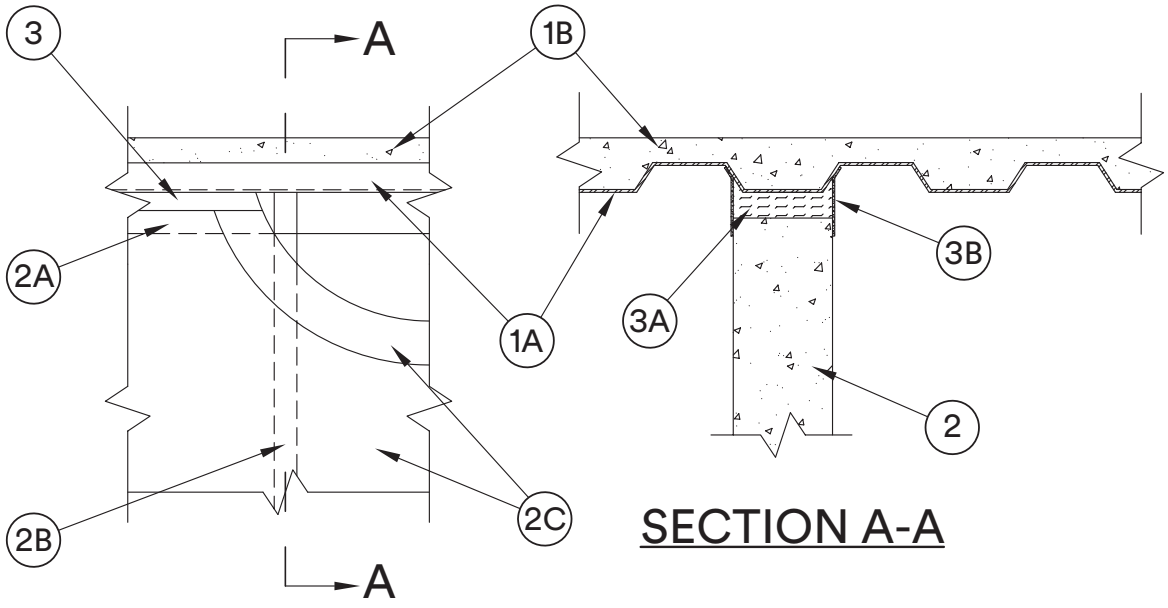
UL System No. HW-D-0030
XHBN - Joint Systems
XHBN7 - Joint Systems Certified for Canada

January 23, 2018

ANSI/UL2079	CAN/ULC S115
Assembly Rating – 2 Hr	F Rating – 2 Hr
Nominal Joint Width - 1 In.	FT Rating –2 Hr
Class II Movement Capabilities – 19% Compression or Extension	FH Rating – 2 Hr
L Rating At 400 F – Less Than 1 CFM/lin ft (See Item 3B)	FTH Rating – 2 Hr
	Nominal Joint Width - 25 mm
	Class II Movement Capabilities – 19% Compression or Extension
	L Rating At Ambient – Less Than 1.55 L/s/lin m (See Item 3B)
	L Rating At 204°C – Less Than 1.55 L/s/lin m (See Item 3B)



SECTION A-A

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 galv steel fluted floor deck .

   A1. Spray Applied Fire Resistive Material* – (Optional, not shown) – Prior to the installation of the Forming Material and Fill, Void or Cavity Materials (Items 3A and 3B), the steel floor units may be sprayed with a min 5/16 in. (8 mm) to max 11/16 in (17 mm) thickness of fire resistive material.

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   B. Concrete – Min 2-1/2 in. (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 P700 or P900 Series Roof-Ceiling Design in the UL Fire Resistance Directory. 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 3 in. (76 mm) deep galv steel fluted roof deck.

   B. Roof Insulation – (P 900 Series) - Min 2-1/4 in. (57 mm) thick poured insulating concrete, as measured from the top plane of the floor units.

   C. Roof Insulation – Mineral and Fiber Board* – (P 700 Series) – Min 3/4 in. (19 mm) thick boards applied in one or more layers directly over steel or over gypsum board sheathing laid atop steel roof deck.

D. Spray Applied Fire Resistive Material* – (P700 Series, not shown)–Prior to the installation of the Deflective Channel, Forming Material and Fill, Void or Cavity Material (Items 3A, 3B, 3C), the steel floor units may be sprayed with a min 5/16 in. (8 mm) to max 11/16 in. (17 mm) thickness of fire resistive material.

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2. Wall Assembly – Min 6-1/8 in. (156 mm) thick steel-reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m^3) concrete. Wall may also be constructed of any UL Classified Concrete Blocks*.

See **Concrete Blocks** (CAZT) category in Fire Resistance Directory for names of manufacturers.

3. Joint System – Max separation between bottom of floor or roof and top of wall is 1 in. (25 mm). The joint system is designed to accommodate a max 19 percent compression or extension from its installed width. The joint system consists of a forming material and a fill material, as follows:

A. Forming Material* – Min 6-1/2 in. (165 mm) thickness of min 4 pcf (64 kg/m^3) density mineral wool batt insulation cut a min of 20 percent wider than the gap between the top of the wall and bottom of the steel floor or roof deck . Mineral wool to be compressed and firmly packed into the gap between the top of the wall and bottom of the steel floor or roof deck.

INDUSTRIAL INSULATION GROUP L L C – MinWool-1200 Safing

ROCK WOOL MANUFACTURING CO – Delta Board or Delta-8

ROCKWOOL MALAYSIA SDN BHD – Type Safe

ROCKWOOL – Type Safe

THERMAFIBER INC – Type SAF

B. Fill, Void or Cavity Material* – Min 1/16 in. (1.6 mm) dry thickness (min 1/8 in. or 3.2 mm wet thickness) of fill material sprayed or brushed on each side of the wall between the top of the wall and the bottom of the steel floor or roof deck to completely cover mineral wool and overlap a min of 1/2 in. (13 mm) onto wall and steel floor or roof deck on both sides of wall. When the steel floor or roof deck is coated with spray applied material, the fill material shall overlap min 2 in. (51 mm) onto the spray applied material.

3M COMPANY – FireDam™ Spray 200

B1. Fill, Void or Cavity Material* – Tape – As an alternate to Item B, Tape cut to size and press applied along length of joint to completely cover mineral wool and lap min 1 in. (25 mm) onto the steel floor units, or min 2 in. (51 mm) onto the spray applied fire resistive material (Item 1A1) on the steel floor units, and min 1 in. (25 mm) onto concrete wall. 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

L Ratings apply only when FireDam™ Spray 200 is used.

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