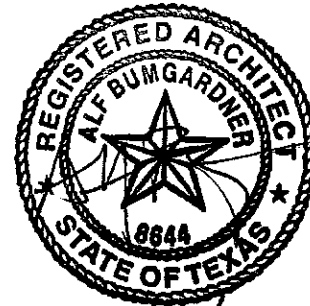


**DOCUMENT 00901
ADDENDUM NUMBER 01**

DATE: October 26, 2009
PROJECT: Fire Separation Wall at T-Hangar 50
Arlington Municipal Airport
5000 S. Collins
PROJECT NUMBER: AVI-0901
OWNER: City of Arlington
TO: Prospective Bidders



This Addendum forms a part of the Contract Documents and modifies the Bidding Documents dated October 9, 2009 with amendments and additions noted below. Acknowledge receipt of this Addendum in the space provided in the Bid Form. Failure to do so may disqualify the Bidder.
This Addendum consists of Twelve (12) pages.

CLARIFICATION:

1. Refer to attached details for Reference to UL System no. U420, HW-D-0002 and BW-S-0003.

End of Addendum



**BXUV.U420
Fire Resistance Ratings - ANSI/UL 263**

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Design/System/Construction/Assembly Usage Disclaimer

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- 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.
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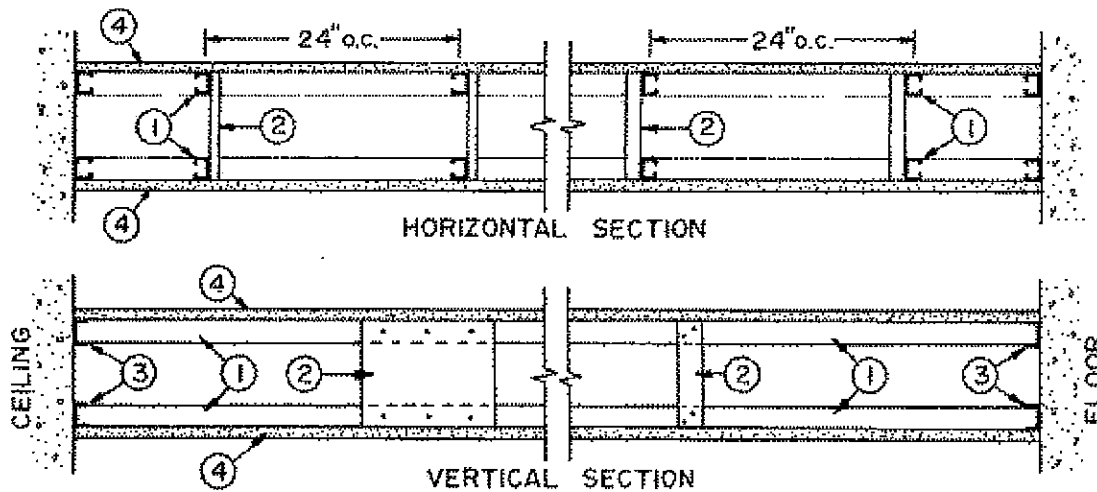
Fire Resistance Ratings - ANSI/UL 263

See General Information for Fire Resistance Ratings - ANSI/UL 263

Design No. U420

October 01, 2009

Nonbearing Wall Rating — 1 or 2 HR.



1. **Studs** — Channel — shaped 1 5/8 in. wide with 1 3/8 in. legs and 1/4 in. stiffening flanges. Fabricated from No. 25 MSG galv steel. Studs to be cut 1/4 in. less than assembly height.

2. **Bracing** — Cut from the steel runners, min. 4-1/4 in. long, fastened to the studs with two No. 8 by 1/2 in. long self-drilling, self-tapping steel screws in each stud. As an alternate, but limits the stud cavity depth to maximum 9-1/2 in., cut from the gypsum wallboard, 9-1/2 in. long and 12 in. wide, fastened to the studs with three Type S wallboard screws in each stud. Vertical spacing of bracing not to exceed 48 in. OC.

3. **Floor and Ceiling Runners** — Channel — shaped 1 5/8 in. wide with 1 in. legs, fabricated from No. 25 MSG galv steel. Attached to floor and ceiling with fasteners spaced 24 in. OC.

4. **Gypsum Board*** — Any 5/8 in. thick gypsum board for fire resistance Classified with beveled, square, or tapered edges.

For 1 Hr Rating — One layer of gypsum board to be used. Applied vertically with joints centered over studs. Fastened to studs with 1 in. long, Type S, gypsum board screws spaced 8 in. OC at the joints, located 3/8 in. from the edges, and 12 in. OC in the field. Fasteners to be spaced 8 in. OC at the runners.

For 2 Hr Rating — Two layers of gypsum board to be used. The inner layer to be applied in the same manner as for the 1 Hr Rating. The outer layer to be fastened to the studs (through the inner layer) using 1 5/8 in. long, Type S, wallboard screws spaced 8 in. OC at the joints, located 3/8 in. from the edges and 12 in. OC in the field.

Fasteners to be spaced 8 in. OC at the runners. Joints to be staggered 24 in. from the inner layer.

See Gypsum Board (CKNX) category for names of manufacturers.

4A. Gypsum Board* — (As alternate to Item 4) - Nom 5/8 in. thick gypsum panels with beveled, square or tapered edges, applied vertically or horizontally. Vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Vertical joints in adjacent layers (2-hr system) staggered one stud cavity. Horizontal edge joints and horizontal butt joints on opposite sides of studs need not be staggered or backed with steel framing. Horizontal edge joints and horizontal butt joints in adjacent layers (2-hr system) staggered a minimum of 12 in. For the single layer system, panels attached to steel studs and floor runner with 1 in. long Type S steel screws spaced 8 in. OC when applied horizontally, or 8 in. OC along vertical and bottom edges and 12 in. OC in the field when applied vertically. For the double layer system, base layer panels attached to steel studs and floor runner with 1 in. long Type S steel screws spaced 16 in. Face layer panels attached to steel studs and floor runner with 1-5/8 in. long Type S steel screws spaced 16 in. OC.

CANADIAN GYPSUM COMPANY — Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRC or WRX.

UNITED STATES GYPSUM CO — Type AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRC or WRX.

USG MEXICO S A DE C V — Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRC or WRX.

4B. Gypsum Board* — (As an alternate to Items 4 or 4A) - Nom 3/4 in. thick, 4 ft wide, installed as described in Item 4A with screw length increased to 1-1/4 in.

CANADIAN GYPSUM COMPANY — Types AR, IP-AR.

UNITED STATES GYPSUM CO — Types AR, IP-AR.

USG MEXICO S A DE C V — Types AR, IP-AR.

4C. Gypsum Board* — (As an alternate to Items 4 through 4B) - Installed as described in Item 4. 5/8 in. thick, 4 ft. wide, paper surfaced, applied vertically and fastened to the studs and plates with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 1/4 in. diam heads, 7 in. OC.

NATIONAL GYPSUM CO — SoundBreak XP Type X Gypsum Board

5. Joint Tape and Compound — Vinyl or casein, dry or premixed joint compound applied in two coats to joints and screw heads. Paper tape, 2 in. wide, embedded in first layer of compound over all joints.

6. Batts and Blankets* — (Optional, not shown) Glass fiber batts may be installed in the interior or wall cavity. The max thickness of the batts shall be 2 1/2 in. for the walls with 2 Hr assembly ratings and 3 1/2 in. for the walls with 1 Hr assembly ratings. Attached to wallboard with wire staples spaced horizontally 12 in. OC and vertically 24 in. OC.

CERTAINTED CORP

GUARDIAN FIBERGLASS INC

JOHNS MANVILLE INTERNATIONAL INC

OWENS CORNING

6A. Fiber, Sprayed* — As an alternate to Batts and Blankets (Item 6) — Spray applied cellulose insulation material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. Nominal dry density of 3.0 lb/ft³. Alternate application method: The fiber is applied with U.S. Greenfiber LLC Type AD100 hot melt adhesive at a nominal ratio of one part adhesive to 6.6 parts fiber to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. Nominal dry density of 2.5 lb/ft³.

U S GREENFIBER L L C — Cocoon2 Stabilized or Cocoon-FRM (Fire Rated Material)

6B. Fiber, Sprayed* — As an alternate to Batts and Blankets (Item 6) and Item 6A - Spray applied cellulose insulation material. The fiber is applied with water to interior surfaces in accordance with the application instructions supplied with the product. Applied to completely fill the enclosed cavity. Minimum dry density of 4.3 pounds per cubic ft.

NU-WOOL CO INC — Cellulose Insulation

7. Cementitious Backer Units* — (Optional Item Not Shown - For Use On Face Of 1 Hr Or 2 Hr Systems With All Standard Items Required) - 1/2 in., 5/8 in., 3/4 in. or 1 in. thick, min. 32 in. wide.- Applied vertically or horizontally with vertical joints centered over studs. Fastened to studs and runners with cement board screws of adequate length to penetrate stud by a minimum of 3/8 in. for steel framing members spaced a max of 8 in. OC. When 4 ft. wide boards are used, horizontal joints need not be backed by framing. 2-Hr System - Applied vertically with vertical joints centered over studs. Face layer fastened over gypsum board to studs and runners with cement board screws of adequate length to penetrate stud by a minimum of 3/8 in. for steel framing members, and a minimum of 3/4 in. for wood framing members spaced a max of 8 in. OC.

NATIONAL GYPSUM CO — Type PermaBase

*Bearing the UL Classification Mark

Last Updated on 2009-10-01

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XHBN.HW-D-0002 Joint Systems

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Joint Systems

See General Information for Joint Systems

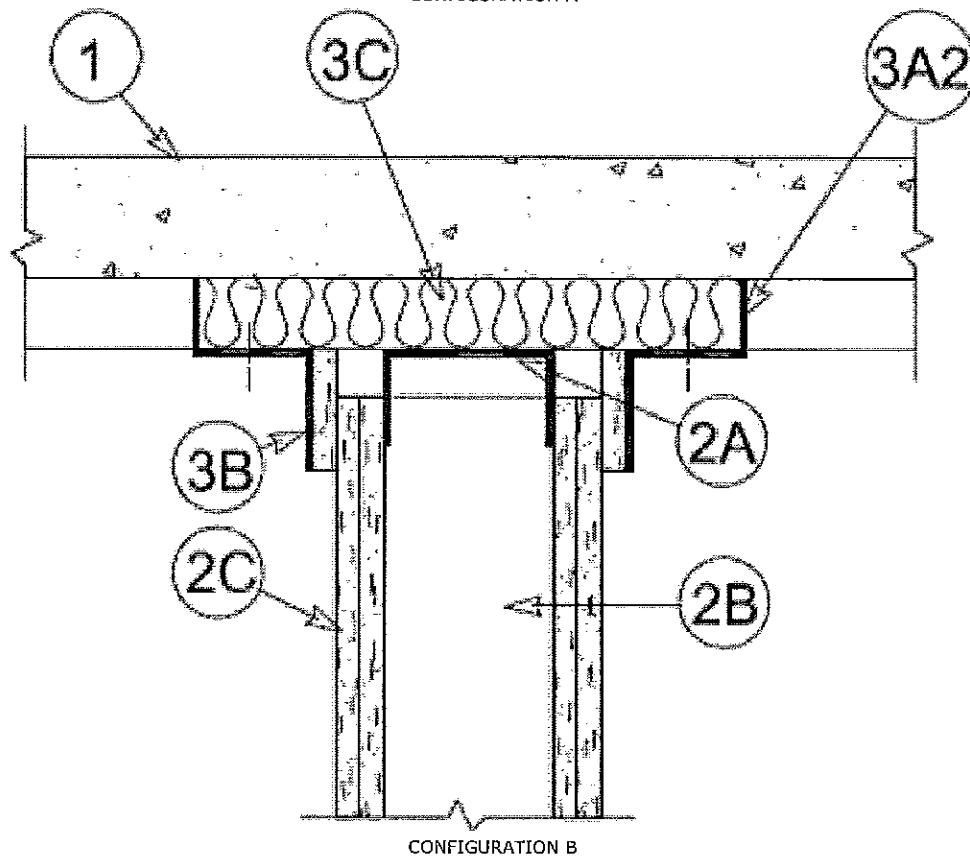
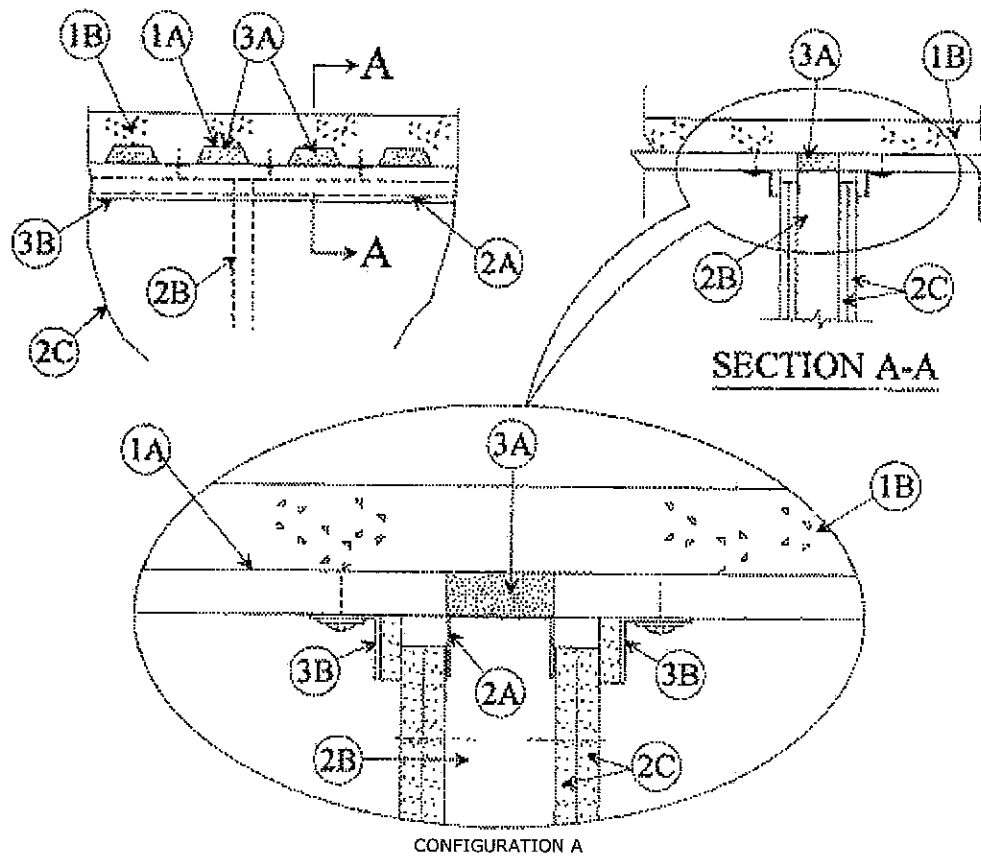
System No. HW-D-0002

March 27, 2009

Assembly Rating — 2 Hr

Nominal Joint Width — 5/8 in.

Class II and III Movement Capabilities — 80% Compression, 60% 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 UL Fire Resistance Directory and shall include the following construction features:

A. Steel Floor and Form Units* — Max 3 in. deep galv steel fluted floor units.

B. Concrete — Min 2-1/2 in. thick reinforced concrete, as measured from the top plane of the floor units.

1A. Roof Assembly — As an alternate to Item 1, Floor Assembly, the fire-rated roof assembly shall be constructed of the materials and in the manner described in the individual P700, P800 or P900 series Roof-Ceiling Designs in the UL Fire Resistance Directory and shall contain max 1-1/2 in. deep galv steel fluted roof units. The hourly fire rating of the roof assembly shall be equal to or greater than the hourly fire rating of the wall assembly. In the case of spray-applied protection materials on the steel roof units, the joint system shall be installed prior to the spray-applied protection material.

1B. Floor Assembly — As an alternate to Item 1, Floor Assembly, min 4-1/2 in. thick reinforced lightweight or normal weight (100-150 pcf) structural concrete.

2. Wall Assembly — The 2 hr fire-rated nonbearing gypsum board/steel stud wall assembly shall be constructed of the materials and in the manner described in the individual U400 or V400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:

A. Steel Floor And Ceiling Runners — Floor and ceiling runners of wall assembly shall consist of min 25 ga galv steel channels sized to accommodate steel studs (Item 2B). Ceiling runner to be provided with 2 in. flanges. Ceiling runner installed perpendicular to direction of fluted steel deck and secured to valleys with steel masonry anchors or by welds spaced max 12 in. OC. Ceiling runner secured to concrete floor slab (Item 1B) with steel masonry anchors spaced max 24 in. OC.

A1. Light Gauge Framing* — Clipped Ceiling Runner — As an alternate to the ceiling runner in Item 2A, clipped runner to consist of galv steel channel with clips preformed in track flanges which positively engage the inside flange of the steel studs (Item 2B). Track sized to accommodate steel studs (Item 2B). Track flanges to be min 2-1/2 in. Clipped ceiling runner installed perpendicular to direction of fluted steel deck and secured to valleys with steel masonry anchors or by welds spaced max 12 in. OC. Clipped ceiling runner secured to concrete floor slab (Item 1B) with steel masonry anchors spaced max 24 in. OC.

TOTAL STEEL SOLUTIONS L L C — Snap Trak

A2. Light Gauge Framing* - Notched Ceiling Runner — As an alternate to the ceiling runners in Items 2A and 2A1, notched ceiling runners to consist of C-shaped galv steel channel with notched return flanges sized to accommodate steel studs (Item 2B). Notched ceiling runner installed perpendicular to direction of fluted steel deck and secured with steel masonry anchors spaced max 12 in. OC. Notched ceiling runner secured to concrete floor slab (Item 1B) with steel masonry anchors spaced max 24 in. OC.

OLMAR SUPPLY INC — Type SCR

B. Studs — Steel studs to be min 2-1/2 in. wide. Studs cut 5/8 to 1 in. 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 24 in. OC.

C. Gypsum Board* — Gypsum board sheets installed to a min total thickness of 1 in. on each side of wall. Wall to be constructed as specified in the individual Wall and Partition Design in the UL Fire Resistance Directory, except that a nom 5/8 in. gap shall be maintained between the top of the gypsum board and the bottom of the steel deck.

3. Joint System — The joint system is designed to accommodate a max 5/8 in. compression and 3/8 in. extension from its installed width. The joint system consists of an optional forming material and fill material in the flutes of the steel deck and a "slip track" detail consisting of restraining angles in combination with gypsum board on the vertical flanges. When the floor assembly consists of a flat concrete slab (Item 1A), the forming material and fill material are not used. The components of the system are as follows:

A. Fill, Void or Cavity Material*— Fill Material — Dry mix material mixed with water at a rate of 2.1 parts dry mix to 1 part water, by weight in accordance with the accompanying installation instructions and applied to fill the recess of each steel deck flute, flush with the vertical flange of the ceiling runner on each side of the wall. As an alternate when steel channel studs wider than 2-1/2 in. are used, mineral wool batt forming material (Item 3C) may be packed into steel floor unit flutes above center of ceiling runner and a min 1 in. depth of fill material shall be applied within the recess of each steel deck flute, flush with the vertical flange of the ceiling runner on each side of wall.

UNITED STATES GYPSUM CO — Type FC.

A1. Fill, Void or Cavity Material* — (Not Shown) — Two component fill material used as a alternate to Item 3A. Ready-mixed component mixed with accelerator component at a rate of 66 parts of ready-mixed component to 1 part of accelerator component by weight in accordance with the accompanying installation instructions. Applied to fill the recess of each steel deck flute flush with the vertical flange of the ceiling track on each side of the wall. As an alternate when steel channel studs wider than 2-1/2 in. are used, mineral wool batt forming material (Item 3C) may be packed into steel deck flutes above center of ceiling runner and a min 1 in. depth of fill material shall be applied within the recess of each steel deck flute, flush with the vertical flange of the ceiling track on each side of the wall.

UNITED STATES GYPSUM CO — Type RFC

A2. Fill, Void or Cavity Material* — (Not Shown) Min 1/8 in. wet thickness of fill material sprayed or brushed on each side of the wall to completely cover mineral wool and overlap a min of 1/2 in. onto steel deck.

UNITED STATES GYPSUM CO — USG Type-SA

B. Restraining Angles — Min 2-1/2 by 2-1/2 in. angle formed from min 25 ga galv steel with one leg lined with a 2-1/2 in. wide piece of the same gypsum board used for the wall (Item 2C). Gypsum board liner secured to steel angle with min 1 in. long self-drilling, self-tapping Type S bugle head steel screws spaced max 8 in. OC along longitudinal centerline of steel angle. Screws installed through face of gypsum board such that excess screw length protrudes through leg of steel angle. Restraining angles installed along top of wall on each side of wall assembly with gypsum liner against wall surface and with horizontal leg of steel angle against valleys of steel deck. Restraining angles secured to valleys of steel deck or to concrete floor slab with steel masonry anchors spaced max 12 in. OC.

C. Forming Material* — (Optional, not shown) — When steel channel studs and runners wider than 2-1/2 in. are used, a thickness of 4 pcf density mineral wool batt insulation may be packed into flutes of steel deck to exclude fill material above center of ceiling runner. Forming material to be recessed min 1 in. from edge of ceiling runner on each side of wall.

THERMAFIBER INC — Type SAF

C1. Forming Material* — Used in conjunction with Item 3A2 as shown in Configuration B. Min 4 pcf density mineral wool batt insulation firmly packed into flutes of steel deck above ceiling runner and above restraining angles as a permanent form. Forming material to be recessed from outside edges of restraining angles on each side of wall to accommodate the required thickness of fill material as specified in Item 3A2.

THERMAFIBER INC — Type SAF

*Bearing the UL Classification Mark

Last Updated on 2009-03-27

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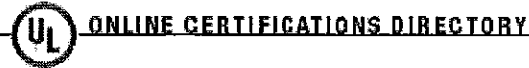
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Joint Systems

See General Information for Joint Systems

System No. BW-S-0003

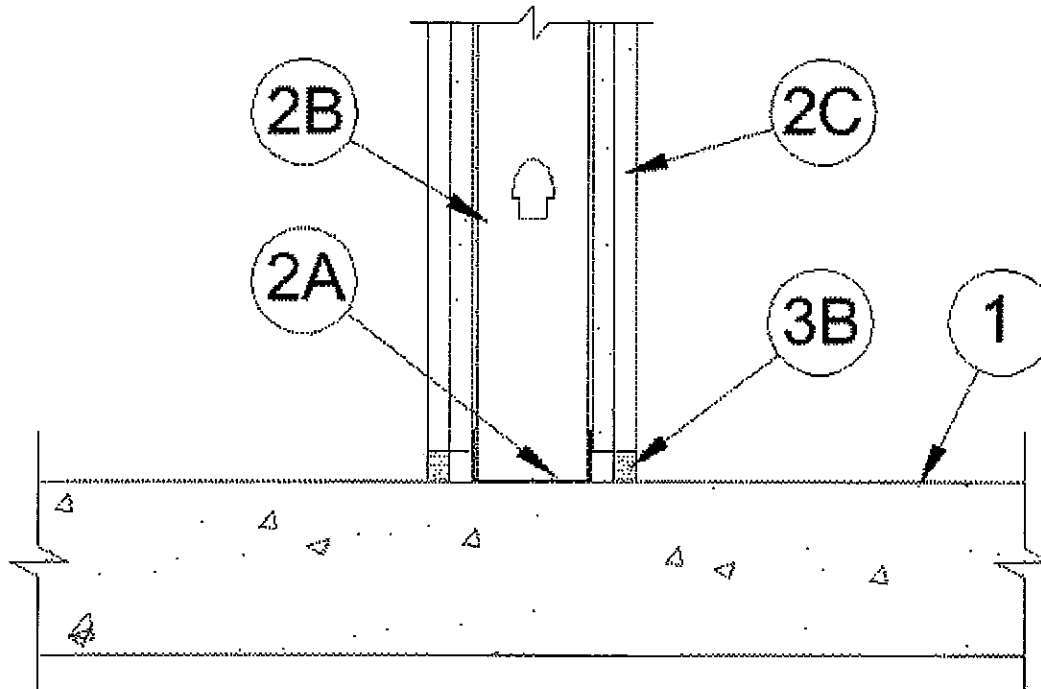
November 18, 2008

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

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)

Joint Width — 3/4 In. Max



1. Floor Assembly — Min 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m³) structural concrete. Floor may also be constructed of any 6 in. (152 mm) thick UL Classified hollow-core **Precast Concrete Units***.

See **Precast Concrete Units** category in the Fire Resistance Directory for names of manufactures.

2. Wall Assembly — The 1 or 2 h fire-rated gypsum board/steel stud wall assembly shall be constructed of the materials and in the manner specified in the individual U400 or V400 Series Wall or Partition Design in the UL Fire Resistance Directory. In addition, the wall may incorporate a head-of-wall joint system constructed as specified in the HW Series Joint Systems in the UL Fire Resistance Directory. The wall shall include the following construction features:

A. Steel Floor Runner — Floor runners of wall assembly shall consist of min No. 25 gauge galv steel channels sized to accommodate steel studs (Item 2B). Floor runners to be provided with min 1-1/4 in. (32 mm) flanges. Runners secured with steel fasteners spaced 12 in. (305 mm) OC.

B. Studs — Steel studs to be min 3-1/2 in. (89 mm) wide. Studs cut 1/2 to 3/4 in. (13 to 19 mm) less in length than assembly height with bottom nesting in, resting on and fastened to floor runner with sheet metal screws. Stud spacing not to exceed 24 in. (610 mm) OC.

C. Gypsum Board* — Gypsum board installed to a min total thickness of 5/8 in. (16 mm) or 1-1/4 in. (32 mm) on each side of wall for a 1 or 2 hr fire rated wall, respectively. Wall to be constructed as specified in the individual U400 or V400 Series Design in the UL Fire Resistance Directory except that a max 3/4 in. (19 mm) gap shall be maintained between the bottom of the gypsum board and the top of the concrete floor.

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

3. Joint System — Max separation between top of floor and bottom of gypsum board is 3/4 in. (19 mm). The joint system consists of a packing material and a fill material, as follows:

A. Packing Material — (Optional, Not Shown) - Mineral wool batt insulation, polyethylene backer rod or glass fiber insulation firmly packed into the gap between the bottom of the gypsum board and the top of the concrete floor and recessed from each surface of the wall to accommodate the required thickness of fill material.

B. Fill, Void or Cavity Material*-Sealant — Min 1/2 in. (13 mm) thickness of fill material installed on each side of the wall between the bottom of the gypsum board and the top of the concrete floor, flush with each surface of the wall. When mineral wool batt insulation is used as a packing material, min thickness of fill material on each side of the wall is 1/4 in. (6 mm).

SPECIFIED TECHNOLOGIES INC — SpecSeal ES Sealant, SpecSeal LCI Sealant, SpecSeal LC150

Sealant, Pensil 300 Sealant or SpecSeal Series SIL300.

Note: L Ratings apply when SpecSeal ES Sealant is used.

*Bearing the UL Classification Mark

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