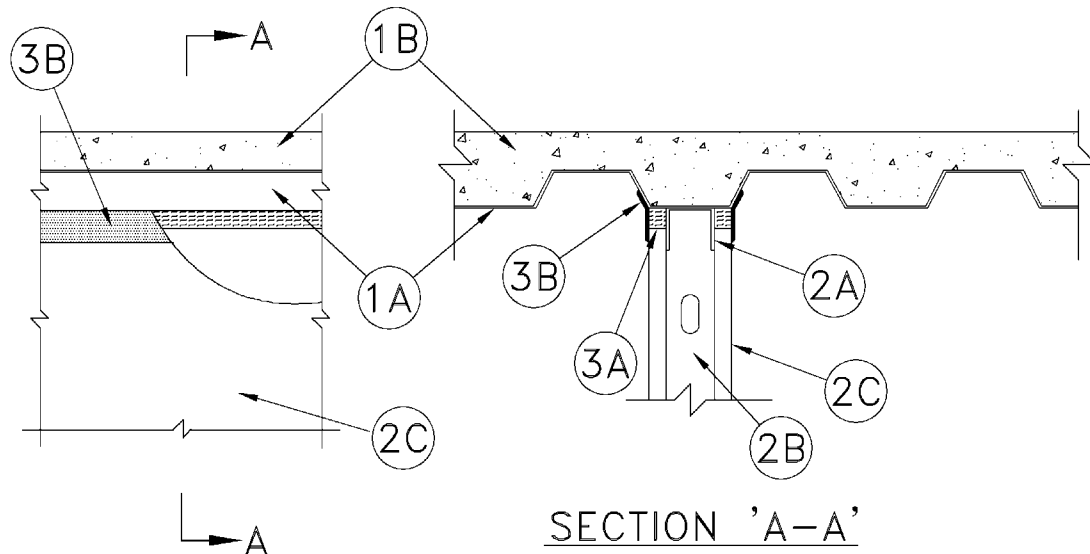


ULC SYSTEM No. HW54

F, FT, FH and FTH Ratings	– 1 h
Joint Width	– 25 mm Max
Movement Capabilities	– 20% 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, Fire Resistance, 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 R900 Roof and Ceiling Assemblies in the ULC List of Equipment and Materials, Fire Resistance. The roof assembly shall include the following construction features:

(a) **Steel Roof Deck** – Maximum 76 mm deep galvanized steel fluted roof deck.

(b) **Roof Insulation** – Minimum 63 mm thick poured insulating concrete, as measured from the top plane of the roof deck.

The hourly rating of the floor or roof assembly shall be equal to or greater than the hourly rating of the wall assembly.

2. Wall Assembly – The 1 h fire-rated gypsum wallboard/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, Fire Resistance, and shall include the following construction features:

(a) **Steel Floor and Ceiling Runners** – Floor and ceiling runners of wall assembly shall consist of galvanized steel channels sized to accommodate steel studs (Item 2b). Ceiling runner to be provided with 38 mm flanges. Ceiling runner secured to valleys of steel floor units with steel fasteners or welds spaced maximum 300 mm OC.

HW54 continued...

(b) Studs – Steel studs to be minimum 89 mm wide. Studs cut 25 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 610 mm OC.

(c) Gypsum Wallboard – Wallboard sheets installed to a minimum total thickness of 16 mm on each side of wall for 1 h rated assemblies. Wall to be constructed as specified in the individual Wall and Partition design in the ULC List of Equipment and Materials, Fire Resistance, except that a nominal 25 mm gap shall be maintained between the top of the wallboard and the bottom of the steel floor units, and the top row of screws shall be installed into the studs 64 mm below the valleys of the steel floor units. The hourly rating of the joint system is equal to the hourly fire rating of the wall.

3. Joint System – Maximum separation between bottom of floor and top of wall is 25 mm. The joint system is designed to accommodate a maximum 20% compression or extension from its installed width. The joint system shall consist of the following:

- **(a) Firestop System Component** – (Guide No. 40 U19.13). Minimum 30 mm thickness of “A/D FIREBARRIER Mineral Wool Insulation”, cut 16 mm in width and compressed into the gap between the top of the gypsum board and the bottom of the steel floor units on both sides of the wall.

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- **(b) Firestop System Component** – (Guide No. 40 U19.13). Minimum 3.2 mm thickness of “A/D FIREBARRIER Seal NS” material sprayed or brushed on each side of the wall, and between the top of the wall and the bottom of the steel floor units to completely cover mineral wool and overlap a minimum of 13 mm onto wallboard and steel deck on both sides of wall.

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January 29, 2003