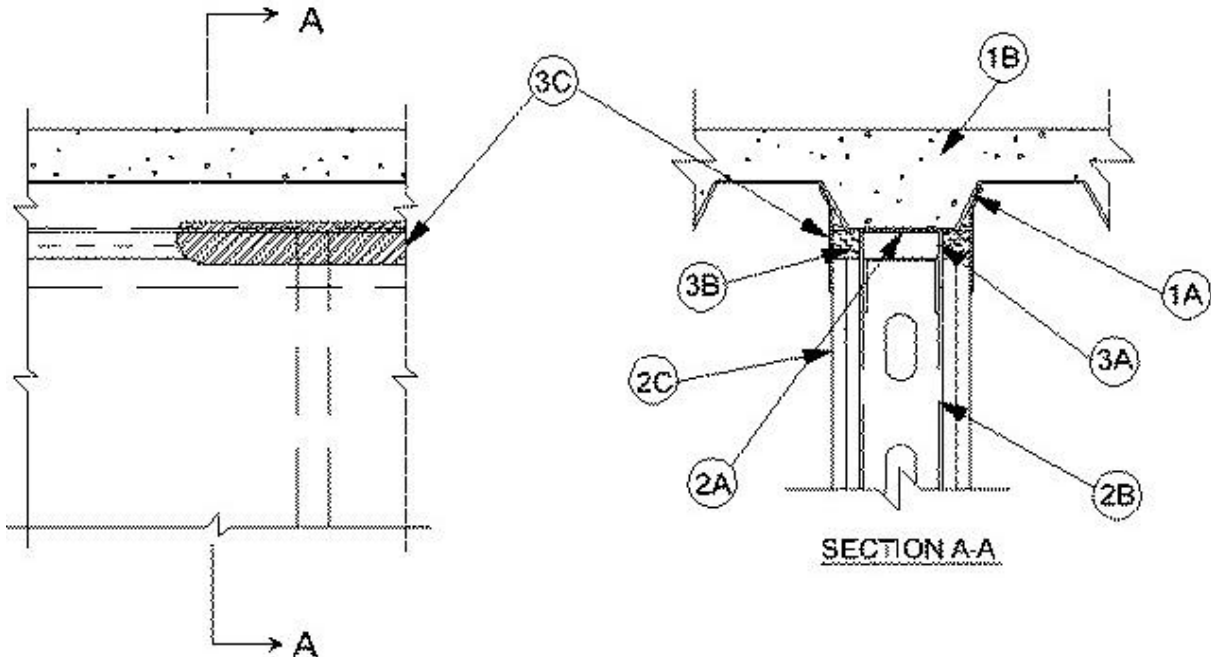


ULC System No. HW 45  
 F, FH, FT, and FTH Ratings—2 Hr  
 Joint Width — 25 mm Maximum  
 Movement Capabilities — 18.75% Compression or Extension



**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 ULC List of Equipment and Materials, and shall include the following construction features:

- (a) **Steel Floor and Form Units** – Maximum 76 mm deep galvanized steel fluted units.
- (b) **Concrete** – Minimum 64 mm thick reinforced concrete as measured from the top plane of the floor units.

**1A. Roof Assembly — (Not Shown)** - As an alternate to the floor assembly, a fire-rated fluted steel deck roof assembly may be used. The roof assembly shall be constructed of the materials and in the manner described in the individual Roof-Ceiling Design in the ULC List of Equipment and Materials. The hourly rating of the roof assembly shall be equal to or greater than the hourly rating of the wall assembly. The roof assembly shall include the following construction features:

- A. **Steel Roof Deck** - Max 76 mm deep galv steel fluted roof deck.
- B. **Roof Insulation** - Min 57 mm thick poured insulating concrete, as measured from the top plane of the roof deck.

**2. Wall Assembly** - The 2 h fire-rated gypsum board/steel stud wall assembly shall be constructed of the materials and in the manner described in the individual Wall or Partition Design in the ULC List of Equipment and Materials, and shall include the following construction feature:

HW45 continued...

**A. Steel Floor And Ceiling Runners** - Floor and ceiling runners of wall assembly shall consist of galv steel channels sized to accommodate steel studs (Item 2B). Ceiling runner to be provided with 50 mm. flanges. Ceiling runner installed within the U-shaped deflection channel (Item 3A) with a 25 mm gap maintained between the top of ceiling runner and top of deflection channel. When deflection channel is not used, ceiling runner centered on valleys of fluted steel floor units (Item 1A) or roof deck and secured to valleys with steel fasteners spaced max 610 mm. OC.

**B. Studs** - Steel studs to be min 89 mm wide. Studs cut 12 to 19 mm less in 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 610 mm OC.

**C. Gypsum Board\*** - Gypsum board installed to a min total thickness of 32 mm on each side of wall. Wall to be constructed as specified in the individual Wall and Partition Design in the ULC List of Equipment and Materials, except that a nom 25 mm gap shall be maintained between the top of the gypsum board and the bottom of the steel floor units or roof deck and the top row of screws shall be installed into the studs 75 to 87 mm below the lower surface of the floor.

**3. Joint System - Max separation between bottom of floor and top of wall at time of installation of joint system is 25 mm. The joint system is designed to accommodate a max 18.75 percent compression or extension from its installed width.** The joint system consists of an optional deflection channel, a forming material and a fill material, as follows:

**A. Deflection Channel** - (Optional) - A nom 96 mm wide by 78 mm deep by 0.6 mm thick steel U-shaped channel. Deflection channel centered on valleys of steel floor units (Item 1A) and secured with steel fasteners or by welds spaced max 305 mm OC. The ceiling runner (Item 2A) is installed within the deflection channel to maintain a 25 mm gap between the top of the ceiling runner and the top of the deflection channel. The ceiling runner is not fastened to the deflection channel.

**B. Firestop System Component** – (Guide No. 40 U19.13) - Nom 32 mm. thickness of min 64 kg/m<sup>3</sup> of A/D FireBarrier Mineral Wool cut into strips, compressed 50 percent in width and firmly packed into the gap between the top of the gypsum board and bottom of the steel floor units or roof deck, flush with both surfaces of the wall.

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**C. Firestop System Component** – (Guide No. 40 U19.13) - Min 3.2 mm wet thickness of A/D FireBarrier Seal N/S fill material spray or brush applied on each side of the wall to completely cover mineral wool forming material and to overlap a min of 13 mm onto gypsum board and steel floor units or roof deck on both sides of wall.

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\*Bearing the UL Classification Mark

September 24, 2002