UL Product iQ®

FWFO.EWS0045 - Exterior Wall Systems

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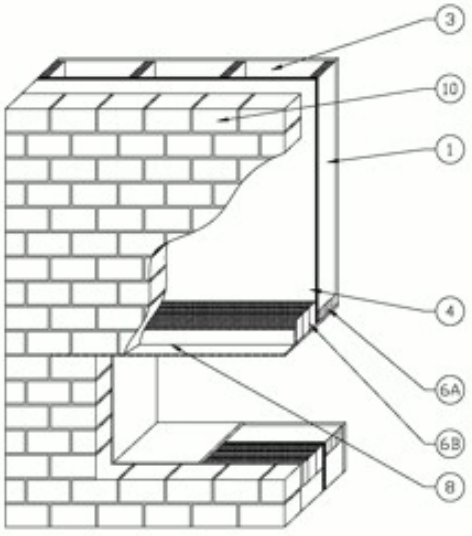
See General Information for Exterior Wall Systems

System No. EWS0045

July 14, 2022

Exterior Wall System



1. **Framing Members (CIKV, BPVV)* —** Pressure-treated, fire-retardant wood studs, nominal 2 by 4 in., spaced 16 in. (406 mm) OC effectively firestopped. As an alternate, pressure-treated, fire-retardant wood studs, nominal 2 by 6 in., spaced max 24 in. (610 mm) OC, effectively fire-stopped. Additional studs to be used to completely frame window openings (see Item 6).
HOOVER TREATED WOOD PRODUCTS INC — Pyro-Guard treated lumber

2. **Batts and Blankets (BZJZ, BKNV)* — Stud Cavity Insulation —** (Not Shown) — Faced or unfaced mineral fiber insulation, 3-1/2 in. (89 mm) thick, minimum 3.0 pcf (48 kg/m^3), pressure fit in the wall cavity between stud, plates, and cross bracing. Insulation may be applied in multiple layers to achieve final thickness.
See **Batts and Blankets** (BZJZ, BKNV) category for names of Classified manufacturers.

2A. **Batts and Blankets (BZJZ, BKNV)* — Alternate Stud Cavity Insulation —** (Not Shown) — Faced or unfaced glass fiber batts, 3-1/2 in. (89 mm) thick, nom 1.40 pcf (22.4 kg/m^3) with a min R-15 thermal insulation rating, friction fit in the wall cavity between stud, plates, and cross bracing. Insulation may be applied in multiple layers to achieve final thickness.

See **Batts and Blankets** (BZJZ, BKNV) category for names of Classified manufacturers.

2B. **Fiber, Sprayed (CCAZ, BNST)* — Alternate Stud Cavity Insulation —** (Not Shown) — Spray applied granulated mineral fiber material. Applied with adhesive at a minimum density of 4.0 pcf (64 kg/m^3) to completely fill the wall cavity in accordance with the application instructions supplied with the product.
See **Fiber, Sprayed** (CCAZ, BNST) category for names of Classified manufacturers.

3. **Interior Gypsum Board (CKNX)* —** Min 5/8 in. (16 mm) thick, 4 ft (1.2 m) wide, two layers applied vertically. Base layer nailed to wood studs (Item 1) 6 in. (152 mm) OC with 1-7/8 in. (48 mm) long, 0.0915 in. (2.3 mm) shank diam. and 1/4 in.(6.4 mm) diam. head 6D coated nails. Face layer nailed to the wood studs (Item 1) over the base layer, with joints staggered, 8 in. (203 mm) OC with 8d cement coated nails, 2-3/8 in. (60 mm) long, 0.113 in. (2.9 mm) shank diam. 9/32 in. (7.1 mm) diam. head. Joints oriented vertically or horizontally and covered with paper tape and joint compound. Nail heads covered with joint compound.
See **Gypsum Board** (CKNX) Category for names of Classified Companies

4. **Building Units (BZXX, BUGV)* — Exterior Sheathing —** Pressure-treated, fire-retardant plywood, installed vertically, nailed to the wood framing with 1-7/8 in. (48 mm) long, 6d nails, spaced 6 in. (152 mm) OC on the perimeter and 12 in. (305 mm) OC in the field. Vertical and horizontal joints are backed by framing. Panels provided in nominal size of 48 in. wide by 96 in. long by 15/32 in. (12 mm) thick.
HOOVER TREATED WOOD PRODUCTS INC — Pyro-Guard treated plywood panels

4A. **Weather Resistive Barrier (FWFX)* —** (Not Shown) — Weather resistive barrier is applied to entire surface of exterior sheathing (Item 4). Joints in exterior sheathing have 4 in (101.6mm) DCH Reinforcing Fabric centered over joint, embedded in first coat of barrier coating. Weather barrier to be applied to 60 mil thickness in one coat sprayed, or two coats (30 mil thick) rolled.

HARDCAST — Barritech-VP. 62790

4B. **Weather Resistive Barrier (FWFX)*** — (Not Shown) — Self-Adhered barrier applied to completely cover the exterior sheathing (Item 4) with min 3 in. (51 mm) vertical or horizontal overlap between layers.

TREMCO INC — ExoAir 110AT 536307

5. **Mineral Wool —** (Not Shown) — Minimum 4 pcf (64 kg/m^3), 4 in. (102 mm) thick mineral batt insulation installed within stud cavity at floor line locations. Insulation installed filling full depth of stud cavity for the full depth of the floor line.

6. **Window System —** The following items shall be used as materials when framing the interior surface of an opening in the exterior wall assembly:
A. **Treated Lumber (BPVV)* — Window Framing —** One layer of nom 2 by 4 in. (50 by 102 mm) treated lumber or 2 by 6 in. (50 by 152 mm) treated lumber, secured to wood studs (Item 1) with two rows of No. 10 by 2-1/2 in. (64 mm) wood screws, spaced max 12 in. (305 mm) OC, to line framed window opening.
HOOVER TREATED WOOD PRODUCTS INC — Pyro-Guard

B. **Treated Lumber (BPVV)* — Buck Extension —** Maximum of three layers of nom 2 by 4 in. (50 by 102 mm) treated lumber secured to wood studs (Item 1) and window framing with two rows of min No. 10 by 2-1/2 in. (64 mm) wood screws, spaced max 16 in. (406 mm) OC, to frame exterior window opening. Each additional layer is secured with two rows of min No. 10 by 2-1/2 in. (64 mm) wood screws, spaced max 16 in. (406 mm) OC, to the previous layers.
HOOVER TREATED WOOD PRODUCTS INC — Pyro-Guard

7. **Masonry Veneer Anchors —** (Not Shown) — Max 3-1/2 in. (89 mm) zinc barrel screw masonry veneer anchors with min 1 in. (25 mm) long self-drilling tip with min 1/2 in. (13 mm) stud penetration, attached into wood studs (Item 1). Includes flanged head/integral zinc/EPDM washer, and thermal break clip to receive double pintle wire tie. Installed on each stud spaced 18 in. (457 mm) vertically with 2 in. (51 mm), 0.2 in. (5 mm) thick plastic pronged brick-tie washers.

8. **Steel Lintel —** Nom 4 by 4 in. (102 by 102 mm) by min 3/8 in. (10 mm) thick steel extending from face of the buck extension (Item 6B) into exterior brick veneer (Item 10A) at top of window opening and extending min 9 in. (229 mm) beyond each side of the window opening, into the brick veneer (Item 10A) mortar joints.

9. **Metallic Flashing —** (Not Shown) — Formed of min 0.040 in. (1 mm) aluminum, bronze, copper, galvanized or stainless steel to cover exterior sheathing (Item 4) by min 12 in. (305 mm), completely cover the buck extension (Item 6B) and overlap onto steel lintel (Item 8) min 4 in. (102 mm) at top of window opening.

10. **Exterior Finishing —** The following items may be used as exterior finishing for the wall system:
A. **Exterior Veneer - Brick —** Nom 4 in. (102 mm) thick clay brick veneer offset to provide a max 2 in. (51 mm) air gap between Exterior Sheathing (Item 4) and brick veneer with standard type veneer anchors (Item 7), spaced a max 24 in. (610 mm) on center.

B. **Concrete —** Min 2 in. (51 mm) thick with max 2 in. (51 mm) air gap between Exterior Sheathing (Item 4) and concrete.

C. **Concrete Masonry Units —** Min 2 in. (51 mm) thick with max 2 in. (51 mm) air gap between Exterior Sheathing (Item 4) and concrete masonry units.

D. **Stone Veneer —** Min 2 in. (51 mm) thick natural or artificial stone veneer with any standard installation technique.

E. **Terracotta Cladding —** Min 1-1/4 in. (32 mm) thick with any standard installation technique.

F. **Stucco —** Min 3/4 in. (19 mm) thick exterior cement plaster lath.

G. **Fiber Cement Siding —** Fiber Cement Lap or Vertical Siding. Minimum 5/16 in. (8 mm) thick, fastened to wood studs (Item 1) through the Exterior Sheathing (Item 4) with nails or screws, at the locations specified by the manufacturer.

11. **Window Flashing —** (Optional) — (Not Shown) — Formed of min 0.040 in. (1 mm) aluminum, bronze, copper, galvanized or stainless steel to completely line window opening and overlap onto both surfaces of the wall assembly a min 1/2 in. (13 mm).

*** Indicates such products shall bear the UL Certification Mark**

Last Updated on 2022-07-14