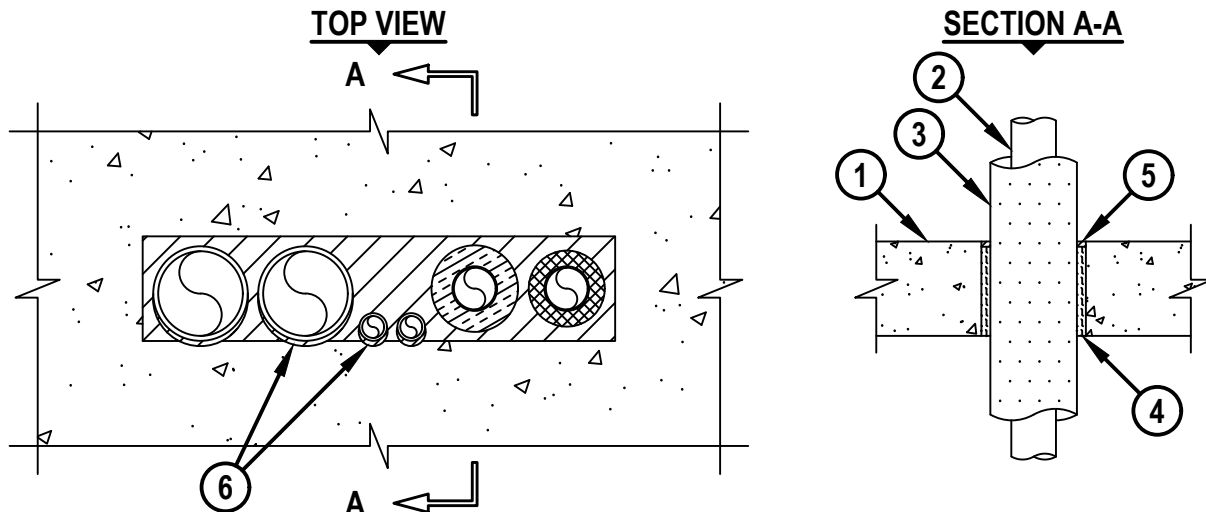


MULTIPLE PIPES THROUGH CONCRETE FLOOR/WALL OR BLOCK WALL ASSEMBLY

F-RATING = 3-HR.

T-RATING = 0-HR. OR 1/4-HR.

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1. CONCRETE FLOOR OR WALL ASSEMBLY (3-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 PIPES, AND IN ANY COMBINATION MAY BE INSTALLED WITHIN THE OPENING :
 - A. MAXIMUM 4" NOMINAL DIAMETER STEEL PIPE (SCHEDULE 10 OR HEAVIER).
 - B. MAXIMUM 4" NOMINAL DIAMETER CAST OR DUCTILE IRON PIPE.
 - C. MAXIMUM 2" NOMINAL DIAMETER COPPER PIPE OR TUBING.
 - D. MAXIMUM 4" NOMINAL DIAMETER STEEL CONDUIT OR STEEL EMT.
3. [OPTIONAL] NOMINAL 3/4" THICK AB/PVC PIPE INSULATION OR 1" THICK GLASS-FIBER PIPE INSULATION MAY BE INSTALLED ON PIPES 2" AND SMALLER.
4. MINIMUM 4-1/4" DEPTH THICKNESS MINERAL WOOL (MIN. 4 PCF DENSITY) TIGHTLY PACKED AND RECESSED TO ACCOMMODATE SEALANT.
5. MINIMUM 1/4" DEPTH HILTI CFS-S SIL GG FIRESTOP SILICONE SEALANT OR HILTI CFS-S SIL SL FIRESTOP SILICONE SEALANT (FLOORS ONLY).
6. MINIMUM 1/4" BEAD HILTI CFS-S SIL GG FIRESTOP SILICONE SEALANT APPLIED AT POINT OF CONTACT.

ANNULAR SPACE	MINIMUM	MAXIMUM
BETWEEN BARE PIPES AND PERIPHERY OF OPENING	0"	3-3/8"
BETWEEN INSULATED PIPES AND PERIPHERY OF OPENING	1/2"	1"
BETWEEN PENETRANTS	1/2"	5/8"

NOTES : 1. MAXIMUM AREA OF OPENING = 112 SQ. IN., WITH A MAXIMUM DIMENSION OF 22-1/2".
 2. MINIMUM 1/4" DEPTH HILTI CFS-S SIL GG FIRESTOP SILICONE SEALANT IS REQUIRED ON BOTH SIDES OF A WALL ASSEMBLY.

HILTI
 Hilti Firestop Systems

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Sheet 1 of 1
 Scale 7/64" = 1"
 Date Apr. 03, 2024

Drawing No.

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