

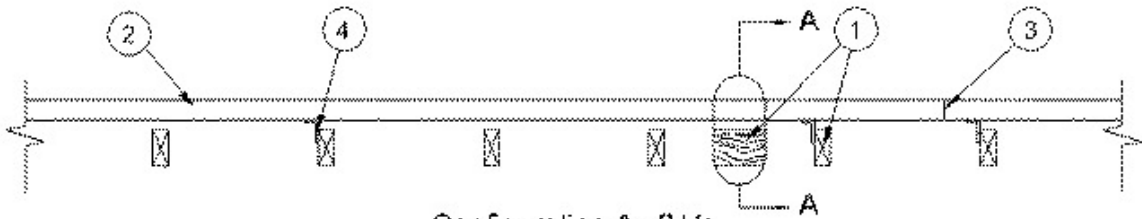
# Fire Resistance Ratings - ANSI/UL 263

Design No. U210

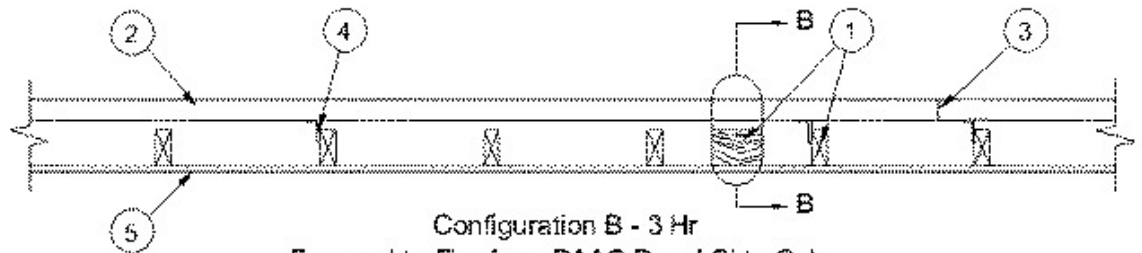
January 06, 2005

Bearing Wall Rating — 2, 3 or 4 Hr (See Items 5, 7 and 8)

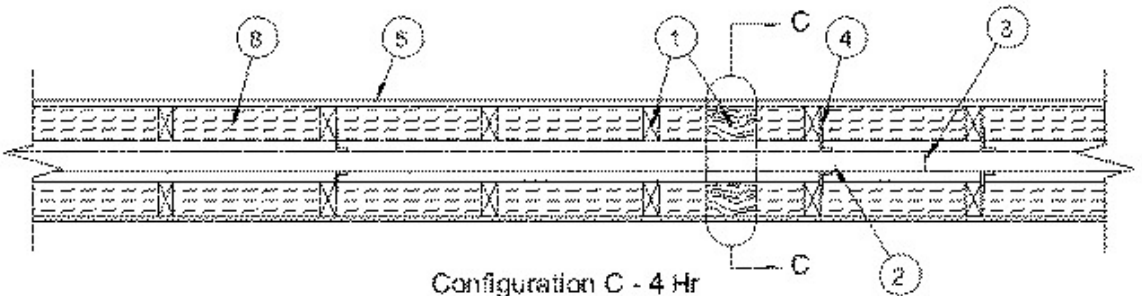
Finish Rating — See Item 9



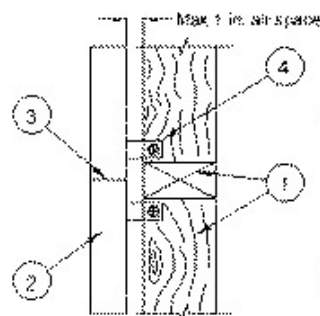
Configuration A - 2 Hr  
Exposed to Fire from PAAC Panel Side Only



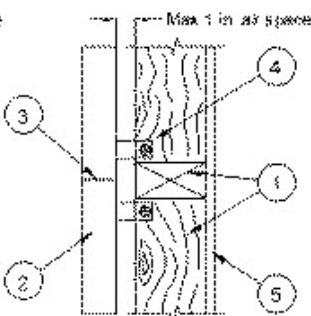
Configuration B - 3 Hr  
Exposed to Fire from PAAC Panel Side Only



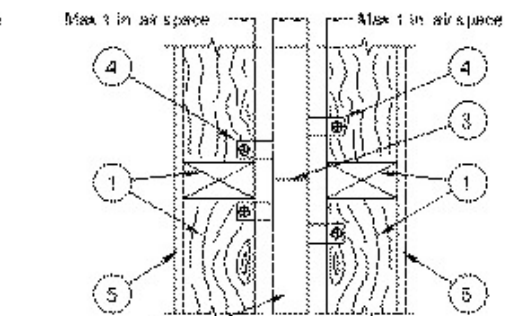
Configuration C - 4 Hr  
Exposed to Fire from Either Side



Section A-A



Section B-B



Section C-C

1. **Wood Studs** — Nom 2 in. by 4 in., spaced a max of 16 in. OC. Studs to be effectively firestopped at the top and bottom of the wall with nom 2 in. by 4 in. plates. Studs effectively cross-braced.

1A. **Steel Studs** — (Not shown - Not to be used with Item 8, Batts and Blankets) — Min 0.0329 in., bare metal thickness (No. 20 MSG) corrosion-protected steel studs, min 3-1/2 in. wide, cold formed, designed in accordance with the current edition of the Specification for the Design of Cold-Formed Steel Structural Members by the American Iron and Steel Institute (AISI). All design details enhancing the structural integrity of the wall assembly, including the axial design load of the studs, shall be as specified by the steel stud designer and/or producer, and shall meet the requirements of all applicable local code agencies. The max stud spacing shall not exceed 16 in. OC. Studs attached to floor and ceiling runners (Item 1B) with 1/2 in. long Type S-12 steel screws on both sides of the studs or by welded or bolted connections designed in accordance with the AISI specifications.

1B. **Floor and Ceiling Runners** — (Not shown) — For use with Item 1A. Channel shaped, fabricated from min 0.0329 in., bare metal thickness (No. 20 MSG) corrosion-protected steel, that provide a sound structural connection between steel studs and adjacent assemblies such as floors, ceilings and/or other walls. Attached to floor and ceiling assemblies with steel fasteners spaced not greater than 24 in. OC.

2. **Precast Autoclaved Aerated Concrete Panels\*** — 2 in. thick, max 24 in. wide and 8 ft or 10 ft long panels installed horizontally or vertically. Panels secured to studs with attachment clips (Item 4). Vertical and horizontal joints need not be backed by nor centered over studs. Butt joints staggered min. 16 in. from adjacent panels.

## **THERMACRETE L L C**

3. **Thin Bed Mortar** — Applied to the horizontal and vertical joints of each precast autoclaved aerated concrete panel.

4. **Attachment Clips** — Aluminum angles 0.048 in. - 0.060 in. thick and 2 in. wide with one 2 in. leg and one 2-1/2 in. leg. A 0.704 in. outside diameter and 0.375 in. inside diameter rubber grommet is pre-attached in the 2-1/2 in long leg of the angle. Clips positioned with 2 in. leg on panel side and 2-1/2 in. leg on stud side. Clips attached to studs (Item 1 or 1A) with one 1-5/8 in. long screw through a 3/4 in. diameter washer and the rubber grommet. Clips attached to panel (Item 2) with two 1-5/8 in. long sharp point high-low thread screws spaced 3/4 in. OC at pre-drilled holes. Max. 1 in. airspace between edge of stud and panel. Panel screws angled 20 degrees from the horizontal as shown. When panels are installed vertically, clips spaced max 16 in. from horizontal joints and max 4 ft OC vertically per panel. When panels are installed horizontally, clips spaced max 16 in. from vertical joints and max 4 ft OC horizontally per panel. Minimum of three clips per 8 ft long side of panel. Minimum of three clips per 10 ft long side of panel. Configuration C - Clips staggered on opposite sides of panel to permit attachment to studs and panels.

5. **Gypsum Board** —

### **Configuration A**

(Optional — Not Shown) — Gypsum Board - Classified or Unclassified - One layer of min 1/2 in. thick by 48 in. wide boards installed horizontally or vertically to wood studs or steel studs. Gypsum board attached to wood studs using 1-5/8 in. wallboard screws spaced 8 in. OC along the edges and in the field. Gypsum board attached to steel studs using 1 in. long Type S-12 steel screws spaced 8 in. OC along the edges and in the field.

### **Configuration B**

(Required) — Gypsum Board - Classified or Unclassified - One layer of min 1/2 in. thick by 48 in. wide boards installed horizontally or vertically to wood studs or steel studs. Gypsum board attached to wood studs using 1-5/8 in. wallboard screws spaced 8 in. OC along the edges and in the field. Gypsum board attached to steel studs using 1 in. long Type S-12 steel screws spaced 8 in. OC along the edges and in the field.

### **Configuration C**

(Required) —Gypsum Board\*- Classified - One layer of min 5/8 in. thick by 48 in. wide boards installed horizontally or vertically to wood studs. Gypsum board attached to wood studs using 1-5/8 in. wallboard screws spaced 8 in. OC along the edges and in the field. See **Gypsum Board\*** (CKNX) category for names of Classified companies

6. **Repair Mortar** — Applied to surface cracks on both sides of precast autoclaved aerated concrete panel.

### **7. Finishing System** —

#### **Configuration A**

(Not Shown) — Gypsum board joints optionally covered with paper tape and joint compound. Nail heads optionally covered with joint compound.

#### **Configurations B and C**

Not Shown) — Gypsum board joints to be covered with paper tape and joint compound. Nail heads optionally covered with joint compound.

### **8. Batts and Blankets\*** —

#### **Configurations A and B**

(Optional — Not Shown — Not to be used with Item 1A) — Placed to completely or partially fill the stud cavities, any glass fiber or mineral wool insulation, max 3.0 pcf density, bearing the UL Classification Marking as to Surface Burning Characteristics and/or Fire Resistance. See Batts and Blankets (BKNV or BZJZ) Categories for names of Classified Companies.

#### **Configuration C**

(Required — Not to be used with Item 1A) — Placed to completely fill the stud cavities in both rows of studs, any glass fiber or mineral wool insulation, max 3.0 pcf density, bearing the UL Classification Marking as to Surface Burning Characteristics and/or Fire Resistance. See Batts and Blankets (BKNV or BZJZ) Categories for names of Classified Companies.

## 9. Finish Rating —

### **Configurations A and B**

Finish rating is 142 minutes when airspace is 0 in., with or without Batts and Blankets\*. Finish rating is 147 minutes when Batts and Blankets\* are used and airspace is 1 in. Finish rating is 155 minutes when Batts and Blankets\* are not used and airspace is 1 in.

### **Configuration C**

Finish rating is 25 minutes without Batts and Blankets. Finish rating has not been determined when Batts and Blankets are used. See Burning Characteristics and/or Fire Resistance. See Batts and Blankets (BKNV or BZJZ) Categories for names of Classified Companies.

\*Bearing the UL Classification Mark

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