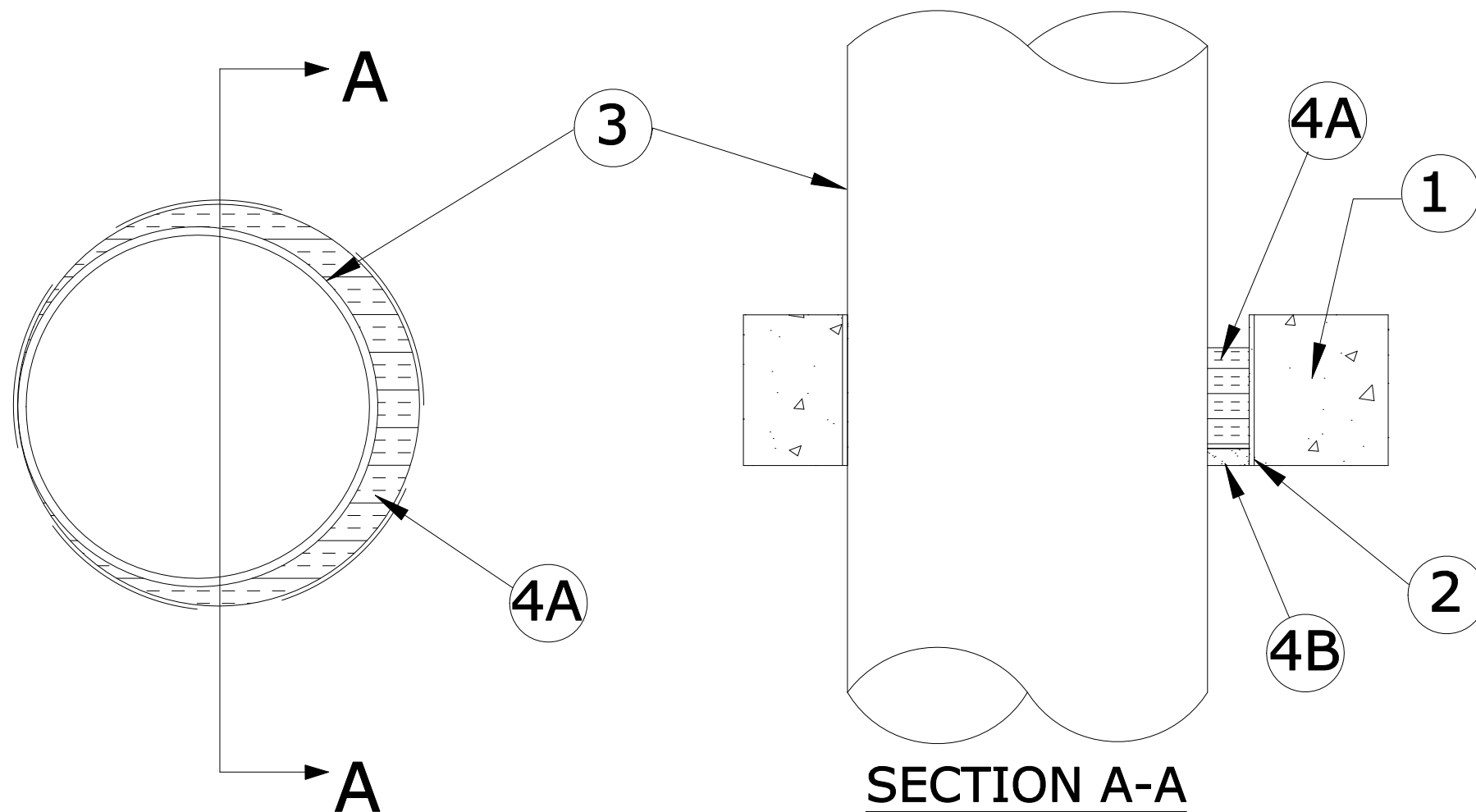


**\* NOTE**  
 THIS MATERIAL WAS EXTRACTED BY 3M FIRE PROTECTION PRODUCTS  
 FROM THE 2005 EDITION OF THE UL FIRE RESISTANCE DIRECTORY.

**System No. C-AJ-1496**

May 18, 2005  
 F Rating - 3 Hr  
 T Rating - 0 Hr



REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

**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/m<sup>3</sup>) concrete. Wall may also be constructed of any UL Classified **Concrete Blocks\***. Max diam of opening 13-3/4 in. (349 mm).

See **Concrete Blocks** (CAZT) category in Fire Resistance Directory for names of manufacturers.

**2. Steel Sleeve** - (optional) - Schedule 10 (or heavier) steel sleeve cast or grouted into slab, flush with bottom of floor. Sleeve may extend a max of 2 in. (51 mm) above top surface of floor or both surfaces of wall.

**3. Through Penetrant** - One metallic pipe or tubing installed concentrically or eccentrically within opening. Annular space between penetrant and sleeve or periphery of opening shall be min of 0 in. (0 mm) (point contact) to max 3 in. (76 mm). Penetrant to be rigidly supported on both sides of floor or wall assembly. The following types and sizes of penetrants may be used:

- A. Steel Pipe** - Nom 10 in. (254 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.
- B. Iron Pipe** - Nom 10 in. (254 mm) diam (or smaller) cast or ductile iron pipe.
- C. Conduit** - Nom 6 in. diam (or smaller) steel conduit or nom 4 in. diam (or smaller) steel electrical metallic tubing.
- D. Copper Tubing** - Nom 4 in. (102 mm) diam (or smaller) Type L (or heavier) copper tubing.
- E. Copper Pipe** - Nom 4 in. (102 mm) diam (or smaller) Regular (or heavier) copper pipe.

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

**A. Packing Material** - Min 3 in. (76 mm) thickness of min 4 pcf (64 kg/m<sup>3</sup>) mineral wool batt insulation firmly packed into opening as a permanent form. Packing material to be recessed from bottom surface of floor or from both surfaces of wall to accommodate the required thickness of fill material.

**B. Fill,Void or Cavity Materials\* - Caulk or Sealant** - Min 1/2 in. (13 mm) thickness of caulk applied within the annulus, flush with bottom surface of floor or with both surfaces of wall.

**3M COMPANY** - CP 25WB+, IC 15WB+ caulk or FB-3000 WT sealant.

\*-Bearing the UL Classification Mark

CONSULT CURRENT INDEPENDENT LABORATORIES (UL) FOR SYSTEMS OR DESIGN DETAILS.

PROJECT	SHT 1 of 1	SIGNATURE	DATE
	CAJ1496.DWG		
SYSTEM/DESIGN NO.	DATE	NOT FOR USE AS CONSTRUCTION DOCUMENT. DRAWING NOT TO SCALE.	
C-AJ-1496	05-18-2005	All statements, technical information recommendations contained herein are based on tests we believe to be reliable. However since the conditions of use and application are beyond our control, 3M shall not be liable for any damage direct or consequential resulting from the use of this material or design. 3M's only warranty shall be to replace our products proved to be defective.	
3M Fire Protection Products			