

UL/cUL SYSTEM NO. HW-D-0042

# TOP OF WALL JOINT : GYPSUM WALL ASSEMBLY

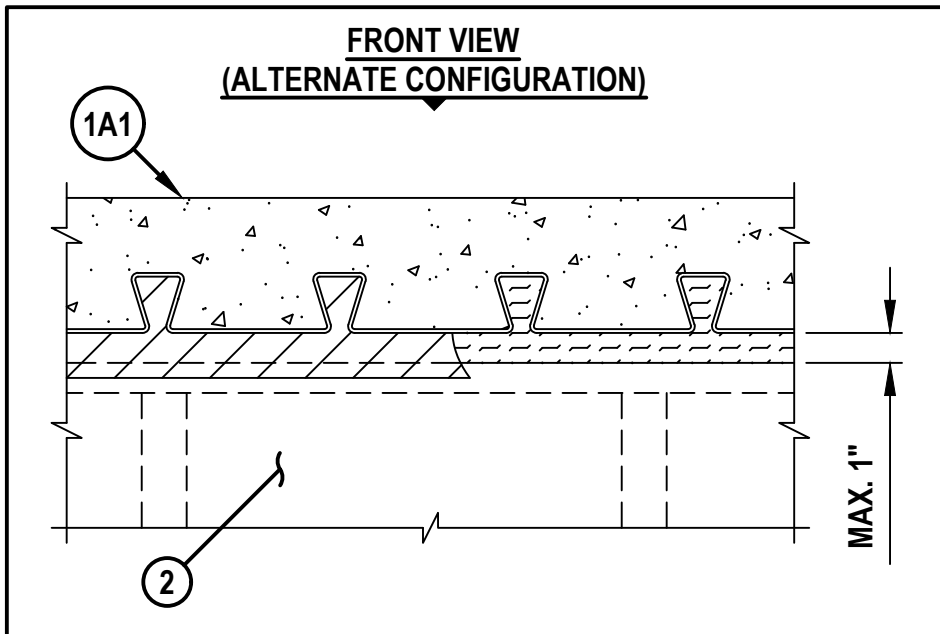
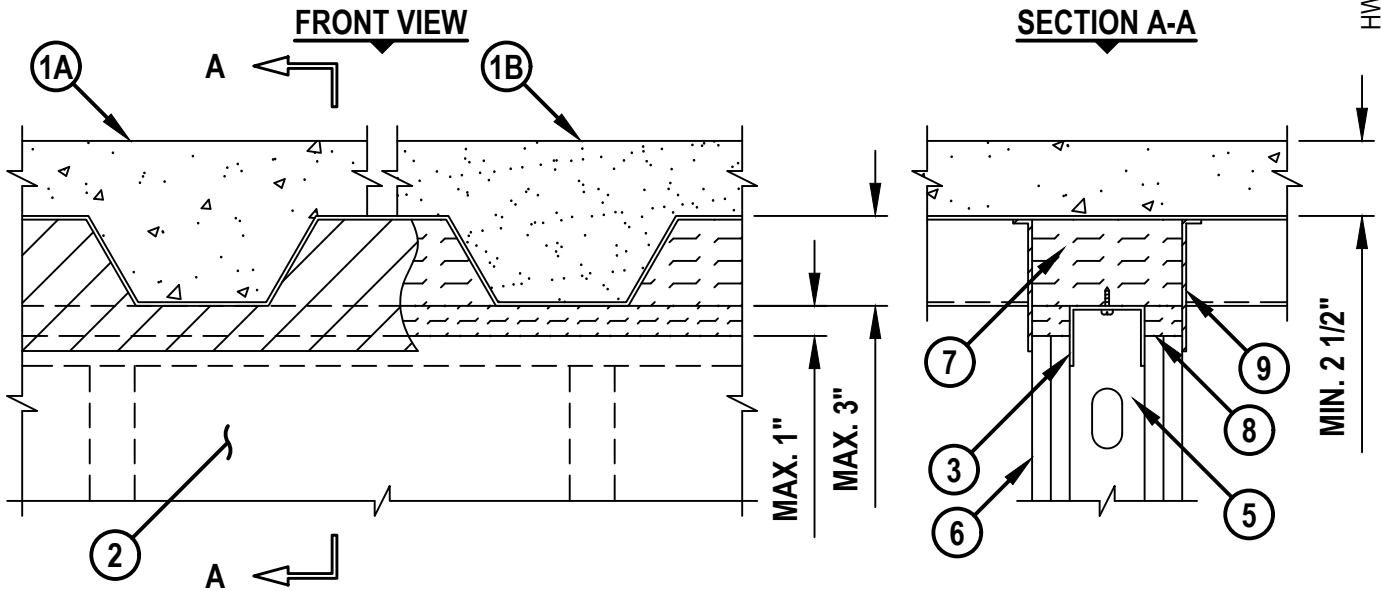
ASSEMBLY RATING = 1-HR. OR 2-HR.

CLASS II MOVEMENT CAPABILITIES - 50% COMPRESSION OR EXTENSION

L-RATING AT AMBIENT = LESS THAN 1 CFM / LIN FT

L-RATING AT 400°F = LESS THAN 1 CFM / LIN FT

HW00042x.082624



HILTI, Inc.  
Plano, Texas USA (800) 879-8000

Sheet	1 of 3
Scale	5/32" = 1"
Date	Aug. 26, 2024

Drawing No.  
**HWD  
0042x**

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1. FLOOR OR ROOF ASSEMBLY (1-HR. OR 2-HR. FIRE-RATING) :
  - A. LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE FLOOR (MIN. 2-1/2" THICK) OVER METAL DECKING (UL/cUL CLASSIFIED D700 OR D900 SERIES).
    - A1. REINFORCED CONCRETE (MIN. 2-1/2" THICK) OVER COMPOSITE METAL DECK (MAX. 2-1/2" DEEP FLUTES) (BY EPIC METALS).
    - A2. REINFORCED CONCRETE (MIN. 2-1/2" THICK) OVER COMPOSITE METAL DECK (MAX. 2" DEEP FLUTES VERSA-DEK®) (BY NEW MILLENNIUM BUILDING SYSTEMS).
    - A3. STEEL FLOOR AND FORM UNITS (CONFIGURATION B) – COMPOSITE MAX 2 IN. (51 MM) DEEP GALV STEEL FLUTED UNITS. (VERCO DECKING INC – A NUCOR CO – TYPE 2.0D FORMLOK).
    - A4. STEEL FLOOR AND FORM UNITS (CONFIGURATION B) – COMPOSITE MAX 2 IN. (51 MM) DEEP GALV STEEL FLUTED UNITS. (VULCRAFT, DIV OF NUCOR CORP – TYPE 2.0D FORMLOK).
  - B. INSULATING CONCRETE (MIN. 2-1/2" THICK) OVER METAL DECKING (UL/cUL CLASSIFIED P900 SERIES).
  - C. [NOT SHOWN] FLUTED STEEL ROOF DECK (UL/cUL CLASSIFIED P700 OR P900 SERIES).
2. GYPSUM WALL ASSEMBLY (UL/cUL CLASSIFIED U400 OR V400 SERIES) (1-HR. OR 2-HR. FIRE-RATING).
3. CEILING RUNNER (MIN. 25 GA., FLANGE HEIGHT OF CEILING RUNNER SHALL BE MINIMUM 1/4" GREATER THAN MAXIMUM EXTENDED JOINT WIDTH) FASTENED TO UNDERSIDE OF DECK WITH STEEL MASONRY ANCHORS, STEEL FASTENERS, OR WELDS (SPACED MAX. 24" O.C.) (SEE NOTE NO. 4 BELOW).
4. [OPTIONAL - NOT SHOWN] WHEN SPRAY-APPLIED FIREPROOFING IS USED, CEILING RUNNER MAY BE SECURED TO DECK WITH Z-SHAPED CLIPS (MIN. 20 GA.) WITH THE FOLLOWING DIMENSIONS : MINIMUM 1" LONG, BUT NOT EXCEEDING THE WIDTH OF THE WALL, BY 1-1/2" OR 2" LONG UPPER AND LOWER LEGS. SUPPORT CLIPS SPACED MAXIMUM 24" OC.
5. STEEL STUDS (MIN. 2-1/2" WIDE), CUT 1/2" TO 3/4" LESS IN LENGTH THAN ASSEMBLY HEIGHT, NESTING IN CEILING RUNNER WITHOUT ATTACHMENT.
6. 5/8" OR 1-1/4" THICKNESS GYPSUM WALLBOARD AS SPECIFIED IN THE INDIVIDUAL UL DESIGN. TOP ROW OF SCREWS SHALL BE INSTALLED INTO STUDS 1-1/2" TO 2" BELOW THE BOTTOM OF THE CEILING RUNNER.
7. HILTI CP 777 SPEED PLUGS FRICTION FITTED TO COMPLETELY FILL FLUTE FLUSH WITH BOTH SIDES OF WALL (SEE NOTES NO. 5 AND 6 BELOW).
8. HILTI CP 767 SPEED STRIPS OR MINERAL WOOL SAFING (MIN. 4 PCF DENSITY) COMPRESSED 50% AND INSERTED INTO JOINT, FLUSH WITH BOTH SIDES OF WALL.
9. MINIMUM 1/8" (WET) THICKNESS HILTI CFS-SP WB FIRESTOP JOINT SPRAY TO COMPLETELY COVER MINERAL WOOL AND TO OVERLAP A MINIMUM 1/2" ONTO GYPSUM WALL AND METAL DECK, ON BOTH SIDES OF GYPSUM WALL ASSEMBLY.



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**NOTES :** 1. MAXIMUM WIDTH OF JOINT = 1".

2. STEEL FLOOR UNITS MAY BE SPRAYED WITH A MINIMUM 5/16" TO MAXIMUM 1-3/4" THICKNESS OF UL CLASSIFIED MONOKOTE TYPE MK-6/HY (MANUFACTURED BY W.R. GRACE) OR CAFCO TYPE 300 (MANUFACTURED BY ISOLATEK, INT.) FIREPROOFING, PRIOR TO OR AFTER INSTALLATION OF CEILING RUNNERS.

3. WHEN THE STEEL DECK IS COATED WITH FIREPROOFING, HILTI FIRESTOP JOINT SPRAY SHALL OVERLAP THE WALL A MINIMUM 1/2" AND OVERLAP THE FIREPROOFING A MINIMUM 2" ON BOTH SIDES OF GYPSUM WALL ASSEMBLY.

4. AS AN ALTERNATE TO CEILING RUNNER IN ITEM NO. 3, SLOTTED CEILING RUNNERS MAY BE USED. CONSULT THE UL FIRE RESISTANCE DIRECTORY FOR APPROVED MANUFACTURERS.

5. AS AN ALTERNATE TO HILTI CP 777 SPEED PLUGS, MINERAL WOOL SAFING (MIN. 4 PCF DENSITY) COMPRESSED 25% MAY BE USED. ALTERNATELY, MINERAL WOOL SAFING (MIN. 4 PCF DENSITY) CUT TO THE SHAPE OF FLUTE AND NOMINAL 1" LONGER THAN THICKNESS OF WALL, COMPRESSED FROM ENDS (APP. 14%) AND PACKED FLUSH WITH WALL SURFACE.

6. WHEN EPIC METALS DECK IS USED, MINERAL WOOL IS TO BE TIGHTLY PACKED INTO THE INVERTED FLUTES, FLUSH WITH BOTH SIDES OF WALL. ADDITIONALLY, WHEN EPIC METALS "TORIS C" DECK IS USED MINERAL WOOL IS TO BE COMPRESSED 25% TO FILL RECESSED INDENTATION ABOVE CEILING RUNNER.



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