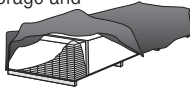


CEDAR ▪ GROOVED CEDAR

IMPORTANT: FAILURE TO INSTALL AND FINISH THIS PRODUCT IN ACCORDANCE WITH APPLICABLE BUILDING CODES AND THE MANUFACTURER'S WRITTEN APPLICATION INSTRUCTIONS MAY LEAD TO PERSONAL INJURY, AFFECT SYSTEM PERFORMANCE, VIOLATE LOCAL BUILDING CODES, AND VOID THE PRODUCT ONLY WARRANTY.

STORAGE & HANDLING:

Store flat and keep dry and covered prior to installation. Installing product wet or saturated may result in shrinkage at butt joints. Carry product on edge. Protect edges and corners from breakage. Cemboard® is not responsible for damage caused by improper storage and handling of the product.



OUTDOORS

- Position cutting station so that wind will blow dust away from user and others in working area.
- Use one of the following methods:
 - Best: i. Score and snap ii. Shears (manual, electric or pneumatic)*
 - Better: Dust reducing circular saw

CUTTING INSTRUCTIONS*

equipped with a HardieBlade® saw blade and vacuum dust extraction
 c. Good: Circular saw with a HardieBlade saw blade (for low to moderate cutting volume)

* Shears and score/snap methods may not be suitable for products thicker than 1/2 in.

INDOORS

- NEVER cut with power saws indoors
- Cut only using score and snap, or shears (manual, electric or pneumatic).
- Position cutting station in well-ventilated area

– NEVER dry sweep – Use wet suppression or Vacuum

NIOSH-approved respirators can be used in conjunction with above cutting practices to further reduce dust exposures. Additional exposure information is available at www.jameshardie.com to help you determine the most appropriate cutting method for your job requirements. If concern still exists about exposure levels or you do not comply with the above practices, you should always consult a qualified industrial hygienist or contact the manufacturer for further information. SD083105

GENERAL REQUIREMENTS (For elevations of 4000 ft. and above please refer to page 3 for specific requirements):

- Refer to table 1 for Cemboard's multifamily/commercial drainage requirements.
- Cempanel® vertical siding can be installed over braced wood or steel studs spaced a maximum of 2 ft. (610mm) o.c. Irregularities in framing and sheathing can mirror through the finished application.
- Consult ESR1844 for fastener schedule as well as additional technical information at www.jameshardiecommercial.com.
- A water-resistive barrier is required in accordance with local building code requirements. The water-resistive barrier must be appropriately installed with penetration and junction flashing in accordance with local building code requirements. Cemboard® will assume no responsibility for water infiltration. Cemboard does market HardieWrap® Weather Barrier, a non-woven non-perforated housewrap¹, which complies with building code requirements.
- Information on installing Cemboard products over foam can be located in JH Tech Bulletin 19 at www.jameshardie.com.
- Do not install Cemboard products, such that they may remain in contact with standing water.
- Cempanel vertical siding may be installed on vertical wall applications only.
- DO NOT use Cempanel vertical siding in Fascia or Trim applications.
- The designer and/or architect shall take into consideration the coefficient of thermal expansion and moisture movement of the product in their design. These values can be found in the Technical Bulletin #8 "Expansion Characteristics of Jame Hardie® Siding Products" at www.jameshardiecommercial.com.

Table 1: Cempanel® Siding – Wall Drainage Requirements

		Exterior Wall Drainage Requirements							
		With a Minimum 12-inch Eave Overhang		Without a Minimum 12-inch Eave Overhang					
Building Height (Stories)		Vertical Joints formed by: Board and Batten; Moderate Contact; Caulk	Vertical Joints formed by Expressed Seam Joints	Vertical Joints formed by: Board and Batten; Moderate Contact; Caulk	Vertical Joints formed by Expressed Seam Joints				
Cemboard Panel Products > 30% of Building's Total Exterior Wall Covering	7 story building	Rainscreen (min. 3/8 in. air gap) ³							
	6 story building								
	5 story building								
	4 story building								
	3 story building								
	2 story building								
1 story building	WRB ¹								
Cemboard Panel Products ≤ 30% of Building's Total Exterior Wall Covering	7 story building	Rainscreen (min. 3/8 in. air gap) ³							
	6 story building								
	5 story building								
	4 story building					Drainage Plane (e.g. drainable WRB) with 90% drainage efficiency ²			
	3 story building								
	2 story building					WRB ¹			
1 story building									

¹ Water-resistive Barrier and drainage requirements as defined by building code.

² Water-resistive Barrier as defined by local building code that is manufactured in a manner to enhance drainage, must meet minimum 90% drainage efficiency when tested in accordance with ASTM E2273 or other recognized national standards.

³ Water-resistive Barrier (WRB) as defined by building code and a minimum 3/8 in. (10mm) air space between the WRB and the panel siding (formed by minimum 3/8 in. furring).

***DANGER: Do not breathe dust from this product. Respirable Crystalline Silica Dust causes damage to lungs and respiratory system through prolonged or repeated inhalation.**

Fiber cement is not a health hazard when handled or stored in its original, unaltered condition. The hazard associated with fiber cement arises from crystalline silica present in the dust generated by activities such as cutting, rebating, drilling, routing, sawing, crushing, or otherwise abrading fiber cement, and when cleaning up, disposing of or moving the dust. When doing any of these activities in a manner that generates dust: (1) follow James Hardie instructions and best practices to reduce or limit the release of dust; (2) warn others in the area to avoid the dust; (3) when using mechanical saw or high speed cutting tools, work outdoors and use dust collection equipment; and (4) if no other dust controls are available, wear a NIOSH-approved dust mask or respirator (e.g., the N 95 dust mask).

Refer to the product Safety Data Sheet before use. Do not handle product until all safety precautions have been read and understood. Wash hands and face thoroughly after handling. If exposed to dust or concerned, get medical advice. If shortness of breath or other health concerns develop after exposure to dust from the product, seek medical attention. Dispose of product in accordance with local, state and national regulations. If there are no applicable regulations, dispose of in a secure landfill, or in a way that will not expose others to dust.

WARNING: This product contains a chemical known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov/product.

For more information contact: James Hardie Building Products, Inc., 231 S. LaSalle St., Suite 2000, Chicago, IL 60604 USA 1-888 JHARDIE www.jameshardie.com www.jhsafesite.com

INSTALLATION:

- CemPanel® vertical siding must be joined on stud.
- Position fasteners 3/8 in. (9.5mm) from panel edges and no closer than 2 in. (50mm) away from corners.

JOINT TREATMENT

- Vertical Joints - Install panels in moderate contact (fig. 1); alternatively joints may also be covered with battens or caulked (fig. 2).
- Horizontal Joints - Provide positive slope Z-flashing at all horizontal joints (fig. 3).

Refer to Table 1 for correct installation condition

Water Resistive Barrier Condition

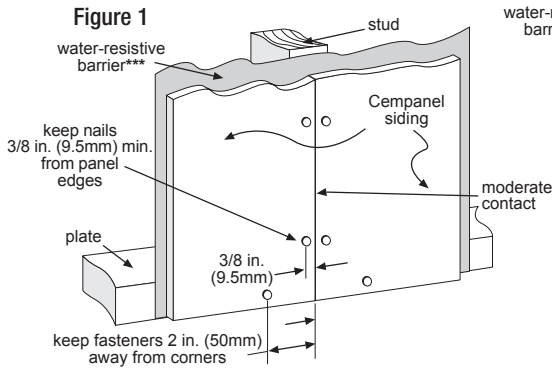


Figure 2

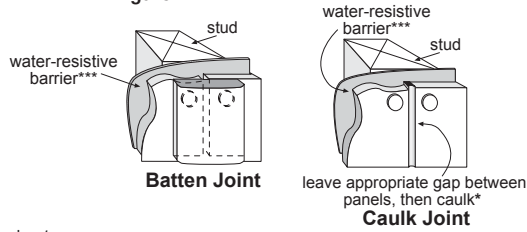


Figure 3

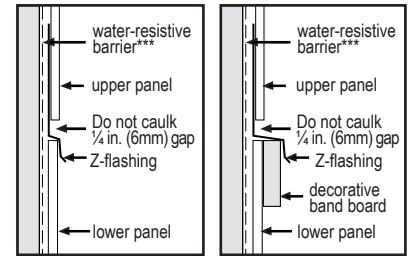
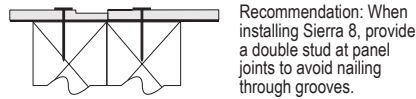


Figure 4



Drainage Plane/Wrap Condition

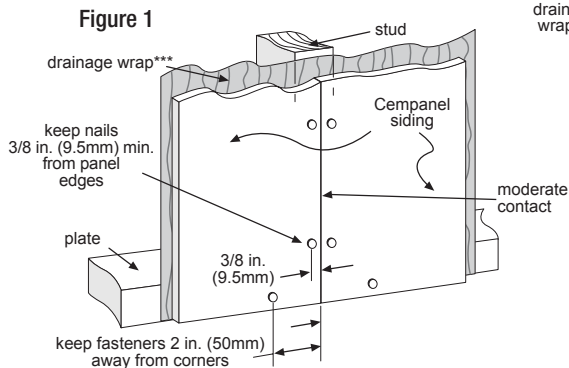


Figure 2

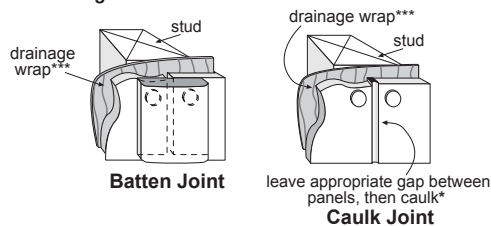


Figure 3

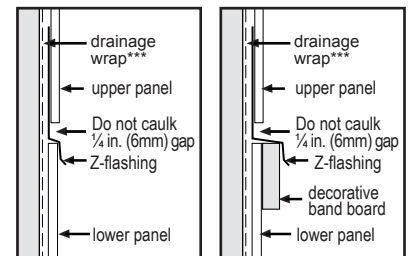
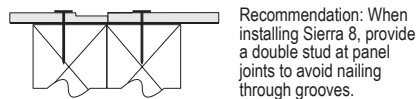


Figure 4



Furring/Rainscreen Condition

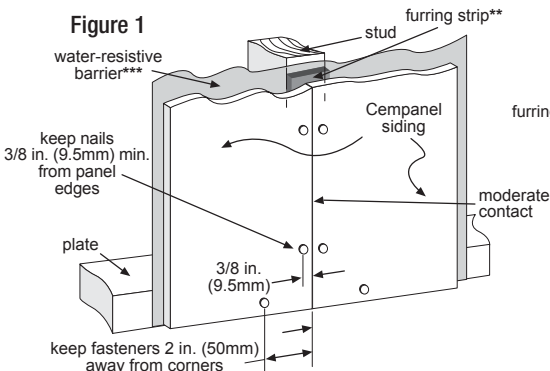


Figure 2

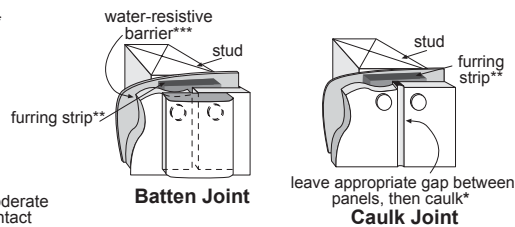


Figure 3

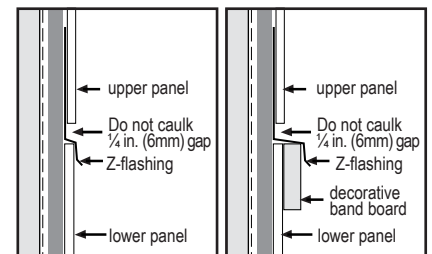
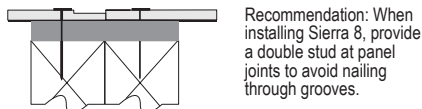


Figure 4



* Apply caulk in accordance with caulk manufacturer's written application instructions.

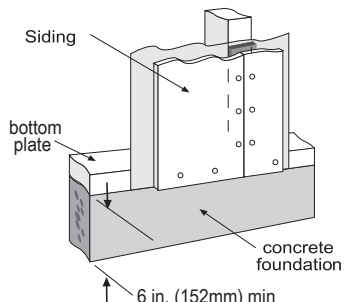
** Furring as prescribed in Table 1.

*** WRB or Drainage Plane as prescribed in Table 1.

CLEARANCES (For elevations of 4000 ft. and above please refer to page 3 for specific requirements)

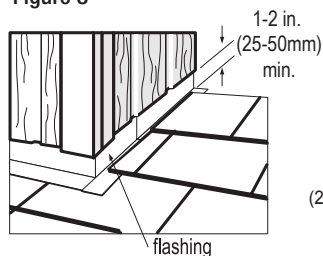
Install siding and trim products in compliance with local building code requirements for clearance between the bottom edge of the siding and the adjacent finished grade.

Figure 5



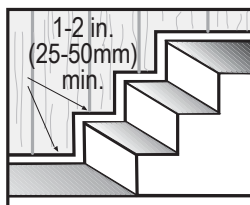
At the juncture of the roof and vertical surfaces, flashing and counterflashing shall be installed per the roofing manufacturer's instructions. A minimum 1-2 in. (25-50mm) clearance between the roofing and the bottom edge of the siding and trim.

Figure 8



Maintain a minimum 1-2 in. (25-50mm) clearance between Cemboard® products and paths, steps and driveways.

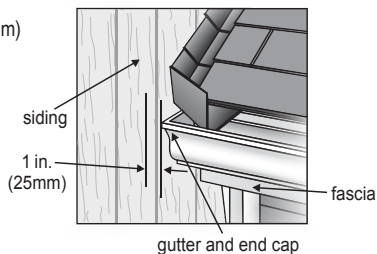
Figure 6



Maintain a 1/4 in. (6mm) clearance between the bottom of Cemboard products and horizontal flashing. Do not caulk gap. (refer to figure 3 on page 1)

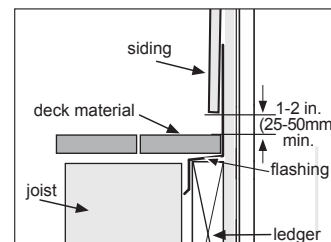
Maintain a minimum 1 in. (25mm) gap between gutter end caps and siding & trim.

Figure 9



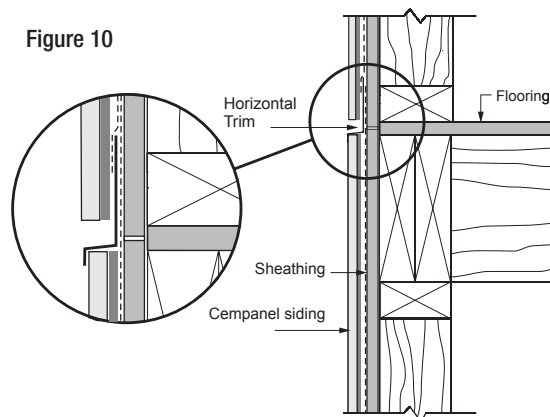
Maintain a minimum 1-2 in. (25-50mm) clearance between Cemboard products and decking material.

Figure 7



Do not bridge floors with Cempanel® siding. Horizontal joints should always be created between floors (fig. 10).

Figure 10



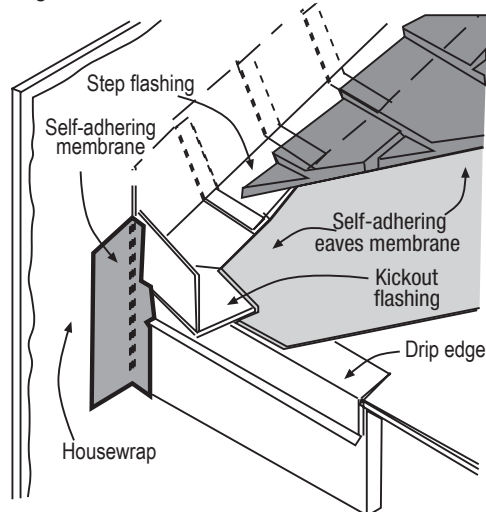
Note: Furring shown is as a best practice or as prescribed per Table 1.

KICKOUT FLASHING

Because of the volume of water that can pour down a sloped roof, one of the most critical flashing details occurs where a roof intersects a sidewall. The roof must be flashed with step flashing. Where the roof terminates, install a kickout to deflect water away from the siding. It is best to install a self-adhering membrane on the wall before the subfascia and trim boards are nailed in place, and then come back to install the kickout.

Figure 11, Kickout Flashing* To prevent water from dumping behind the siding and the end of the roof intersection, install a "kickout" as required by IRC code R905.2.8.3: "...flashing shall be a min. of 4 in. high and 4 in. wide." Cemboard® recommends the kickout be angled between 100° - 110° to maximize water deflection.

Figure 11



GENERAL FASTENING REQUIREMENTS

Fasteners must be corrosion resistant, galvanized, or stainless steel. Electro-galvanized are acceptable but may exhibit premature corrosion. The manufacturer recommends the use of quality, hot-dipped galvanized nails. The manufacturer is not responsible for the corrosion resistance of fasteners. Stainless steel fasteners are recommended when installing Cemboard® products near the ocean, large bodies of water, or in very humid climates.

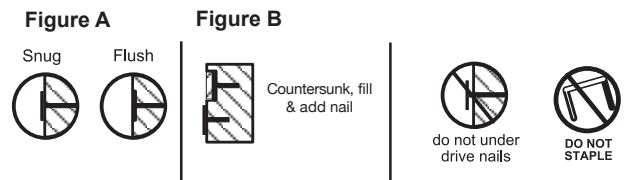
Manufacturers of ACQ and CA preservative-treated wood recommend spacer materials or other physical barriers to prevent direct contact of ACQ or CA preservative-treated wood and aluminum products. Fasteners used to attach HardieTrim Tabs to preservative-treated wood shall be of hot dipped zinc-coated galvanized steel or stainless steel and in accordance to 2009 IRC R317.3 or 2009 IBC 2304.9.5.

Note: When utilizing express seam joints ensure adequate nailable substrate width is available.

PNEUMATIC FASTENING

Cemboard® products can be hand nailed or fastened with a pneumatic tool. Pneumatic fastening is highly recommended. Set air pressure so that the fastener is driven snug with the surface of the siding. A flush mount attachment on the pneumatic tool is recommended. This will help control the depth the nail is driven. If setting the nail depth proves difficult, choose a setting that under drives the nail. (Drive under driven nails snug with a smooth faced hammer - Does not apply for installation to steel framing).

- Consult applicable code compliance report for correct fastener type and placement to achieve specific design wind loads.
- NOTE: Published wind loads may not be applicable to all areas where Local Building Codes have specific jurisdiction. Consult the Manufacturer's Technical Services if you are unsure of applicable compliance documentation.
- Drive fasteners perpendicular to siding and framing.
- Fastener heads should fit snug against siding (no air space). (fig. A)
- Do not over-drive nail heads or drive nails at an angle.
- If nail is countersunk, nail hole and add a nail. (fig. B)
- For wood framing, under driven nails should be hit flush to the plank with a hammer (for steel framing, remove and replace nail).
- Do not use aluminum fasteners, staples, or clipped head nails.



CUT EDGE TREATMENT

Caulk, paint or prime all field cut edges.

CAULKING

For best results use an Elastomeric Joint Sealant complying with ASTM C920 Grade NS, Class 25 or higher, such as Quad Max® or a Latex Joint Sealant complying with ASTM C834. Caulking/Sealant must be applied in accordance with the caulking/sealant manufacturer's written instructions or ASTM C1193.

PAINTING

DO NOT use stain, oil/alkyd base paint, or powder coating on Cemboard products. Cemboard products must be painted within 180 days for primed product and 90 days for unprimed. 100% acrylic topcoats are recommended. Do not paint when wet. For application rates refer to paint manufacturers specifications. Back-rolling is recommended if the siding is sprayed.

SPECIFIC REQUIREMENTS FOR ELEVATIONS OF 4000 FT. AND ABOVE

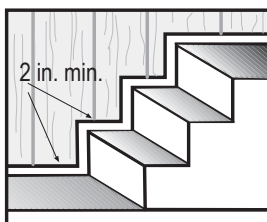
ALL OTHER REQUIREMENTS SPECIFIED IN THESE INSTRUCTIONS AND NOT ADDRESSED BELOW ARE APPLICABLE.

- DO NOT use Cempanel® vertical siding on fascia or trim.
- Maintain a minimum 2 in. clearance between Cemboard® products and roofs, decks, paths, steps and driveways (figs. 12, 13 & 14).

CLEARANCES

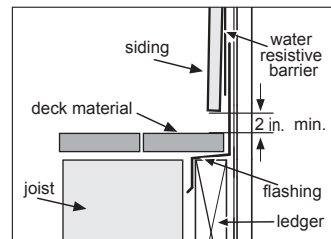
Maintain a minimum 2 in. clearance between Cemboard® products and paths, steps and driveways.

Figure 12



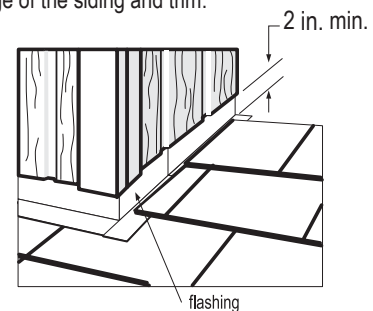
Maintain a 2 in. minimum clearance between Cemboard® products and decking material.

Figure 13



At the juncture of the roof and vertical surfaces, flashing and counterflashing shall be installed per the roofing manufacturer's instructions. Provide a 2 in. clearance between the roofing and the bottom edge of the siding and trim.

Figure 14



CUT EDGE TREATMENT

Caulk, paint or prime all field cut edges.

RECOGNITION: In accordance with ICC-ES Evaluation Report ESR-1844, CemPanel® vertical siding is recognized as a suitable alternate to that specified in: the 2006, 2009, & 2012 International Residential Code for One-and-Two-Family Dwellings and the 2006, 2009, & 2012 International Building Code. CemPanel vertical siding is also recognized for application in the following: City of Los Angeles Research Report No. 24862, State of Florida listing FL#889, Dade County, Florida NOA No. 02-0729.02, U.S. Dept. of HUD Materials Release 1263c, Texas Department of Insurance Product Evaluation EC-23, City of New York MEA 223-93-M, and California DSA PA-019. These documents should also be consulted for additional information concerning the suitability of this product for specific applications.

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Additional Installation and warranty information is available at www.cemboardsiding.com

