

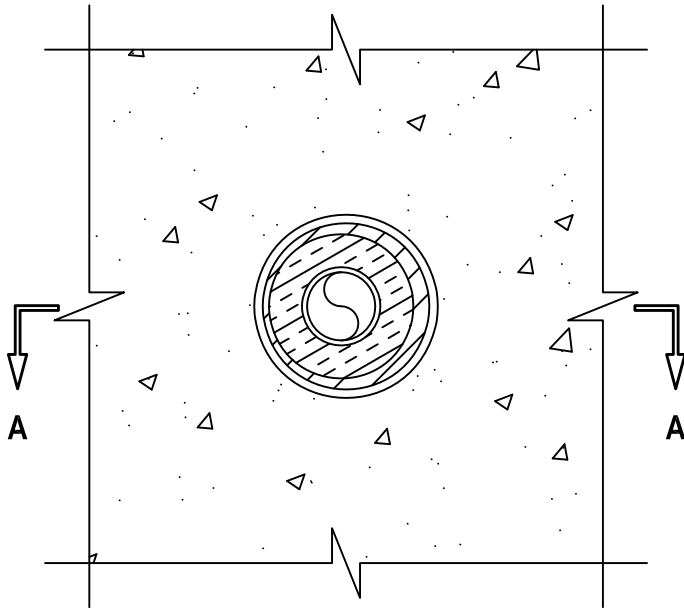
**INSULATED PIPE THROUGH SLEEVE IN CONCRETE FLOOR ASSEMBLY**

F-RATING = 3-HR.

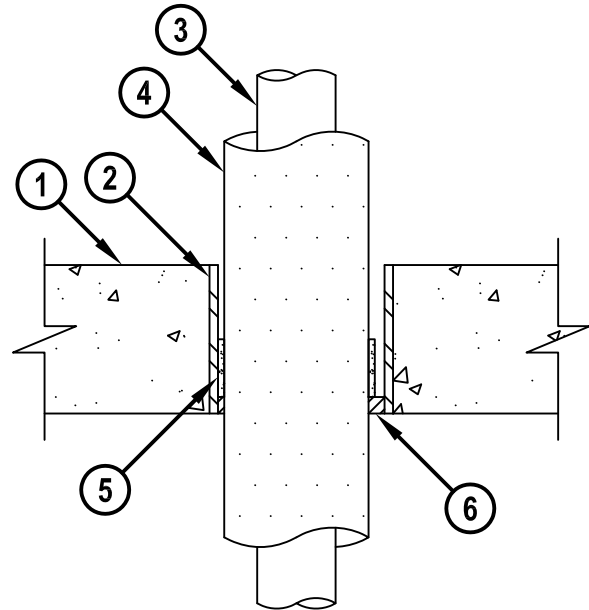
T-RATING = 0-HR. OR 3/4-HR.

CAJ5289b.011515

**BOTTOM VIEW**



**SECTION A-A**



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 CONCRETE BLOCK WALL.
2. (OPTIONAL). MAXIMUM 5" NOMINAL DIAMETER STEEL PIPE SLEEVE (SCHEDULE 10 OR HEAVIER).
3. PENETRATING ITEM TO BE ONE OF THE FOLLOWING :
  - A. MAXIMUM 2" NOMINAL DIAMETER STEEL PIPE (SCHEDULE 10 OR HEAVIER).
  - B. MAXIMUM 2" NOMINAL DIAMETER CAST OR DUCTILE IRON PIPE.
  - C. MAXIMUM 2" NOMINAL DIAMETER COPPER PIPE OR TUBING.
4. NOMINAL 1/2" TO 1" THICK AB/PVC PIPE INSULATION.
5. HILTI CP 648E FIRESTOP WRAP STRIP (NOMINAL 3/16" THICK x 1-3/4" WIDE) CONTINUOUSLY WRAPPED AROUND THE OUTER CIRCUMFERENCE OF THE INSULATION, COVERING ONE TIME, WITH ENDS BUTTED AND HELD IN PLACE WITH ALUMINUM FOIL TAPE. WRAP STRIP RECESSED FROM BOTTOM SURFACE OF FLOOR TO ACCOMMODATE FIRESTOP SEALANT.
6. MINIMUM 1/2" DEPTH HILTI FS-ONE MAX OR FS-ONE INTUMESCENT FIRESTOP SEALANT.

**NOTES :** 1. MAXIMUM DIAMETER OF OPENING = 5".  
 2. ANNULAR SPACE = MINIMUM 3/16", MAXIMUM 3/4".  
 3. HILTI CP 648E FIRESTOP WRAP STRIP AND FS-ONE MAX OR FS-ONE INTUMESCENT FIRESTOP SEALANT ARE REQUIRED ON EACH SIDE OF A WALL ASSEMBLY.



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

Sheet	1 of 1
Scale	11/64" = 1"
Date	Jan. 15, 2015

Drawing No.  
**CAJ  
 5289b**