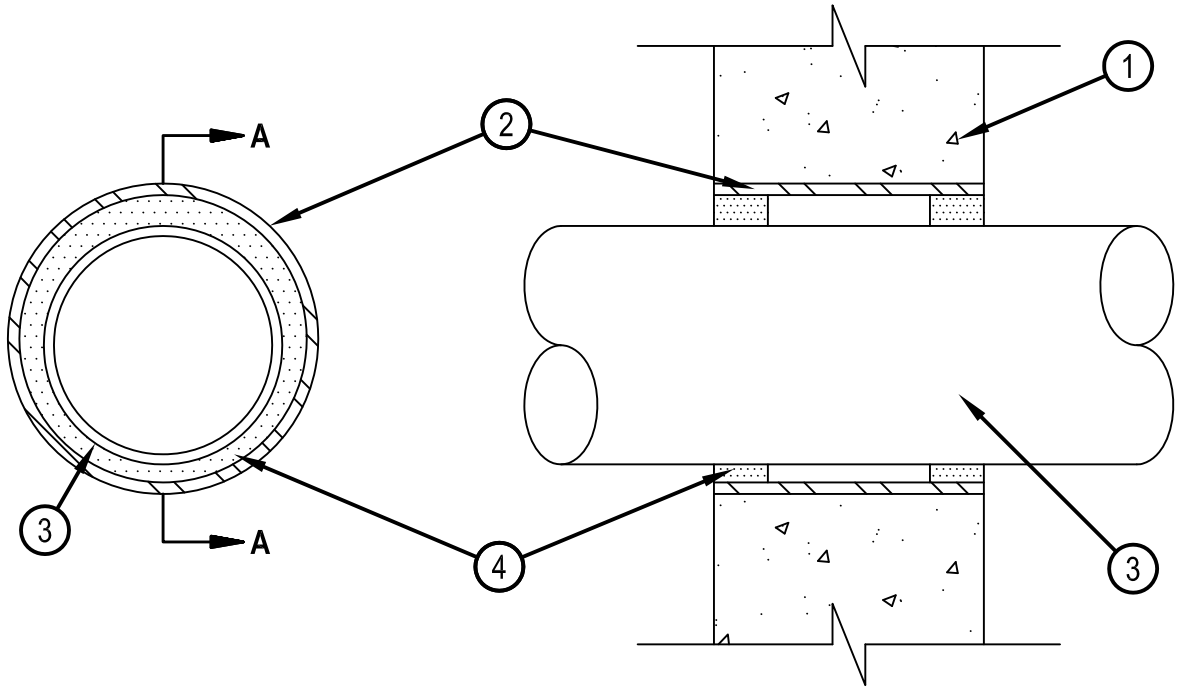
System No. W-J-1068

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

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



SECTION A-A

1. Wall Assembly — Min 7-1/2 in. (191 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 diam of opening is 8 in. (203 mm).
   See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.
2. Steel Sleeve — Nom 8 in. (203 mm) diam (or smaller) Schedule 40 (or heavier) steel pipe sleeve friction fit in nom 8 in. (203 mm) diam circular opening core drilled through wall. Length of steel sleeve to be equal to thickness of wall.
3. Through- Penetrant — One metallic pipe or tubing installed either concentrically or eccentrically within the firestop system. The annular space between pipe or tubing and the steel sleeve shall be min of 1/2 in. (13 mm) to max 1-1/4 in. (32 mm). Pipe or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes or tubing may be used:
   A. Steel Pipe — Nom 6 in. (152 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.
   B. Steel Conduit — Nom 4 in. (102 mm) diam (or smaller) steel electrical metallic tubing.
   C. Copper Tubing — Nom 6 in. (152 mm) diam (or smaller) Type L (or heavier) copper tubing.
   D. Copper Pipe — Nom 6 in. (152 mm) diam (or smaller) Regular (or heavier) copper pipe.
4. Fill, Void or Cavity Material*—Sealant — Min 1-1/2 in. (38 mm) thickness of fill material applied within the annulus, flush with both surfaces of the wall.
   HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-ONE Sealant or 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.