UL SYSTEM NO. HW-D-0946
TOP OF WALL JOINT : GYPSUM WALL ASSEMBLY

ASSEMBLY RATING = 1-HR. OR 2-HR.
L-RATING AT AMBIENT = LESS THAN 2.63 CFM / LIN FT (SEE NOTE NO. 4 BELOW)
L-RATING AT 400°F = LESS THAN 2.33 CFM / LIN FT (SEE NOTE NO. 4 BELOW)
CLASS II MOVEMENT CAPABILITIES - 25% COMPRESSION OR EXTENSION OR
25% COMPRESSION ONLY

FRONT VIEW

SECTION A-A

SECTION B-B

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TOP OF WALL JOINT : GYPSUM WALL ASSEMBLY
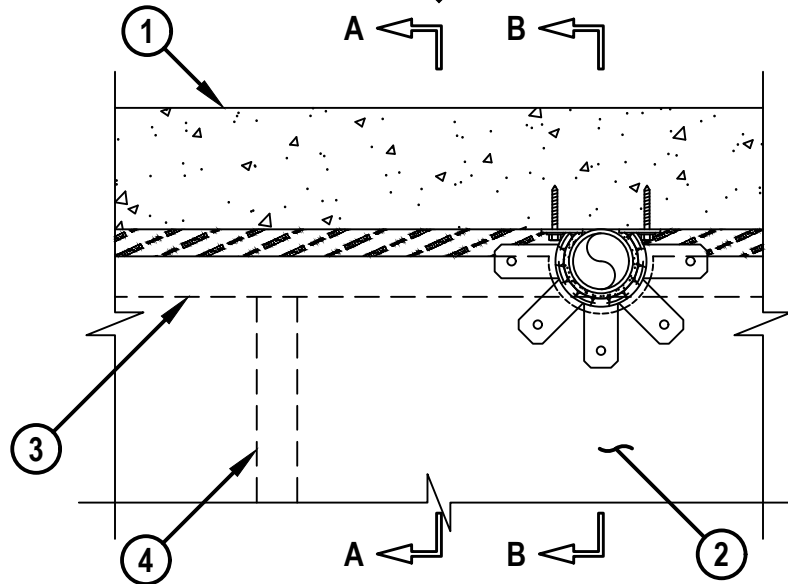
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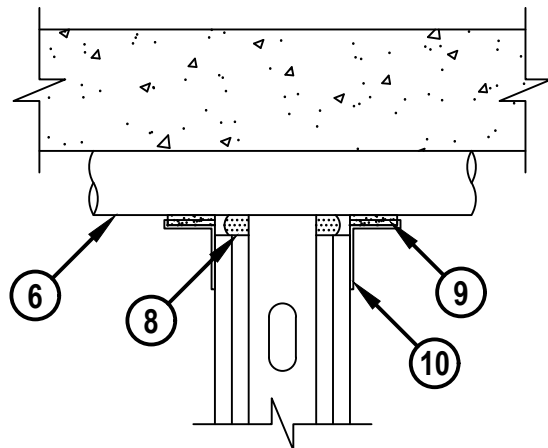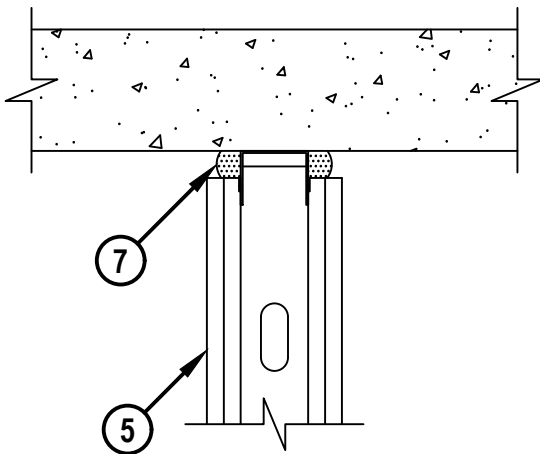25% COMPRESSION ONLY

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1. CONCRETE FLOOR ASSEMBLY :
   A. LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE FLOOR (MINIMUM 4-1/2" THICK).
   B. ANY UL/cUL CLASSIFIED PRECAST (HOLLOW-CORE) CONCRETE FLOOR (MINIMUM 6" THICK).
2. GYPSUM WALL ASSEMBLY (UL/cUL CLASSIFIED U400, V400 OR W400 SERIES) (1-HR. OR 2-HR. FIRE-RATING) (2-HR. SHOWN). THE HOURLY RATING OF THE JOINT SYSTEM IS DEPENDENT UPON THE HOURLY RATING OF THE WALL ASSEMBLY.
3. CEILING RUNNER (MIN. 25 GA., FLANGE HEIGHT OF CEILING RUNNER SHALL BE MINIMUM 1-1/4" GREATER THAN MAXIMUM EXTENDED JOINT WIDTH) FASTENED TO UNDERSIDE OF FLOOR WITH MASONRY ANCHORS OR STEEL FASTENERS (SPACED MAXIMUM 24" OC) (SEE NOTE NO. 3 BELOW).
4. STEEL STUDS (MIN. 3-1/2" WIDE) CUT 3/4" TO 1" LESS IN LENGTH THAN ASSEMBLY HEIGHT WITH TOP NESTED IN CEILING RUNNER WITHOUT ATTACHMENT.
5. 5/8" OR 1-1/4" THICKNESS GYPSUM WALLBOARD AS SPECIFIED IN THE INDIVIDUAL UL DESIGN. TOP ROW OF SCREWS SHALL BE INSTALLED INTO STUD 2-1/2" TO 4-1/2" BELOW THE BOTTOM EDGE OF THE CEILING RUNNER.
6. [OPTIONAL] ONE OF THE FOLLOWING PENETRATING ITEMS MAY BE INSTALLED PERPENDICULAR TO WALL AGAINST BOTTOM OF CONCRETE FLOOR (SEE NOTE NO. 2 BELOW) :
   A. MAXIMUM 2" NOMINAL DIAMETER PVC PLASTIC PIPE (SCHEDULE 40) (CLOSED OR VENTED PIPING SYSTEM).
   B. MAXIMUM 2" NOMINAL DIAMETER CPVC PLASTIC PIPE (SCHEDULE 40) (CLOSED OR VENTED PIPING SYSTEM).
   C. MAXIMUM 2" NOMINAL DIAMETER CPVC PLASTIC PIPE (SDR 13.5) (CLOSED PIPING SYSTEM ONLY).
   D. MAXIMUM 2" NOMINAL DIAMETER RIGID NONMETALLIC CONDUIT (SCHEDULE 40 PVC) INSTALLED IN ACCORDANCE WITH NATIONAL ELECTRIC COD (NFPA NO. 70).
7. HILTI CFS-TTS MD OS OR CFS-TTS MD 600 FIRESTOP TOP TRACK SEAL INSTALLED OVER CEILING RUNNER PRIOR TO ATTACHMENT TO UNDERSIDE OF CONCRETE FLOOR UNIT IN ACCORDANCE WITH THE ACCOMPANYING INSTALLATION INSTRUCTIONS. TOP TRACK SEAL TO BE COMPRESSED MIN 1/2" AT PRODUCT SEAMS. SEAMS AT PENETRATION OPENING TO BE BUTTED AGAINST PENETRATING ITEM (ITEM 6).
8. [REQUIRED WHEN ITEM 6 IS USED] HILTI CFS-TTS MD OS OR CFS-TTS MD 600 FIRESTOP TOP TRACK SEAL INSTALLED WITHIN ANNULAR SPACE AROUND PENETRATING ITEM IN A SINGLE PIECE, WITH ENDS BUTTING TIGHTLY TO BOTTOM OF CONCRETE FLOOR. THE FLAP OF TOP TRACK SEAL IS TO OVERLAP THE GYPSUM BOARD AND BE HELD IN PLACE WITH TWO STAPLES OR SCREWS EQUALLY SPACED.

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		Scale	**-**	**HWD 0946b**
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9. TWO LAYERS OF HILTI CP 648E WRAP STRIP (NOMINAL 3/16" THICK x 1-3/4" WIDE) INSTALLED IN A U-SHAPED FASHION WITH ENDS BUTTING UP AGAINST BOTTOM OF THE FLOOR.

10. HILTI 1-3/4" RETAINING COLLAR INSTALLED OVER WRAP STRIP. TWO ANCHOR TABS (ONE ON EACH SIDE OF PENETRATING ITEM) BENT TOWARD UNDERSIDE OF CONCRETE FLOOR AND SECURED TO FLOOR WITH MIN 3/4" LONG CONCRETE SCREW ANCHORS WITH MIN. 3/4" STEEL WASHERS. REMAINING TABS TO OVERLAP ONTO GYPSUM WALL WITHOUT ATTACHMENT.

NOTES : 1. ALLOWABLE JOINT WIDTHS TO BE DETERMINED AS FOLLOWS :
    A. TO ACCOMMODATE MAX 25% COMPRESSION OR EXTENSION, MAX WIDTH OF JOINT = 1".
    B. TO ACCOMMODATE MAX 25% COMPRESSION ONLY, MAX WIDTH OF JOINT = 1-1/4".
  2. WHEN PENETRATING ITEM (ITEM 6) IS PRESENT, THE CEILING RUNNER IS TO BE TERMINATED 1/4" FROM EACH SIDE OF PENETRATING ITEM AND SHALL BE SECURED CONCRETE FLOOR AT THE END. IN ADDITION, THE GYPSUM BOARD IS TO CONTOUR AROUND THE PENETRATING ITEM SO THAT THE ANNULAR SPACE IS 3/4".
  3. AS AN ALTERNATE TO CEILING RUNNER IN ITEM 3, SLOTTED CEILING RUNNERS MAY BE USED. CONSULT THE UL FIRE RESISTANCE DIRECTORY FOR APPROVED MANUFACTURERS.
  4. L-RATINGS ARE NOT APPLICABLE WHEN SPRAY-APPLIED FIRE RESISTIVE MATERIAL IS USED.

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