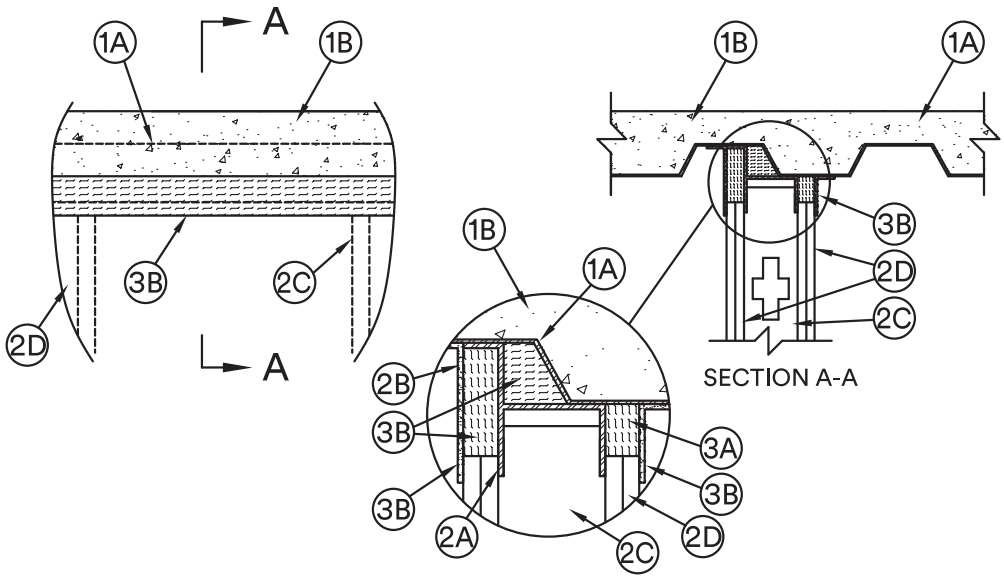
UL System No. HW-D-0478

December 13, 2016

ANSI/UL2079
Assembly Rating – 2 Hr
Nominal Joint Width – 2 in.
Class II Movement Capabilities – 25% Compression or Extension

CAN/ULC S115
F Rating – 2 Hr
FT Rating – 2 Hr
FH Rating – 2 Hr
FTH Rating – 2 Hr
Nominal Joint Width – 51 mm
Class II Movement Capabilities – 25% Compression or Extension



1. **Floor Assembly** – The fire rated fluted steel deck/concrete floor assembly shall be constructed of the materials and in the manner described in the individual Floor-Ceiling Design in the UL Fire Resistance Directory and shall include the following construction features:

   A. Steel Floor And Form Units* – Max 3 in. (76 mm) deep fluted galv steel deck.

   B. Concrete – Min 2-1/2 in. (64 mm) thick reinforced concrete, as measured from the top plane of the floor units.

2. **Wall Assembly** – The 2 hr fire rated gypsum board/steel stud wall assembly shall be constructed of the materials and in the manner described in the individual U400 or V400 Series Wall and Partition Design in the UL Fire Resistance Directory and shall include the following construction features:

   A. Steel Floor And Ceiling Runners – Floor and ceiling runners of wall assembly shall consist of min 25 ga galv steel channels sized to accommodate steel studs (Item 2B). Ceiling runner to be provided with min 3 in. (76 mm) flanges. Ceiling runner installed parallel with direction of fluted steel deck with one side in contact with deck valley and with opposite side cantilevered minimum 1-1/2 in. (38 mm) beyond deck valley. Ceiling runner secured to valley of deck with steel anchors or welds spaced max 24 in. (610 mm) OC. Ceiling runner additionally secured to crest of deck in conjunction with steel attachment clips (Item 2B).

   B. Steel Attachment Clips – Z-shaped clips formed from min 1 in. (25 mm) wide strips of min 16 ga galv steel. Height of clip to be equal to depth of steel deck. Legs of clip to be sized to lap min 1 in. (25 mm) on crest of steel deck and min 1 in. (25 mm) on top of steel ceiling runner. Web of clip to be parallel and flush with side edge of ceiling runner. Legs of clips fastened to crest of the steel deck and to the top of the ceiling runner (or deflection channel) prior to application of spray-applied fire resistive materials using steel fasteners or welds. Clips spaced max 6 in. (152 mm) OC.

   C. Studs – Steel studs to be min 3-1/2 in. (89 mm) wide. Studs cut 1/2 to 3/4 in. (13 to 19 mm) less in length than assembly height with bottom nesting in and resting on floor runner and with top nesting in ceiling runner without attachment. Stud spacing not to exceed 24 in. (610 mm) OC.

   D. Gypsum Board* – Gypsum board sheets installed to a min total thickness of 1-1/4 in. (32 mm) on each side of wall. Wall to be constructed as specified in the individual Wall and Partition Design in the UL Fire Resistance Directory, except that a max 2 in. (51 mm) gap shall be maintained between the top of the gypsum board and the bottom plane of the steel deck floor and the top row of screws shall be installed into the studs 1 in. (25 mm) below the bottom of the ceiling runner.

3. **Joint System** – Max separation between bottom plane of steel deck floor and top of gypsum board is 2 in. (51 mm). The joint system is designed to accommodate a max 25 percent compression or extension from its installed width. The joint system consists of the following:

   A. Forming Material* – The flute area of the steel deck above the cantilevered ceiling runner is to be tightly packed with min 4 pcf (64 kg/m^3) mineral wool batt insulation inserted cut-edge first and compressed min 33 percent in thickness. Nom 1-1/4 in. (32 mm) thick strips of min 4 pcf (64kg/m^3) mineral wool batt insulation to be cut to a width which is 1 in. (25 mm) greater than the vertical distance between the top of the gypsum board and the steel deck on each side of the wall. Mineral wool strips to be compressed in width and installed to fill the gap between the top of the gypsum board and the bottom of the steel floor deck flush with the wall surface on each side of the wall.

   INDUSTRIAL INSULATION GROUP LLC – MinWool-1200 Safing

   JOHNS MANVILLE – Safing

UL System No. HW-D-0478 (cont.)

ROCK WOOL MANUFACTURING CO – Delta Board or Delta -8

ROCKWOOL MALAYSIA SDN BHD – Type Safe

ROXUL INC – Type Safe

THERMAFIBER INC – Type SAF

B. Fill, Void or Cavity Material* – Sealant – Min 1/8 in. (3.2 mm) wet thickness or 1/16 in. (1.6 mm) dry thickness of fill material spray applied over the forming material on each side of the wall. Fill material to overlap min 2 in. (51 mm) onto steel deck and min 1 in. (25 mm) onto the gypsum board on both sides of the wall.

3M COMPANY
3M FIRE PROTECTION PRODUCTS – FireDam 200 Spray

B1. Fill, Void or Cavity Material* – Tape – As an alternate to Item B, Tape cut to size and press applied over the mineral wool forming material and lapping min 1 in. (25 mm) onto the steel floor units and gypsum wall. Tape applied in minimum 1 ft (305 mm) lengths along joint and adjoining lengths of Tape shall overlap min 1/2 in. (13 mm). Tape shall be applied at both sides of wall.

3M COMPANY – 3M Fire and Water Barrier Tape

*Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.