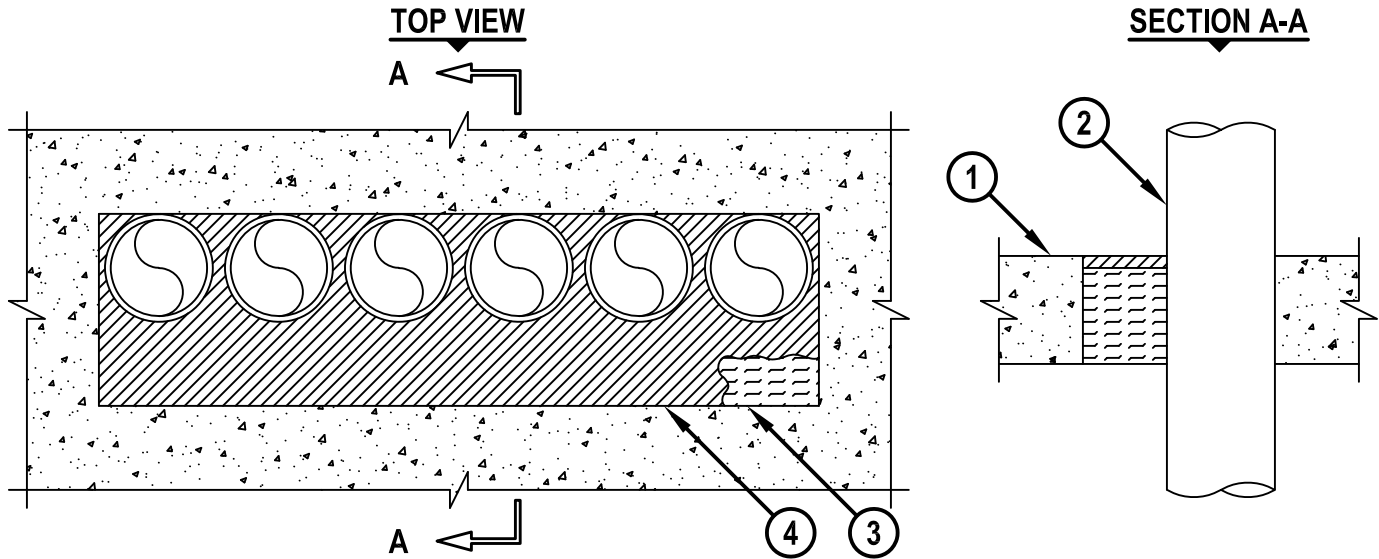


**MULTIPLE PENETRATING ITEMS THROUGH CONCRETE FLOOR/WALL OR BLOCK WALL**

F-RATING = 2-HR.  
T-RATING = 0-HR.

CAJ1513e.052918



1. CONCRETE FLOOR OR WALL ASSEMBLY (2-HR. FIRE-RATING) :
  - A. LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE FLOOR (MINIMUM 4-1/2" THICK).
  - B. LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE WALL (MINIMUM 5" THICK).
  - C. ANY UL/cUL CLASSIFIED CONCRETE BLOCK WALL.
2. ONE OR MORE OF THE FOLLOWING CONDUITS AND IN ANY COMBINATION, MAY BE INSTALLED WITHIN THE OPENING :
  - A. MAXIMUM 4" NOMINAL DIAMETER STEEL CONDUIT.
  - B. MAXIMUM 4" NOMINAL DIAMETER EMT.
  - C. MAXIMUM 2" NOMINAL DIAMETER FLEXIBLE STEEL GAS PIPING (WITH OR WITHOUT PLASTIC COVERING) MANUFACTURED BY OMEGA FLEX, INC. OR WARD MFG., INC.
  - D. MAXIMUM 1" NOMINAL DIAMETER FLEXIBLE STEEL GAS PIPING (WITH OR WITHOUT PLASTIC COVERING) MANUFACTURED BY GASTITE, DIVISION OF TITEFLEX.
3. MINIMUM 4" THICKNESS MINERAL WOOL (MIN. 4 PCF DENSITY) TIGHTLY PACKED AND RECESSED TO ACCOMMODATE FIRESTOP SEALANT.
4. MINIMUM 1/2" DEPTH HILTI FS-ONE MAX INTUMESCENT FIRESTOP SEALANT.

ANNULAR SPACE	MINIMUM	MAXIMUM
BETWEEN CONDUITS AND PERIPHERY OF OPENING	0"	12"
BETWEEN CONDUITS 2" AND SMALLER	0"	12"
BETWEEN CONDUITS GREATER THAN 2"	1/2"	12"

**NOTES :** 1. MAXIMUM SIZE OF OPENING = 30" x 8".  
2. MINIMUM 1/2" DEPTH HILTI FS-ONE MAX INTUMESCENT FIRESTOP SEALANT IS REQUIRED ON EACH SIDE OF A WALL ASSEMBLY.



HILTI, Inc.  
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Sheet	1 of 1
Scale	1/8" = 1"
Date	May 29, 2018

Drawing No.  
**CAJ  
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