



XHBN.HW-D-0480 Joint Systems

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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 Listed or Classified 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 as Classified, Listed, or Recognized.
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Joint Systems

[See General Information for Joint Systems](#)

System No. HW-D-0480

April 20, 2010

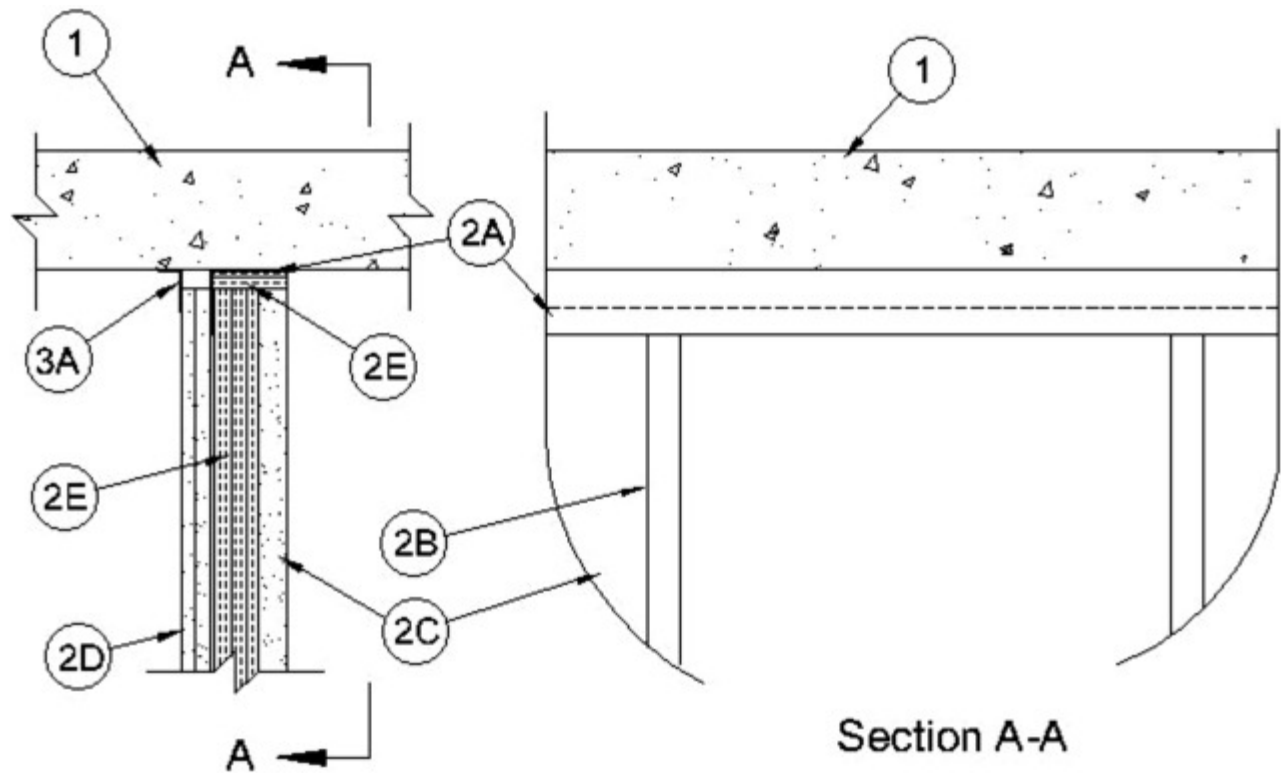
Assembly Ratings — 1 and 2 Hr (See Item 2)

L Rating at Ambient — Less Than 1 CFM/Lin ft

L Rating at 400° F — Less Than 1 CFM/Lin ft

Nominal Joint Width — 3/4 in.

Class II and III Movement Capabilities — 50% Compression or 83% Extension



1. **Floor Assembly** — Min 4-1/2 in. (114 mm) thick steel reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m³) structural concrete. Floor may also be constructed of any min 6 in. thick UL Classified hollow-core **Precast Concrete Units***.

See **Precast Concrete Units** (CFTV) category in the Fire Resistance Directory for names of manufacturers.

2. **Shaft Wall Assembly** — 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 Ceiling Runners** — "J"-shaped runner, min 2-1/2 in. (64 mm) wide with unequal legs of min 1-1/2 in. (32 mm) and 2 in. (52 mm), fabricated from min 24 MSG galv steel.

A1. **Light Gauge Framing* — Slotted Ceiling Track** — (Not Shown) - As an alternate to the "J"-shaped runner in Item 2A, a ceiling track consisting of galv steel channel with slotted flanges may be used. Slotted ceiling track sized to accommodate steel "C-T", "I" or "C-H" studs (Item 2C). Attached to steel deck with steel fasteners or welds spaced max 24 in. (610 mm) OC.

CALIFORNIA EXPANDED METAL PRODUCTS CO — CST

METAL-LITE INC — The System

BRADY CONSTRUCTION INNOVATIONS INC,

DBA SLIPTRACK SYSTEMS — SLP-TRK

SCAFCO STEEL STUD MANUFACTURING CO — Slotted Track

TELLING INDUSTRIES L L C — True-Action Deflection Track

B. **Steel Studs** — "C-T", "I" or "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 "J"-shaped runner or slotted ceiling track. Studs spaced max 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. If slotted ceiling track (Item 2A1) is used, 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 mid-height.

C. **Gypsum Board*** — 1 in. (25 mm) thick by max 24 in. (610 mm) wide gypsum board liner panels. Panels cut 3/4 in. (19 mm) less in length than floor to ceiling height. Vertical edges inserted into "T"-shaped section of "C-T" studs, into holding tabs of "I" studs or into "H"-shaped section of "C-H" studs.

D. **Gypsum Board*** — Gypsum board, 1/2 or 5/8 in. (13 or 16 mm) thick, applied on finished side of wall as specified in the individual Wall and Partition Design. The boards cut 3/4 in. (19 mm) less in length than floor to ceiling height. The screws attaching the gypsum board layer(s) to the "C-T", "I" or "C-H" studs shall be located a max of 2 in. (51 mm) below the bottom of the ceiling runner.

E. **Mineral Wool** — Min 1-1/2 in. (38 mm) thick min 4 pcf (64 kg/m³) mineral wool batt insulation cut to the width of ceiling runner and compressed 50 percent in thickness, installed to completely fill ceiling runner above the studs. Additional min 1-1/2 in. (38 mm) thick min 4 pcf (64 kg/m³) mineral wool batt insulation installed to fill stud cavities.

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 wall (at time of installation of joint system) is 3/4 in. (19 mm). The joint system is designed to accommodate a max 50 percent compression or 83 percent extension from its installed width.

A. **Fill, Void or Cavity Material*** — A nom 20 gauge steel angle provided with a nom 1 or 2 in. (25 or 51 mm) wide intumescent strip on one leg to be secured to the bottom floor assembly with the intumescent strip against the outer face of gypsum board on finished side of wall with min steel masonry fasteners spaced a max 24 in. (610 mm) OC.

CALIFORNIA EXPANDED METAL PRODUCTS CO — Firestik FS1 or FS2

*Bearing the UL Classification Mark

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