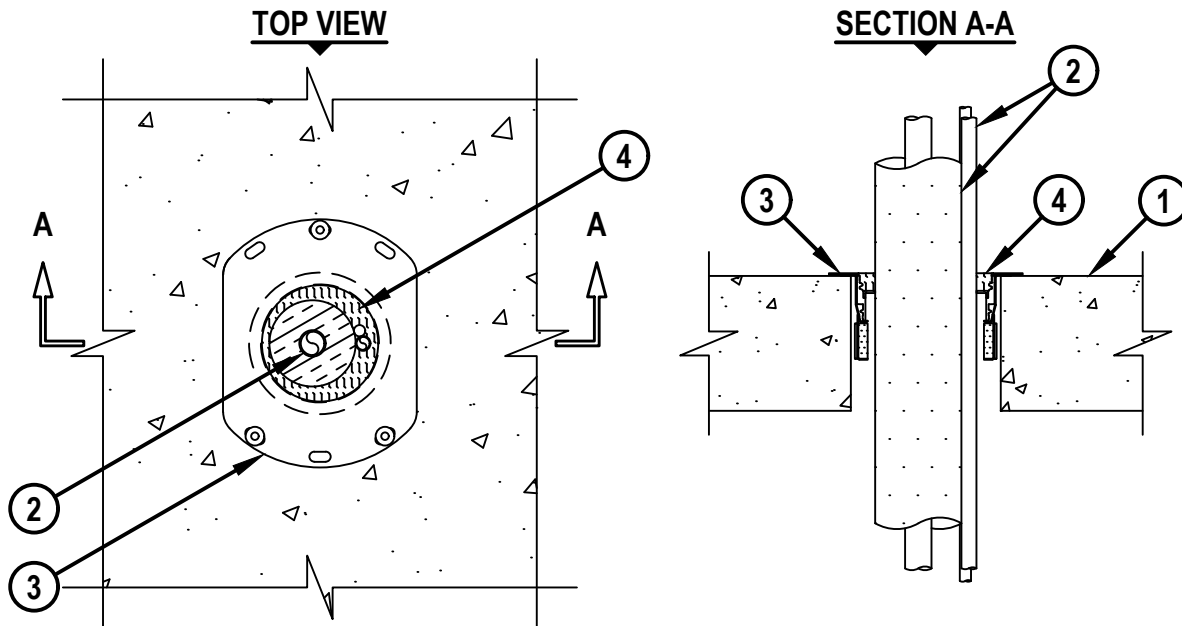


MULTIPLE PENETRANTS THROUGH CONCRETE FLOOR ASSEMBLY

F-RATING = 2-HR.
T-RATING = 1-HR.



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1. CONCRETE FLOOR ASSEMBLY (2-HR. FIRE-RATING) :
 - A. LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE FLOOR (MINIMUM 4-1/2" TO 12" THICK).
 - B. STEEL FLOOR UNIT/FLOOR ASSEMBLY - NORMAL WEIGHT CONCRETE FLOOR (MINIMUM 4-1/2" TO 12" THICK) OVER METAL DECKING.
2. SINGLE HVAC LINE SET INSTALLED WITHIN THE FIRESTOP DEVICE AND CONSISTING OF THE FOLLOWING :
 - A. MAXIMUM 1" NOMINAL DIAMETER COPPER PIPE OR TUBING (MAX. QTY. = 2).
 - B. NOMINAL 1" THICK AB/PVC INSULATION INSTALLED ON COPPER PIPE OR TUBING GREATER THAN 3/8" NOMINAL DIAMETER.
 - C. MAXIMUM 4 PAIR NO. 18 AWG THERMOSTAT CABLE WITH PVC JACKET.
3. HILTI CFS-DID FIRESTOP DROP-IN DEVICE INSERTED INTO OPENING (SEE TABLE BELOW) AND SECURED TO TOP OF FLOOR WITH THREE HILTI 1/4" (6mm) DIAMETER BY 1-1/4" (32mm) LONG KWIK-CON II+ CONCRETE SCREW ANCHORS, HILTI 1/4" (6mm) DIAMETER BY 1-3/4" (45mm) LONG KWIK BOLT 3 STEEL EXPANSION ANCHORS, OR HILTI 1/4" (6mm) BY 3/4" (19mm) LONG METAL HIT ANCHORS (INSTALLED IN A TRIANGULAR FASHION THROUGH HOLES PROVIDED). IN ADDITION, FOR NOMINAL 2", 3", AND 4" DEVICES, FOUR 11/16" (18mm) LONG HILTI X-GH P18 MX STEEL FASTENERS MAY BE INSTALLED THROUGH THE STEEL FLANGE, TWO ON EACH SIDE.
4. MINIMUM 1/2" THICKNESS MINERAL WOOL (MIN. 4 PCF DENSITY) TIGHTLY PACKED, FLUSH WITH TOP OF FIRESTOP DEVICE.

FIRESTOP DEVICE	CORE HOLE DIAM	FLOOR THICKNESS (MIN. - MAX.)
CFS-DID 3" MD	5"	4-1/2" to 8"
CFS-DID 3" C	5"	6" to 12"



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Sheet 1 of 1
Scale 5/32" = 1"
Date Mar. 15, 2018

Drawing No.

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