.

3. Cables — Aggregate cross-sectional area of cable in opening to be max 33 percent of the cross-sectional area of the opening. The annular space between the cable bundle and the periphery of the opening to be min 1/4 in. (6.4 mm) to max 3/4 in. (19 mm). Cables to be rigidly supported on both sides of the wall assembly. Any combination of the following types and sizes of copper conductor cables may be used:
   A. Max 7/C No. 12 AWG with polyvinyl chloride (PVC) insulation and jacket.
   B. Max 25 pair No. 24 AWG telephone cable with PVC insulation and jacket.
   C. Type RG 59/U coaxial cable with polyethylene (PE) insulation and PVC jacket.
   D. Multiple fiber optical communication cable jacketed with PVC and having a max OD of 5/8 in. (16 mm).
   E. Max 3/C No. 12 AWG copper conductor steel clad cable.
   G. Fire Resistive Cables* - Max 1-1/4 in. (32 mm) diam single conductor or multi conductor Type MI cable. A min 1/8 in. (3 mm) separation shall be maintained between MI cables and any other types of cable.

4. Firestop System — The firestop system shall consist of the following:
   A. Packing Material — Min 2-1/8 in. (54 mm) or 2-3/4 in. (70 mm) thickness of min 4 pcf (64kg/m3) mineral wool batt insulation firmly packed into opening on one side of the wall as permanent form for 1 and 2 hr fire rated walls, respectively. Packing material to be recessed from the room side of wall as required to accommodate the required thickness of fill material. . In alternate wall assembly, packing material to be flush with either side of the wall and recessed from the other side of the wall to accommodate the required thickness of fill material.
   B. Fill, Void or Cavity Material — Sealant* — Min 1 in. (25 mm) thickness of fill material applied within sleeve, flush with surface of wall.
   HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-ONE MAX Intumescent Sealant

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