

## XHBN.HW-D-0194 - Joint Systems

Design/System/Construction/Assembly Usage Disclaimer

- Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Certified products, equipment, system, devices, and materials.
- Authorities Having Jurisdiction should be consulted before construction.
- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
- When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
- Only products which bear UL's Mark are considered Certified.

## XHBN - Joint Systems

## System No. HW-D-0194

September 26, 2019

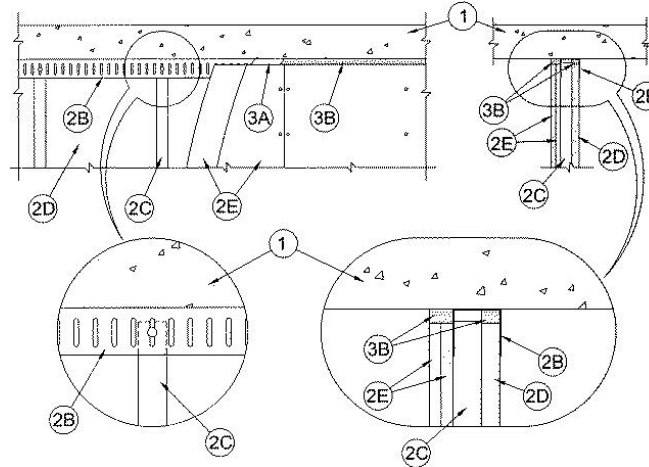
## Assembly Ratings — 1 and 2 Hr (See Items 2 and 3B)

Joint Width— 1 in. Max

L Rating At Ambient — Less Than 1 CFM/Lin Ft (See Item 3B)

L Rating At 400°F — Less Than 1 CFM/Lin Ft (See Item 3B)

Class II Movement Capabilities—25 Percent Compression or Extension



1. **Floor Assembly** — Min 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m<sup>3</sup>) structural concrete.

2. **Shaft Wall Assembly** — With the exception of the ceiling runner, the 1 or 2 hr fire rated shaft 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. The wall shall include the following construction features:

A. **Floor and Wall Runners** — (Not Shown) - "J"-shaped runner, min 2-1/2 in. (64 mm) wide with unequal legs of 1 in. (25 mm) and 2 in. (51 mm), fabricated from min 24 MSG galv steel. Runners positioned with short leg toward finished side of wall. Runners attached to walls and floor with steel fasteners spaced max 24 in. (610 mm) OC. As an alternate to the "J"-shaped runner, a min 2-1/2 in. (64 mm) wide by 1 or 1-1/4 in. (25 or 32 mm) deep channel formed from min 24 MSG galv steel may be used for the floor runner.

B. **Light Gauge Framing\* - Slotted Ceiling Track** — Slotted ceiling track shall consist of galv steel channels with slotted flanges. Slotted ceiling track sized to accommodate steel "C"-H studs (Items 2C). Attached to concrete at ceiling with steel fasteners spaced max 12 in. OC (305 mm).

**BRADY CONSTRUCTION INNOVATIONS INC, DBA SLIPTRACK SYSTEMS** — SLP-TRK

**CALIFORNIA EXPANDED METAL PRODUCTS CO** — CST

**CLARKDIETRICH BUILDING SYSTEMS** — Type SLT, SLT-H

**MARINO/WARE, DIV OF WARE INDUSTRIES INC** — Type SLT

**RAM SALES L L C** — RAM Slotted Track

**SCAFCO STEEL STUD MANUFACTURING CO**

**STEELER INC** — Steeler Slotted Ceiling Runner

**TELLING INDUSTRIES L L C** — True-Action Deflection Track

C. **Steel Studs** — "C"-H-shaped steel studs to be min 2-1/2 in. (64 mm) wide and formed of min 24 MSG galv steel. 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 slotted ceiling track. Studs spaced 24 in. (610 mm) OC. After installation of gypsum board liner panels (Item 2D), studs secured to flange of floor runner on finished side of wall only with No. 6 by 1/2 in. (13 mm) long self-drilling, self-tapping steel screws. Studs secured to flange of slotted ceiling track on finished side of wall only with No. 8 by 1/2 in. (13 mm) long self-drilling, self-tapping wafer head steel screws at slot midheight.

D. **Gypsum Board\*** — 1 in. (25 mm) thick by 24 in. (610 mm) wide gypsum board liner panels as specified in the individual U400 or V400-Series Wall and Partition Design. Panels cut 1 in. (25 mm) less in length than floor to ceiling height. Vertical edges inserted in "H"-shaped section of "C"-H studs. Free edge of end panels attached to long leg of "J" runner (Item 2A) with 1-5/8 in. (41 mm) long Type S steel screws spaced max 12 in. (305 mm) OC.

E. **Gypsum Board\*** — Gypsum board sheets, 1/2 or 5/8 in. (13 or 16 mm) thick, applied vertically or horizontally in one or two layers on finished side of wall as specified in the individual U400 or V400-Series Wall and Partition Design. A max 1 in. (25 mm) gap shall be maintained between the top of the gypsum board and the bottom surface of the concrete floor. The screws attaching the gypsum board layers to the C-H studs shall be located 1 in. (25 mm) below the bottom of the slotted ceiling track (Item 2C). No gypsum board attachment screws are to penetrate the slotted ceiling track.

**The hourly fire rating of the joint system is equal to the hourly fire rating of the wall.**

3. **Joint System** — Max separation between bottom of floor and top of liner panel (Item 2D) and between bottom of floor and top of gypsum board sheets (Item 2E) at time of installation of joint system is 1 in. (25 mm). The joint system is designed to accommodate a maximum 25 percent compression or extension from its installed width. The joint system consists of bond breaker tape and sealant, as follows:

A. **Bond Breaker Tape** — Polyethylene tape supplied in rolls. Tape applied to flanges of slotted ceiling track (Item 2D) to prevent bonding of the sealant at points other than the top and bottom of the linear gap. Bond breaker tape is optional when movement capability of the joint is limited to compression only.

B. **Fill, Void or Cavity Material\* - Sealant** — Min 1 in. (25 mm) depth of sealant to be installed to fill linear gap between top of gypsum board liner panel (Item 2D) and top inside surface of slotted ceiling track (Item 2B) prior to installation of gypsum board sheets on finished side of wall. For 1 hr fire rated walls, min 5/8 in. (16 mm) depth of sealant to be installed to fill linear gap between top of gypsum board sheet (Item 2E) and bottom of concrete floor. For 2 hr walls, min 1 in. (25 mm) depth of sealant to be installed to fill linear gap between top of gypsum board sheets (Item 2E) and bottom of concrete floor.

**SPECIFIED TECHNOLOGIES INC** — SpecSeal ES Elastomeric Sealant or SpecSeal LCI Sealant. **L Ratings apply when SpecSeal ES Elastomeric Sealant is used. When SpecSeal LCI Sealant is used, the movement capability of the joint is limited to 25 percent in compression only.**

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

Last Updated on 2019-09-26

