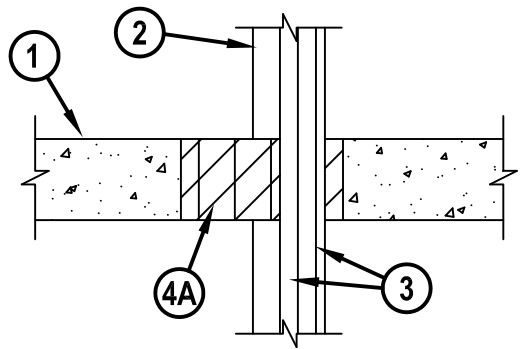
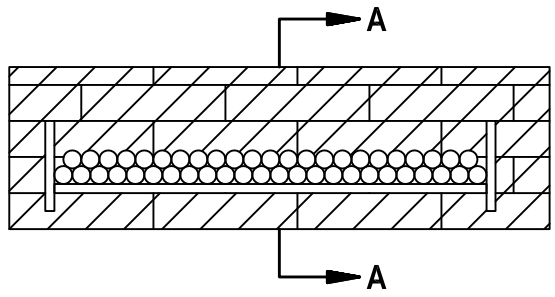




Classified by
Underwriters Laboratories, Inc.
to UL 1479 and CAN/ULC-S115

System No. C-AJ-4035

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Rating — 3 Hr	F Rating — 3 Hr
T Rating — 0 Hr	FT Rating — 0 Hr
	FH Rating — 3 Hr
	FTH Rating — 0 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/m³) concrete. Wall may also be constructed of any UL Classified Concrete Blocks*. Max area of opening is 270 sq in (1742 cm²) with max dimension of 30 in. (762 mm).
See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.
2. Cable Tray* — Max 24 in. (610 mm) wide by max 4 in. (102 mm) deep open-ladder or solid-back cable tray with channel-shaped side rails formed of 0.10 in. (2.54 mm) thick aluminum or 0.060 in. (1.52 mm) thick galv steel and with 1-1/2 in. (38 mm) wide by 1 in. (25 mm) channel shape rungs spaced 9 in. (229 mm) OC or a 0.029 in. (0.74 mm) thick steel solid back, respectively. The annular space between the cable tray and the periphery of the opening shall be min 1 in. (25 mm) to max 4 in. (102 mm). Cable tray to be rigidly supported on both sides of floor or wall assembly.
3. Cables — Aggregate cross-sectional area of cables in cable tray to be max 40 percent of the cross-sectional area of the cable tray. Any combination of the following types and sizes of copper conductor or fiber optic cables may be used:
 - A. 1/C, 500 kcmil with thermoplastic insulation and PVC jacket.
 - B. 300 pair — No. 24 AWG cable with PVC insulation and jacket.
 - C. 24 fiberoptic cable with PVC subunit and jacket.
 - D. Three 1/C No. 12 AWG wire, insulated with polyvinyl chloride, in a nominal 3/4 in. (19 mm) flexible metal conduit.
4. Firestop System — The firestop system shall consist of the following:
 - A. Fill, Void or Cavity Material* — Fire blocks installed with the long dimension placed horizontally within the opening, flush with bottom of floor assembly or centered within wall opening. In concrete block walls, fire block to fill entire thickness of wall opening unless wall is solid filled. Blocks to be firmly packed and completely fill the entire width and height of opening. Either one or a combination of the block specified below may be used.
HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS 657 Fire Block or CFS-BL Firestop Block
 - B. Fill, Void or Cavity Material* -Sealant or Putty- Not Shown — Fill material to be forced into interstices of cables and between cables and cable trays to max extent possible on both surfaces of the penetration.
HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-One Sealant, FS-ONE MAX Intumescent Sealant or CP618 Firestop Putty Stick.

* 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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