

**ROXUL Inc.**  
**Design No. RI/MFF 30-01**  
**Mineral Wool Insulation**  
**CAVITYROCK and COMFORTBOARD 110**  
**NFPA 285 – Meets Conditions of Acceptance**

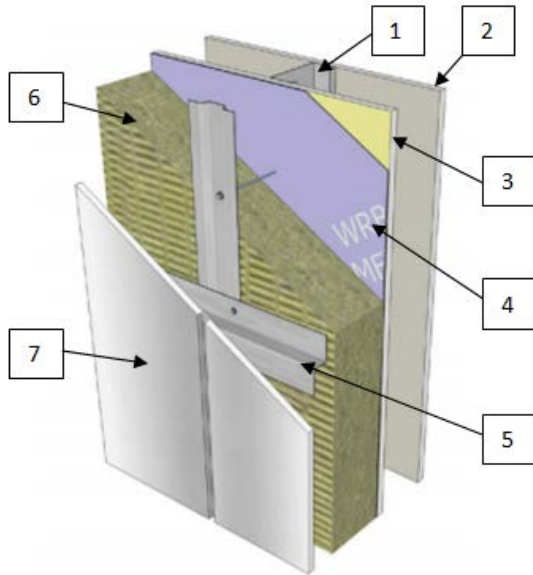


Figure 1: Construction with COMFORTBOARD 110

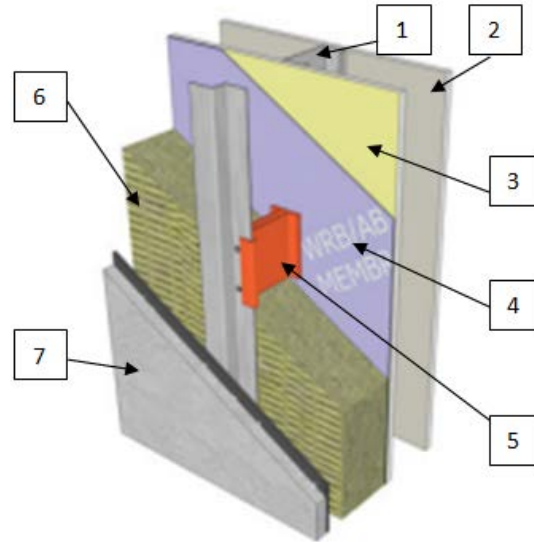


Figure 2: Construction with CAVITYROCK

- 1. FRAMING/STEEL STUDS: STEEL STUDS:** Min. 3-5/8 in. depth, min. GA per Table 1, max. 16 in. on center (oc) with the Cascadia Clip® and 24 in. oc with steel hat channels with lateral bracing every 4 ft. vertically. Secure steel studs to top and bottom track using approved screws.

Table 1: Steel Framing Gauge

Exterior Cladding	Steel Framing
larson® by Alucoil® FR ACM Panels (Item 7A)	18 GA
ALPOLIC® FR Wall Panels from Mitsubishi Plastics Inc. (Item 7B)	20 GA
Non-combustible Cladding Options (Item 7C)	20 GA

- 2. INTERIOR GYPSUM:** Apply one layer of 5/8 in. thick, Type X gypsum board to the interior side of the steel framing with the long dimension parallel to the steel studs. Secure using no. 6, 1-1/4 in. long, Type S screws spaced nominally 8 in. oc around the perimeter and 12 in. oc in the field.

**JOINT TAPE AND COMPOUND (Not Shown)** – Apply a level 2 finish of vinyl or casein, dry or premixed, joint compound applied in two coats to all exposed fastener heads and gypsum board joints. Embed min. 2 in. wide paper, plastic, or fiberglass tape in first layer of compound over joints in gypsum board (Item 3).

- 3. EXTERIOR SHEATHING:** Install 1/2 in. thick DensGlass® Gold exterior sheathing to the exterior side of the steel framing (Item 2) with the long dimension perpendicular to the steel studs. Secure using no. 6, 1-1/4 in. long, Type S screws spaced nominally 8 in. oc around the perimeter and 12 in. oc in the field.

**4. WATER RESISTIVE BARRIER (WRB):**

Install a single layer of Henry BlueskinVP™, or Blueskin® SA, or any certified WRB that meets the following requirements: ASTM E84 FSI ≤ 75 and SDI ≤ 450.

**5. THERMAL SPACER: CASCADIA CLIP®:**

The Cascadia Clip® Fiberglass Thermal Spacer is manufactured with the glass fiber and polyester resin with a max. depth of 6 in. The Cascadia Clip® is installed between the exterior wall cladding and structural substrates of the walls. The z-girt is clipped on to the Cascadia Clip® vertically, typically 26 in. oc. The clip is screwed into the substrate using different fastener lengths for different framing options.

The fastener should be 1/4 - 14 × [102] [127] [152] [178] [204] mm long with hex-head when attached to steel framing. The screw of the Cascadia Clip® will puncture the WRB and outer layer of gypsum. The Cascadia Clip® should be installed as per manufacturer's instructions and to meet their IAPMO report (ER #410).

In construction in which the exterior cladding is a non-combustible cladding (Item 7C) the Cascadia Clip® must be fastened per the Cascadia Clip® manufacturer's installation guide.

COMFORTBOARD 110 is installed with steel vertical steel hat channels and steel z-girts in lieu of the Cascadia Clip® system per Roxul's installation guide.

**6. CERTIFIED MANUFACTURER: ROXUL Inc.**

**CERTIFIED PRODUCT:** Mineral Wool Insulation

**CERTIFIED MODEL:** CAVITYROCK and COMFORTBOARD 110

The ROXUL mineral wool insulations are described below. The CAVITROCK products are to be sized from 2 in. to 6 in. for use with the Cascadia Clip® (Item 5). Follow the ROXUL Cascadia Clip® installation guide (Detail D) on the ROXUL website. The

Cascadia Clips® are fastened to the girts and spaced accordingly. The clip is then fastened to the wall and the steel stud structure (Item 1) behind. The ROXUL product is then added between the clips after all the clips have been put in place.

COMFORTBOARD 110 is installed with steel vertical steel hat channels and steel z-girts in lieu of the Cascadia Clip® system per ROXUL's installation guide.

**7. EXTERIOR CLADDING:** Use composite panels or non-combustible cladding as indicated in Items 7A through 7C.

A. LARSON® BY ALUICOIL® FR – Install the Alucoil® FR panels using the "J.W. McDougall 150 Series Route and Return Wet Seal System" or equivalent, consisting of the following elements:

- i. "L" Channels: Install vertical aluminum "L" shaped channels, secured through the exterior sheathing (Item 3) into the steel framing (Item 1) around the perimeter of the assembly. Secure clip extrusion channel into steel framing (Item 1) using no. 12, 11 × 2 in. long self-drilling screws spaced max. 24 in. oc.
- ii. Aluminum Composite Metal Panel: Install Alucoil® FR 4 mm or 6 mm ACM panels to "L" channels using no 12, 11 × 3/4 in. long stainless steel fasteners spaced nominal 18 in. oc.
- iii. Aluminum Extrusions: Secure aluminum composite metal panels (Item 7B) in the field assembly using aluminum extrusions attached directly to the panels using no 10 × 3/4 in. self-drilling hex-head plated steel fasteners.
- iv. Backer Rod: Install nominal 1/2 in. diameter Tundra Foam open cell backer rod in all horizontal and vertical seams between aluminum composite panels.
- v. Sealant: Install DOW 795 over the backer rod (Item 6D) to bring the surface flush composite panels (Item 7B).

- B. ALPOLIC® FR – Install the ALPOLIC® FR panel system using route and return Universe Corporation, Universe® 2000R Dry-set Wall System, or equivalent route and return system. Install in accordance with the wall system manufacturer's specifications and the following requirements:
- i. Spline Angles: Angles are shop attached at corners with F.H. pop rivets.
  - ii. Plastic Shim: Use 1/8 in. + 1/16 in. plastic shim.
  - iii. Extrusion Fastener: No. 10 × 1-3/4 in. H.W.H. head, spaced 16 in. oc for the first layer of gypsum board (Item 2), and no. 10 × 2-1/2 in. H.W.H. head, 16 in. oc for the second layer of gypsum board.
  - iv. Aluminum Extrusion Retainer: Use 5/8 in. aluminum retainers between vertical and horizontal joints.
  - v. Panel Stiffeners (Not Shown): Attach aluminum stiffeners at a max. spacing of 24 in. with structural silicone sealant.
- C. NON-COMBUSTIBLE CLADDING – Options including anchored masonry, stone veneer, slab-type veneer, terra cotta, fiber-cement siding can be used per the product specifications and installations set out in the 2015 International Building Code.