

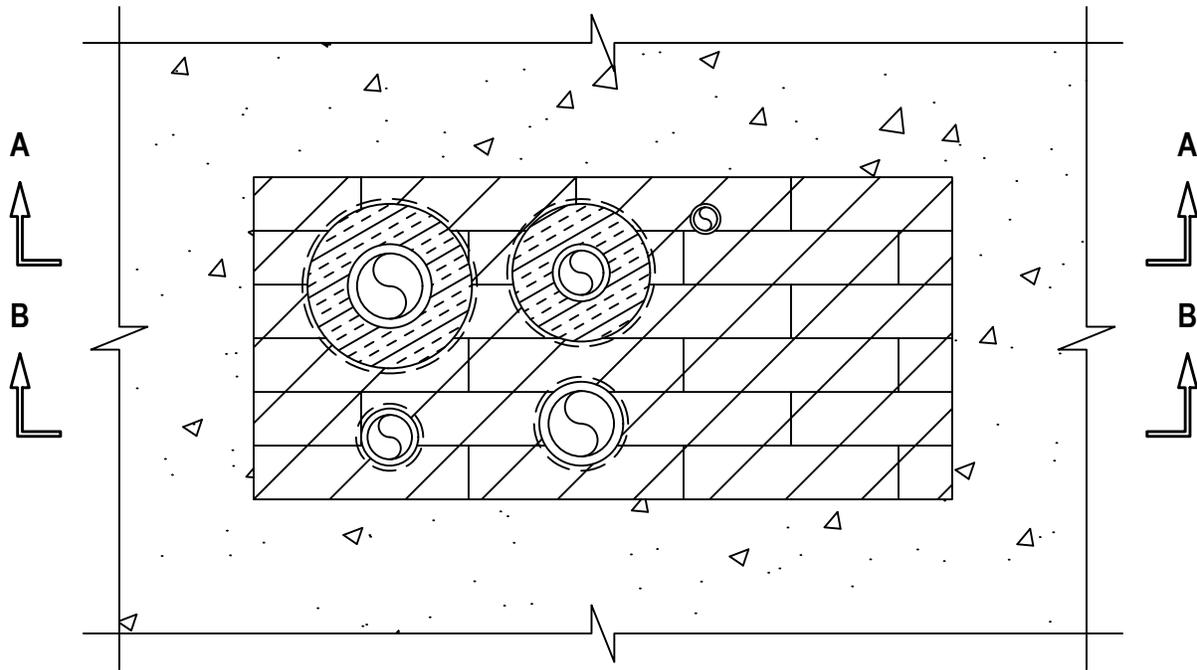
UL SYSTEM NO. C-AJ-8357

MULTIPLE PENETRATING ITEMS THROUGH CONCRETE FLOOR/WALL OR BLOCK WALL

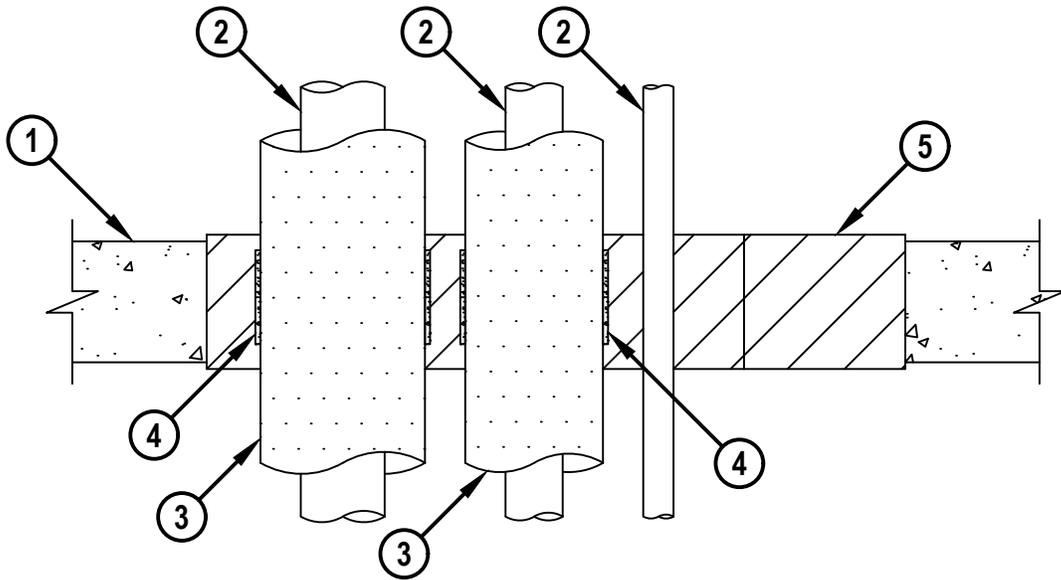
F-RATING = 2-HR.
T-RATING = 1-3/4-HR.

CAJ8357a.030926

TOP VIEW



SECTION A-A



HILTI, Inc.
Plano, Texas USA (800) 879-8000

Sheet	1 of 3
Scale	9/64" = 1"
Date	Mar. 09, 2026

Drawing No.

**CAJ
8357a**

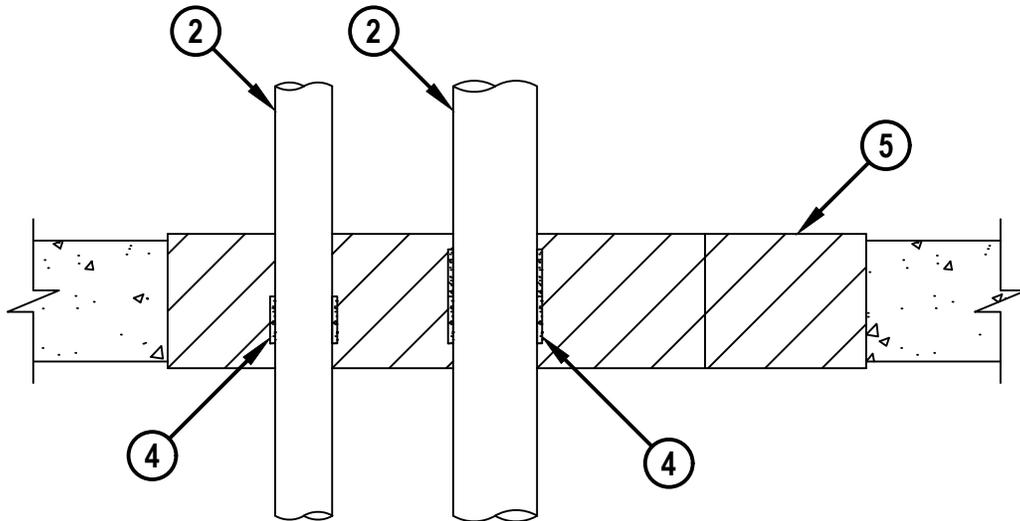
Saving Lives through Innovation and Education

MULTIPLE PENETRATING ITEMS THROUGH CONCRETE FLOOR/WALL OR BLOCK WALL

F-RATING = 2-HR.
T-RATING = 1-3/4-HR.

CAJ8357a.030926

SECTION B-B



1. CONCRETE FLOOR OR WALL ASSEMBLY (2-HR. FIRE-RATING) :
 - A. LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE FLOOR OR WALL (MINIMUM 4-1/2" THICK).
 - B. ANY UL/cUL CLASSIFIED CONCRETE BLOCK WALL.
2. ONE OR MORE OF THE FOLLOWING PENETRATING ITEMS, IN ANY COMBINATION, MAY BE INSTALLED WITHIN THE OPENING :
 - A. MAXIMUM 3" NOMINAL DIAMETER PEX TUBING (SDR 9) (CLOSED PIPING SYSTEM).
 - B. MAXIMUM 2" NOMINAL DIAMETER PVC PLASTIC PIPE (SCHEDULE 40) (CLOSED OR VENTED PIPING SYSTEM).
 - C. MAXIMUM 2" NOMINAL DIAMETER CPVC PLASTIC PIPE (SDR 13.5) (CLOSED PIPING SYSTEM).
3. [OPTIONAL] MAXIMUM 1-1/2" THICK GLASS-FIBER PIPE INSULATION PER TABLE BELOW.



HILTI, Inc.
Plano, Texas USA (800) 879-8000

Sheet	2 of 3
Scale	9/64" = 1"
Date	Mar. 09, 2026

Drawing No.
CAJ
8357a

MULTIPLE PENETRATING ITEMS THROUGH CONCRETE FLOOR/WALL OR BLOCK WALL

F-RATING = 2-HR.
T-RATING = 1-3/4-HR.

CAJ8357a.030926

4. HILTI CP 648E WRAP STRIP (NOMINAL 3/16" THICK x 1" WIDE) CONTINUOUSLY WRAPPED AROUND THE OUTER CIRCUMFERENCE OF THE PIPE, NUMBER OF LAYERS AND STACKS PER TABLE BELOW, WITH ENDS BUTTED AND HELD IN PLACE WITH (MASKING OR ALUMINUM) TAPE. WRAP STRIP TO BE RECESSED 1" FROM BOTTOM OF CFS-BL FIRESTOP BLOCKS WHEN IN FLOOR, OR RECESSED 1" FROM EITHER SIDE OF CFS-BL FIRESTOP BLOCKS WHEN IN A WALL ASSEMBLY.
5. HILTI CFS-BL FIRESTOP BLOCK (2" THICK x 8" WIDE x 5" DEEP, REFERENCE : TOP VIEW) FIRMLY PACKED AND CENTERED WITHIN OPENING (SEE NOTE NO. 5 BELOW).

MAX PIPE DIAM	PENETRANT TYPE	INSULATION	NUMBER OF WRAP STRIP LAYERS	NUMBER OF WRAP STRIP STACKS
3"	PEX	MAX 1-1/2" GFI	1	2
3"	PEX	NONE	1	2
2"	PEX	MAX 1-1/2" GFI	1	2
2"	PEX, PVC, CPVC	NONE	1	1
1"	PEX, PVC, CPVC	NONE	0	0

- NOTES :**
1. MAXIMUM AREA OF OPENING = 312 SQ. IN., WITH A MAXIMUM DIMENSION OF 26".
 2. ANNULAR SPACE BETWEEN PENETRATING ITEMS AND PERIPHERY OF OPENING = MINIMUM 1".
 3. ANNULAR SPACE BETWEEN PENETRATING ITEMS = MINIMUM 1-1/2".
 4. APPLY HILTI FS-ONE MAX INTUMESCENT FIRESTOP SEALANT OR HILTI CP 618 FIRESTOP PUTTY STICK IN ANY VOID THAT MAY EXIST AROUND PENETRANTS OR FIRESTOP BLOCKS. HILTI CP 618 IS NOT SUITABLE FOR USE WITH CPVC.
 5. FOR BLOCK WALLS, FIRESTOP BLOCKS TO FILL ENTIRE THICKNESS OF WALL UNLESS WALL IS SOLID FILLED.



Hilti Firestop Systems

HILTI, Inc.
Plano, Texas USA (800) 879-8000

Sheet 3 of 3

Scale -

Date Mar. 09, 2026

Drawing No.

**CAJ
8357a**