

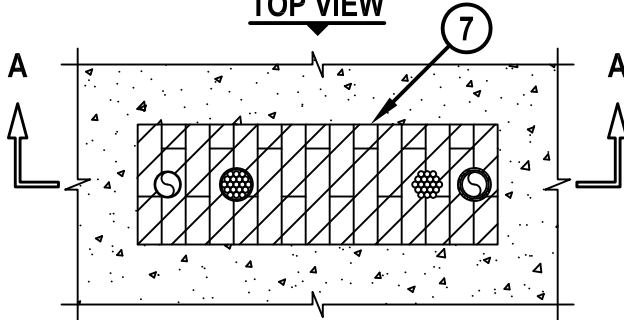
MULTIPLE PENETRATING ITEMS THROUGH CONCRETE FLOOR/WALL OR BLOCK WALL

F-RATING = 3-HR.

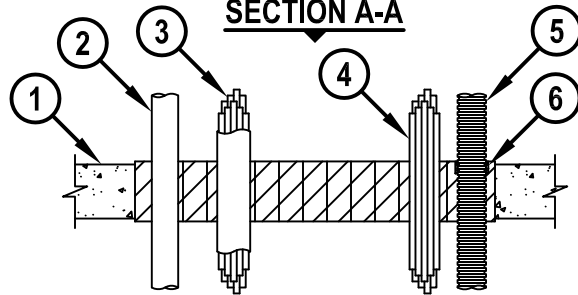
T-RATING = 3/4-HR., 1-HR., 1 3/4-HR., OR 3-HR.

NOTE : TESTED TO A 2.5 Pa PRESSURE DIFFERENTIAL

TOP VIEW



SECTION A-A



CAJ8107d.010615

1. CONCRETE FLOOR OR WALL ASSEMBLY (3-HR. FIRE-RATING) :
 - A. LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE FLOOR OR WALL (MINIMUM 4-1/2" THICK).
 - B. ANY UL/cUL CLASSIFIED SOLID OR FILLED CONCRETE BLOCK WALL.
2. MAXIMUM 2" NOMINAL DIAMETER EMT OR STEEL CONDUIT.
3. MAXIMUM 1800 PAIR NO. 24 AWG ARMM TELEPHONE CABLE WITH PVC JACKET.
4. MAXIMUM 3" DIAMETER CABLE BUNDLE CONSISTING OF ANY OF THE FOLLOWING :
 - A. MAXIMUM 300 PAIR NO. 24 AWG TELEPHONE CABLE WITH PVC JACKET.
 - B. MAXIMUM 7/C NO. 12 AWG POWER CABLE WITH PVC JACKET.
 - C. MAXIMUM (24 FIBER) 1/2" DIAMETER FIBER-OPTIC CABLE.
5. MAXIMUM 2" NOMINAL DIAMETER PVC OPTICAL FIBER RACEWAY.
6. [OPTIONAL] HILTI CP 648E WRAP STRIP (NOMINAL 3/16" THICK x 1" WIDE) CONTINUOUSLY WRAPPED AROUND THE OUTER CIRCUMFERENCE OF THE RACEWAY, COVERING ONE TIME, AND HELD IN PLACE WITH TAPE. WRAP STRIP INSTALLED FLUSH WITH TOP SURFACE OF FIRESTOP BLOCKS/FIRE BLOCKS.
7. HILTI CFS-BL FIRESTOP BLOCK OR HILTI FS 657 FIRE BLOCK (2" THICK x 8" WIDE x 5" DEEP, REFERENCE : TOP VIEW) FIRMLY PACKED AND CENTERED WITHIN OPENING. EITHER ONE OR A COMBINATION OF THE BLOCK TYPES MAY BE USED.

- NOTES :
1. MAXIMUM SIZE OF OPENING = 30" x 10".
 2. MINIMUM ANNULAR SPACE BETWEEN EMT, 1800 PAIR CABLE, FIBER OPTIC RACEWAYS, AND ADJACENT PENETRANTS = 3".
 3. MIN. ANNULAR SPACE BETWEEN CABLE BUNDLE AND ADJACENT PENETRANTS = 1-1/2".
 4. ANNULAR SPACE BETWEEN INDIVIDUAL PENETRANTS AND THE PERIPHERY OF THE OPENING = MINIMUM 1/2", MAXIMUM 11-1/4".
 5. APPLY HILTI FS-ONE MAX OR FS-ONE INTUMESCENT FIRESTOP SEALANT, CP 618 FIRESTOP PUTTY STICK, OR CP 620 FIRE FOAM IN ANY VOID THAT MAY EXIST (AROUND PENETRANTS OR BETWEEN FIRESTOP BLOCKS/FIRE BLOCKS).
 6. IF THE ANNULAR SPACE IS GREATER THAN 4", ATTACH A STEEL WIRE MESH (NOMINAL 2" SQUARES, NO. 16 SWG) ON TOP OF FLOOR OR BOTH SURFACES OF WALL, USING 1/4" DIAMETER x 1" LONG STEEL CONCRETE ANCHORS AND 1-1/2" DIAMETER FENDER WASHERS (SPACED MAX. 8" C/C). STEEL WIRE MESH CUT TO FIT THE CONTOUR OF THE PENETRATING ITEMS WITH A MINIMUM 3" OVERLAP BEYOND THE PERIPHERY OF THE OPENING.



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Sheet	1 of 1
Scale	1/16" = 1"
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Drawing No.

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