ONLINE DIRECTORIES

# BXUVC.W446
# Fire-resistance Ratings

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## Fire-resistance Ratings

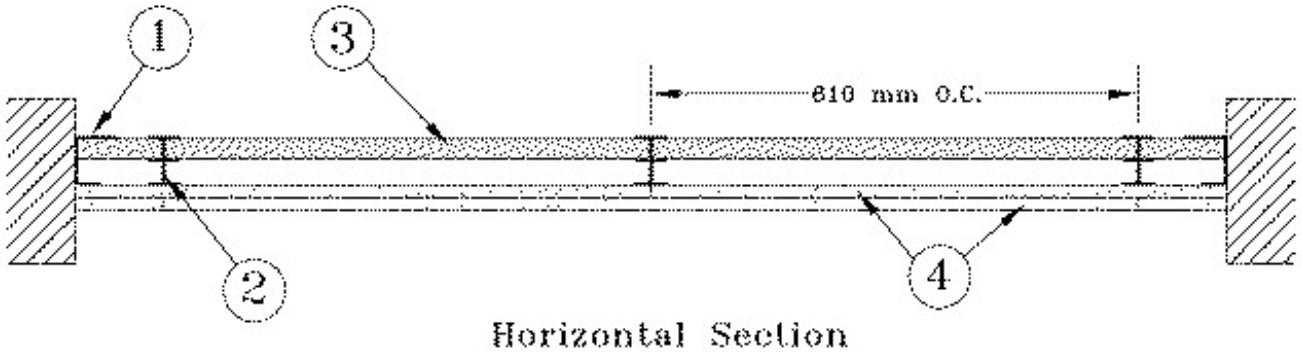
See General Information for Fire-resistance Ratings

## Design No. W446

December 31, 2012

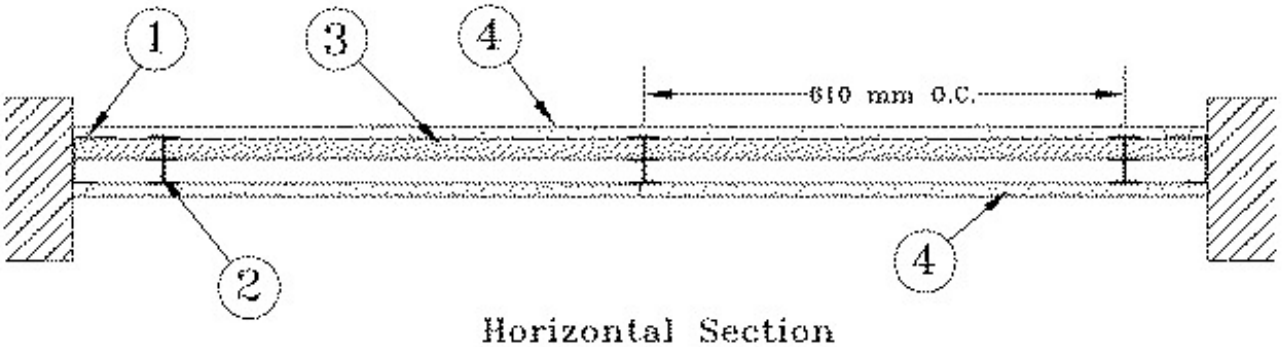
**Assembly Ratings - 1, 2 or 3 h**

**System A - 2 h**



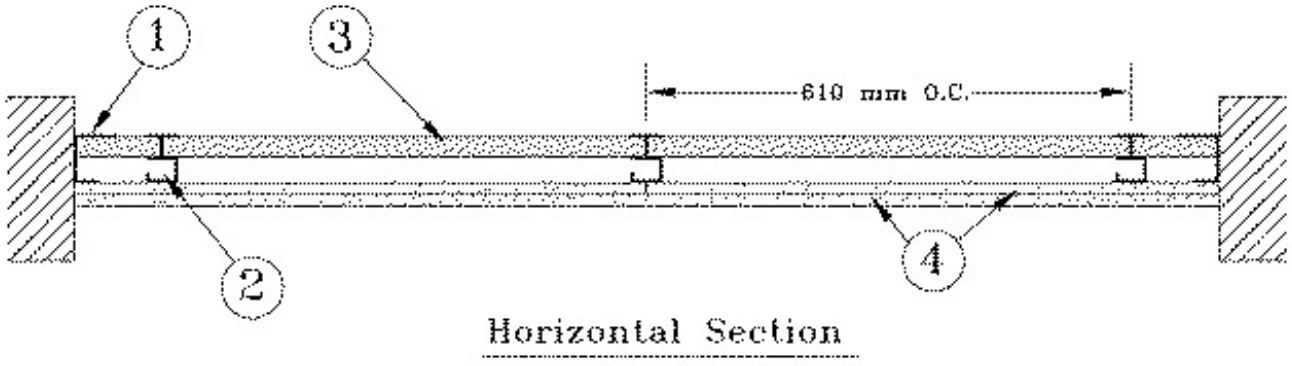

Horizontal Section

**System B - 2 h**



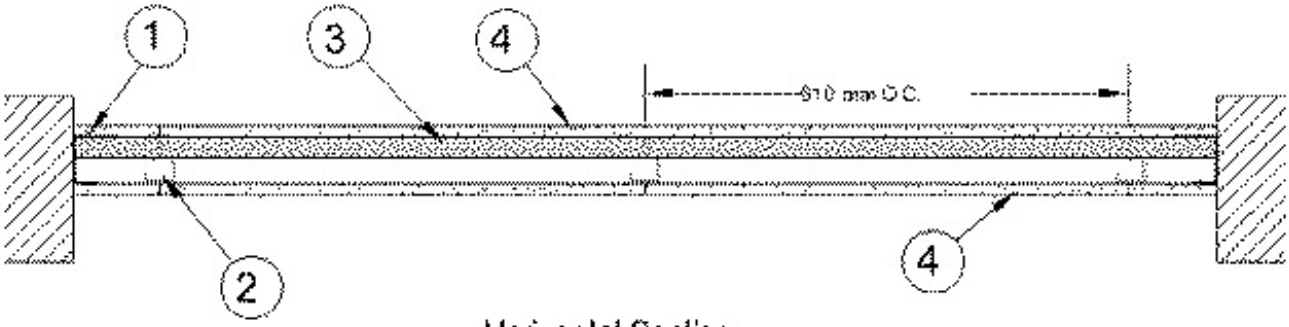

Horizontal Section

**System C - 2 h**




Horizontal Section

**System D - 2 h**




Horizontal Section

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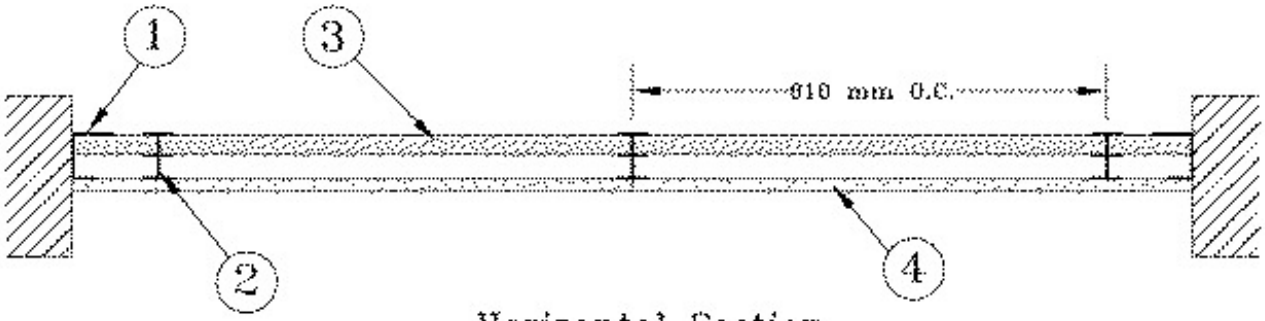
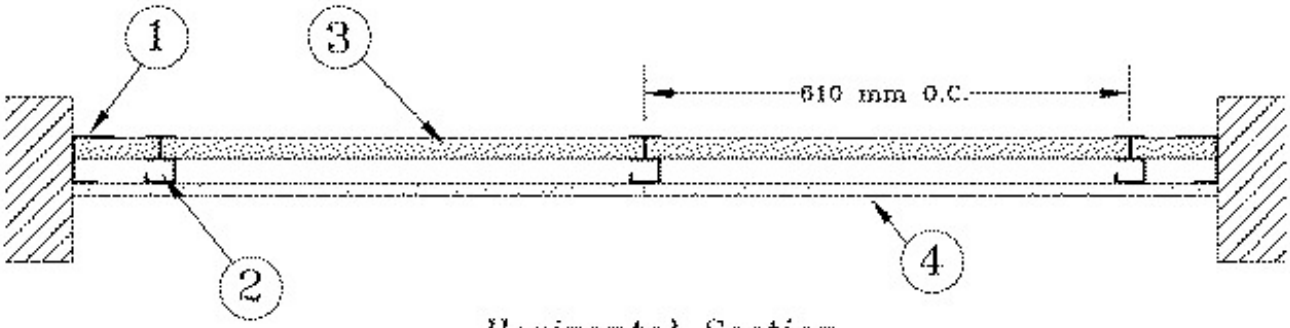
**System E - 1 h**



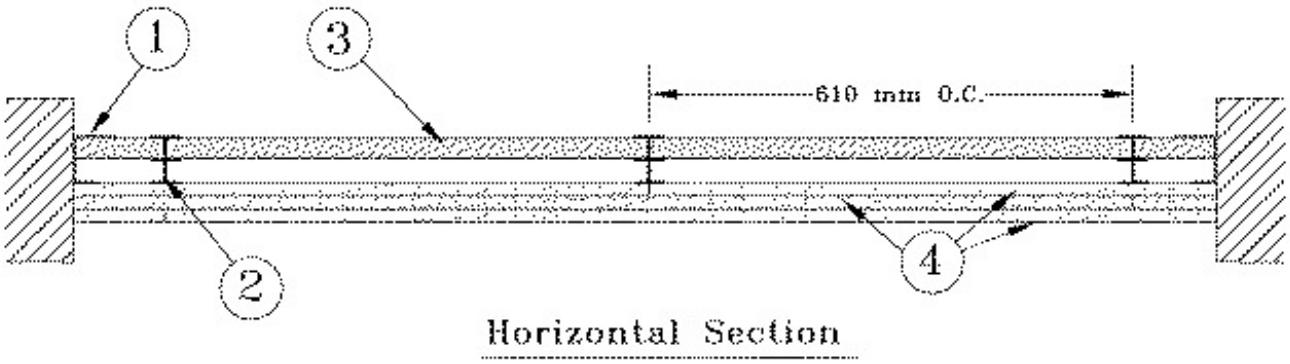

Horizontal Section

**System F- 1 h**



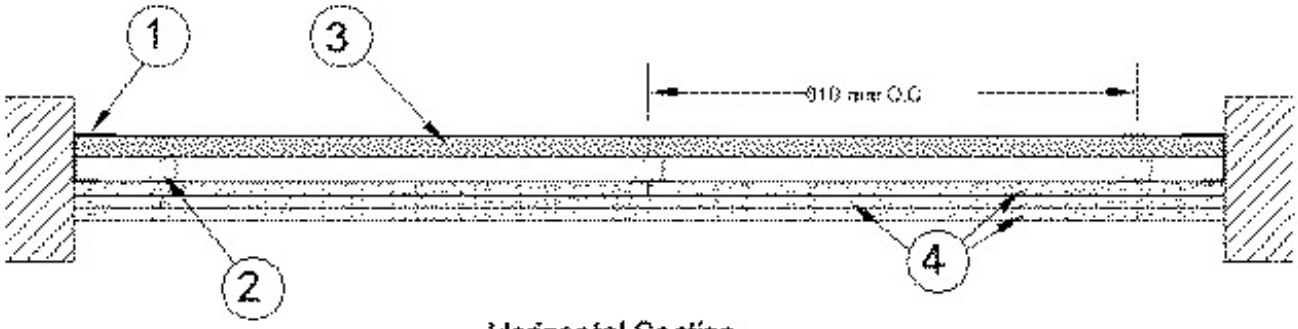

Horizontal Section

**System G - 3 h**




Horizontal Section

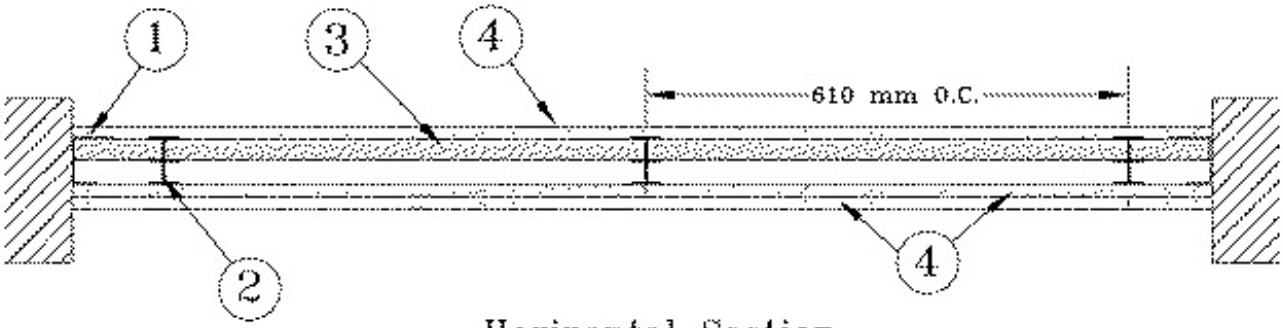
**System H - 3 h**




Horizontal Section

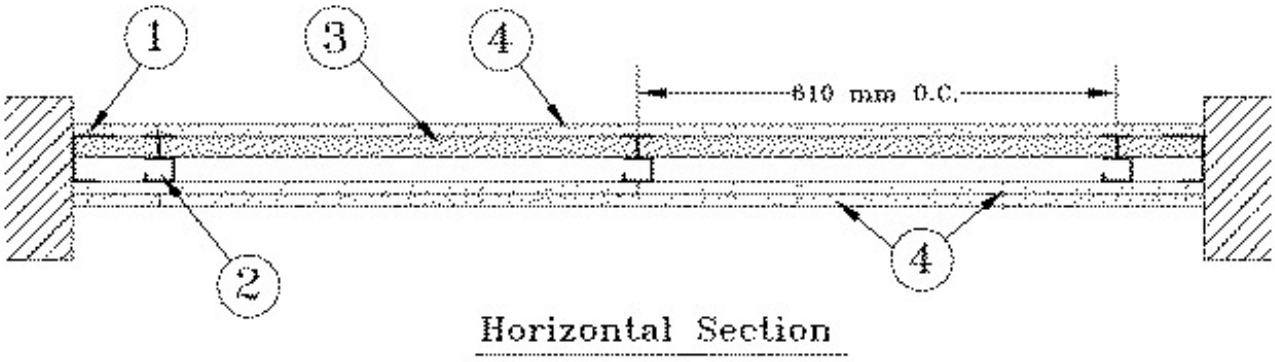
©

**System I - 3 h**




Horizontal Section

**System J - 3 h**




Horizontal Section

1. **Floor, Side and Ceiling Runners —** "J" -shaped runner, minimum 64 mm deep, with unequal legs of 29 mm and 54 mm, fabricated from minimum 0.53 mm galvanized steel. Runners positioned with short leg toward finished side of wall. Runners attached to structural supports with steel fasteners located not greater than 50.8 mm from ends and not greater than 610 mm OC.

2. **Steel Studs —**

**Systems A, B, E, G and I**

"I" -shaped studs fabricated from minimum 0.53 mm galvanized steel, minimum 64 mm deep, 38 mm wide. Studs contain 19 mm wide by 57 mm high holding tabs spaced 70 mm OC. Cut to lengths 15.9 mm less than floor-to-ceiling height and spaced 610 mm.

**Systems C, D, F, H and J**

"C-T" -shaped studs, minimum 64 mm deep, 38 mm wide, fabricated from minimum 0.53 mm galvanized steel. Cut to lengths 15.9 mm less than floor-to-ceiling height and spaced 610 mm or

"C-H" - shaped studs, min 64 mm deep, fabricated from min 0.53 mm galvanized steel. Cut to lengths 15.9 mm less than floor-to-ceiling height and spaced 610 mm OC.

2A. **Steel Studs —** (Not Shown) —Alternate to Item 2, "E" - shaped studs installed back to back in place of "C-H" - shaped studs (Item 2) "E" - shaped studs secured together with steel screws spaced a maximum 305 mm OC. Fabricated from min 25 MSG (min 20 MSG when Item 5A is used) galv steel, min 64 mm deep, with one leg 25.4 mm long and two legs 19 mm long. Shorter legs 25.4 mm apart to engage gypsum liner panels. Cut to lengths 9.5 mm to 12.7 mm less than floor to ceiling heights.

- 3. **Gypsum Wallboard —** (CKNXC). Gypsum liner panels, nominal 25.4 mm thick, 610 mm wide. Panels cut maximum 25.4 mm less in length than floor to ceiling height. Vertical edges inserted in "T" -shaped section of "C-T" studs, the "H"-shaped section of "C-H" studs or tabs holding tabs of "I" studs. Free edge of end panels attached to long leg of "J" - runners with 41 mm long Type S self-drilling, self-tapping bugle head steel screws spaced not greater than 305 mm OC. When Type EGRG Shaftliner panel is used the hourly rating is limited to 1 hr and 2 hr only.

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- 4. **Gypsum Wallboard —** (CKNXC).

**Systems A and C**

Gypsum panels, nominal 12.7 mm or 15.9 mm thick, 1220 mm wide, applied in one of the following methods. Method 1 — Base layer installed horizontally to steel studs with 25.4 mm long Type S self-drilling, self-tapping bugle head steel screws spaced 610 mm OC. Face layer installed vertically to steel studs with 41 mm long Type S self-drilling, self-tapping bugle head steel screws spaced 610 mm OC, staggered 305 mm from base layer screws. Method 2 — Base layer installed vertically to steel studs with 25.4 mm long Type S self-drilling, self-tapping bugle head steel screws spaced 610 mm OC. Face layer installed horizontally to steel studs with 41 mm long Type S self-drilling, self-tapping bugle head steel screws spaced 610 mm OC, staggered 305 mm from base layer screws. When Type EGRG Shaftliner panels are used, the base layer of gypsum board installed horizontally to steel studs with 25.4 mm long Type S self-drilling, self-tapping bugle head steel screws spaced 610 mm OC. Face layer installed vertically to steel studs with 41 mm long Type S self-drilling, self-tapping bugle head steel screws spaced 305mm OC, staggered 305 mm from base layer screws. Method 2 — Base layer of gypsum board installed vertically to steel studs with 25.4 mm long Type S self-drilling, self-tapping bugle head steel screws spaced 610 mm OC. Face layer installed horizontally to steel studs with 41 mm long Type S self-drilling, self-tapping bugle head steel screws spaced 305 mm OC, staggered 305 mm from base layer screws.

Additionally, Type G screws to be installed at the center of each stud cavity, 38 mm from both sides of the horizontal joint. For the 12.7 mm thick and 15.9 mm thick boards, the Type G screw length shall be 32 mm and 38 mm long, respectively. Method 3 — Base layer installed vertically to steel studs with 25.4 mm long Type S self-drilling, self-tapping bugle head steel screws spaced 610 mm OC. Face layer installed vertically to steel studs with 41mm long Type S self-drilling, self-tapping bugle head steel screws spaced 610 mm OC, staggered 305 mm from base layer screws. Vertical joints centered over studs and staggered 610 mm on adjacent layers.

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**Systems B and D**

Gypsum panels, nominal 12.7 or 15.9 mm thick, 1220 mm wide, applied vertically to steel studs with 25.4 mm long Type S self-drilling, self-tapping bugle head steel screws spaced 305 mm OC. Vertical joints on opposite sides of wall staggered a minimum of 610 mm.

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**Systems E and F**

Gypsum panels, nominal 15.9 mm thick, 1220 mm wide, applied vertically with edges centered over studs, with 25.4 mm long Type S self-drilling, self-tapping bugle head steel screws spaced 305 mm OC.

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**Systems G and H**

Gypsum panels, nominal 15.9 mm thick, 1220 mm wide applied in three layers to one side of the assembly. Base layer applied vertically, remaining layers applied vertically or horizontally. Base layer attached to studs with 25.4 mm long Type S steel screws spaced 610 mm OC. Middle layer attached to studs with 41 mm long Type S steel screws spaced 610 mm OC when installed vertically or 406 mm OC when installed horizontally. Face layer attached to studs with 57 mm long Type S steel screws spaced 406 mm OC when installed vertically or 305 mm OC when installed horizontally. Screws offset 152 mm from layer below. Horizontal joints on adjacent layers staggered a minimum of 305 mm When applied horizontally, 38 mm long Type G screws to be installed at the center of each stud cavity, 38 mm from both sides of the horizontal joint. Vertical joints centered over studs and staggered 610 mm on adjacent layers.

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**Systems I and J**

Gypsum panels, nominal 15.9 mm thick, 1220 mm wide applied in two layers to one side of the assembly and one layer to the other side. On the two layer side, base layer applied vertically, face layer applied vertically or horizontally. Base layer attached to studs with 25.4 mm long Type S steel screws space 610 mm OC. Face layer attached to studs with 41 mm long Type S steel screws spaced 610 mm OC when installed vertically or 406 mm OC when installed horizontally. Screws offset 152 mm from layer below. When applied horizontally, 38 mm long Type G screws to be installed at the center of each stud cavity, 38 mm from both sides of the horizontal joint. Vertical joints centered over studs and staggered 610 mm on adjacent layers. On the one layer side, panels applied vertically and attached to studs with 25.4 mm long Type S steel screws spaced 305 mm OC. Vertical joints on opposite sides of wall staggered minimum 610 mm OC.

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5. **Furring Channels —** (Optional, not shown) — For use with single or double layer systems. Resilient furring channels fabricated from min 25MSG corrosion protected steel, installed horizontally, and spaced vertically a max 610 mm OC. Flange portion of channel attached to each intersecting "I", "C-T", "C-H" or "E" stud on side of stud opposite the 25.4 mm. liner panels with 12.7 mm long Type S or S-12 pan-head steel screws. When furring channels are used, wallboard to be installed vertically only.

5A. **Steel Framing Members* —** (Optional, not shown) — For use with single or double layer systems. Furring channels and Steel Framing Members as described below:

a. **Furring Channels —** Formed of No. 25 MSG galv steel. 65 mm or 69 mm wide by 22.2 mm deep, spaced max. 610 mm OC perpendicular to studs. Channels secured to studs as described in Item b. Gypsum board installed vertically only.

b. **Steel Framing Members* —** Used to attach furring channels (Item 5Aa) to studs (Item 2 or 2A). Clips spaced max. 610 mm OC., and secured to studs with No. 8 x 38 mm minimum self-drilling, S-12 steel screw through the center grommet. Furring channels are friction fitted into

clips. RSIC-1 clips for use with 65 mm wide furring channels. RSIC-1 (2.75) clips for use with 69 mm wide furring channels.

**PAC INTERNATIONAL INC** — Types RSIC-1, RSIC-1 (2.75).

6. **Joint Tape and Compound —** (Not shown) — Joints covered with joint compound and paper or mesh tape. Screw heads covered with joint compound.

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