

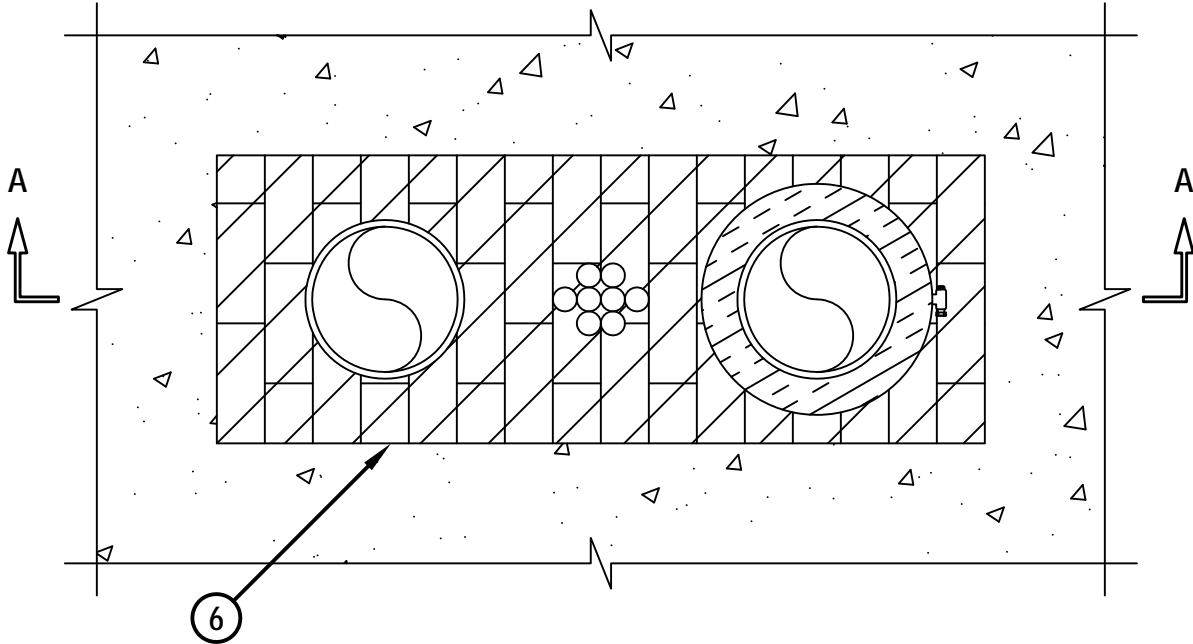
UL/cUL SYSTEM NO. C-BJ-8010

MULTIPLE PENETRATIONS THROUGH CONCRETE FLOOR/WALL ASSEMBLY

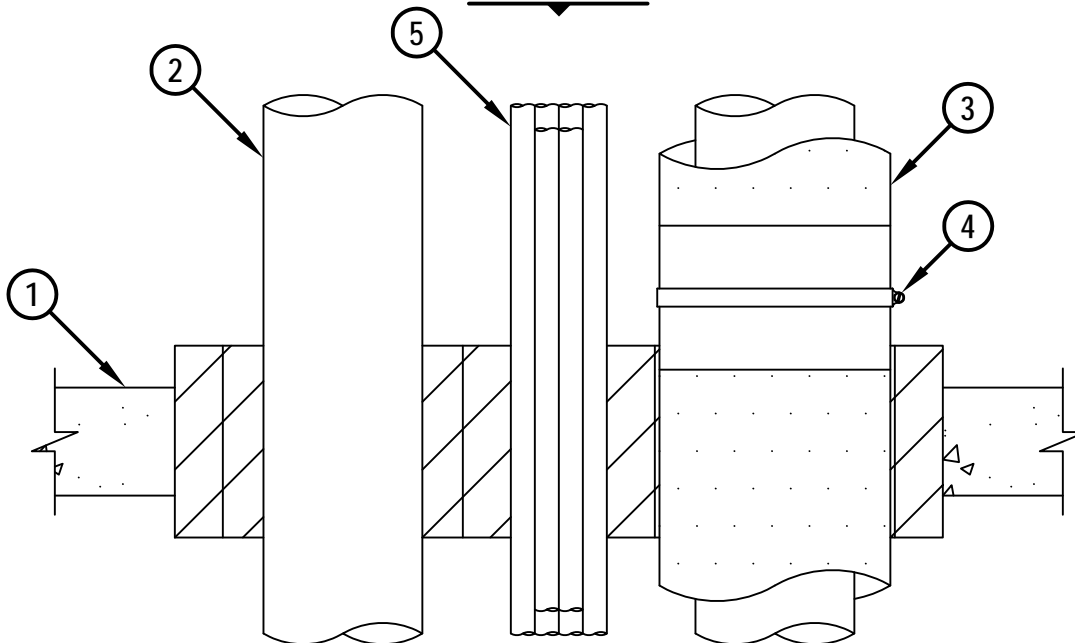
F-RATING = 3-HR.

T-RATING = 0-HR.

TOP VIEW



SECTION A-A



CBJ8010d.010615



HILTI, Inc.
Tulsa, Oklahoma USA (800) 879-8000

Sheet	1 of 2
Scale	1/8" = 1"
Date	Jan. 06, 2015

Drawing No.

**CBJ
8010d**

Saving Lives through Innovation and Education

MULTIPLE PENETRATIONS THROUGH CONCRETE FLOOR/WALL ASSEMBLY

F-RATING = 3-HR.

T-RATING = 0-HR.

CBJ8010d.010615

1. PRECAST AUTOCLAVED AERATED CONCRETE FLOOR, WALL, OR ROOF/CEILING ASSEMBLY (UL DESIGN NO. K908, P931, U916, OR U917) (3-HR. FIRE-RATING).
2. A MAXIMUM OF TWO PIPES TO BE INSTALLED WITHIN THE OPENING. PIPES TO BE ANY OF THE FOLLOWING :
 - A. MAXIMUM 6" NOMINAL DIAMETER STEEL PIPE (SCH. 10 OR HEAVIER).
 - B. MAXIMUM 6" NOMINAL DIAMETER CAST IRON PIPE.
 - C. MAXIMUM 6" NOMINAL DIAMETER COPPER PIPE.
 - D. MAXIMUM 6" NOMINAL DIAMETER STEEL CONDUIT.
 - E. MAXIMUM 4" NOMINAL DIAMETER EMT.
3. MAXIMUM 1-1/2" THICK GLASS-FIBER PIPE INSULATION.
4. WHEN PIPE DIAMETER IS GREATER THAN 4", INSTALL MINIMUM 6" LONG JACKET FORMED OF MINIMUM 0.010 IN. THICKNESS STEEL SHEET WITH ONE STAINLESS STEEL HOSE CLAMP (1/2" WIDE) AT CENTER OF JACKET. ENDS OF JACKET TO OVERLAP A MINIMUM OF 2" AND EXTEND 1" INTO OPENING ON TOP SIDE OF FLOOR, OR BOTH SIDES OF A WALL.
5. MAXIMUM 4" DIAMETER CABLE BUNDLE TO INCLUDE ANY OF THE FOLLOWING :
 - A. 300 PAIR NO. 24 AWG TELEPHONE CABLES.
 - B. 7/C NO. 12 AWG CABLES.
6. HILTI CFS-BL FIRESTOP BLOCK OR HILTI FS 657 FIRE BLOCK (2" THICK x 5" WIDE x 8" DEEP, REFERENCE : TOP VIEW) FIRMLY PACKED WITHIN OPENING. EITHER ONE OR A COMBINATION OF BLOCK TYPES MAY BE USED.

NOTES :

1. MAXIMUM AREA OF OPENING = 384 SQUARE INCHES, MAXIMUM DIMENSION TO BE 32".
2. ANNULAR SPACE BETWEEN PIPES = MINIMUM 1", MAXIMUM 4 1/2".
3. ANNULAR SPACE BETWEEN NON-INSULATED PIPES AND PERIPHERY OF OPENING = MINIMUM 0", MAXIMUM 3-15/16".
4. ANNULAR SPACE BETWEEN INSULATED PIPES AND PERIPHERY OF OPENING = MINIMUM 2", MAXIMUM 2-15/16".
5. ANNULAR SPACE BETWEEN INSULATED PIPES = MINIMUM 1", MAXIMUM 8".
6. INSTALL HILTI FS-ONE MAX OR FS-ONE PERFORMANCE INTUMESCENT FIRESTOP SEALANT IN ANY VOID THAT MAY EXIST (AROUND CABLES, OR PIPE PENETRANTS).
7. IF THE ANNULAR SPACE IS GREATER THAN 4-1/2", THEN ATTACH A STEEL WIRE MESH (NOMINAL 2" SQUARES, NO. 16 SWG) WITH 1/4" DIAMETER x 1" LONG STEEL CONCRETE ANCHORS AND 1-1/2" DIAMETER FENDER WASHERS (SPACED MAXIMUM 8" C/C) ON TOP SURFACE OF FLOOR ASSEMBLY, OR ON BOTH SIDES OF A WALL ASSEMBLY. STEEL WIRE MESH SHALL BEGIN MAXIMUM 2-1/2" FROM THE PENETRANT AND OVERLAP MINIMUM 3" BEYOND THE PERIPHERY OF THE OPENING.



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