

Lap Siding Installation Guide

This Siding is a Premium Product. Handle with Care!

• To prevent marring the surface and to keep the panels from slipping against each other, this product has been shipped with a protective sheet. Keep the protective sheet on the panels to prevent damage to the surface of the panel and to keep moisture from settling on the product.



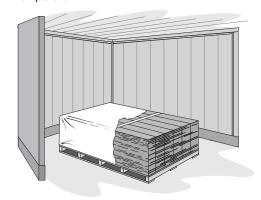
 Variations in texture and color are to be expected when comparing a sample and this material. However, inspect the panels for breakage, foreign objects, surface defects, color consistency, and correctness.
 Do not install questionable product. If you elect to install questionable product and a manufacturing defect is not found to be the source of the problem, your claim may not be honored.

• Keep the Do not

• Keep the siding covered at all times. Do not install wet product.

 Pick up the boards from the center to avoid marring the surface of the board below.

Proper Storage store covered,



- Do not lay fiber cement on the ground. Place the siding on a sawhorse or use the shipping pallet provided with the siding.
- Carry fiber cement siding by its narrow edge, and support it when you cut large pieces.
- Cut fiber cement face down, with the protective sheet on.
- Install the siding with the proper textured side facing out. Remove the protective sheet after the siding has been installed. Remove each sheet as you move up the wall.
- If you are face nailing the product, use only color matched, double-dipped, hot galvanized nails or hammer caps (available from MAZE).
- Do not install product you think is defective. Instead, please contact CertainTeed's Consumer Services Group at 800-233-8990.

These instructions describe and illustrate the steps involved in installing ColorMax™ Prefinished FiberCement Siding and Soffit and CertainTeed Trim.

Their purpose is to provide detailed information and how-to tips that will simplify the installation process. CertainTeed shall not accept any liability or responsibility under its written warranty for failure caused by application that does not meet our minimum requirements for proper installation. Any deviations from these requirements should be addressed and approved in writing by CertainTeed Corporation. For complete installation details, see the *WeatherBoards 2006 Installation Instructions (WB008)*.

Safety

Work outdoors where feasible or use mechanical ventilation when possible.

When operating power tools to saw, cut, drill, or sand this product, wear a NIOSH-approved disposable dust mask or respirator equipped with an N, P, or R cartridge and follow the manufacturer's instructions for use and care of the respirator.

Storage and Handling

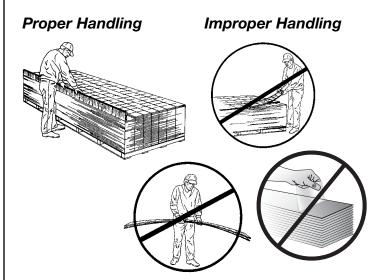
This Is a Premium Product. Handle with Care!

- All ColorMax FiberCement
 Siding is sealed with our
 proprietary FiberTect
 Sealing System and a
 finish coat. Even with
 these coatings, the product
 can become saturated if not
 protected during storage.
 Use the plastic wrapper that
 is provided to keep the

Proper Storage

store covered,

- product dry. Siding must be kept covered with the plastic bonnet provided and kept dry at all times.
- ColorMax FiberCement siding must be kept under a roofed structure, preferably indoors. It must also be kept covered and stored up off the ground, on a clean flat surface.
 Protect it from direct exposure to the weather. Do not store fiber cement siding directly on the ground.
- To prevent marring the surface and to keep the panels from slipping against each other, this product has been shipped with a protective sheet. Keep the sheet on the siding to prevent damage to the prefinished surface and to keep moisture from settling on the product.
- Pick up the boards from the center to avoid marring the surface of the board below. If handled incorrectly, the surface of the siding will scratch. Keep the protective sheet on the siding until after it has been installed.



- Carry fiber cement siding by its narrow edge, and support it when you cut large pieces.
- Do not install siding or trim that is saturated. Installing siding that is wet or saturated can cause shrinkage at butt joints.
- Do not remove the protective sheet until after the siding has been installed.

Tools

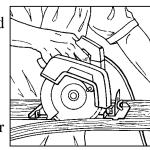
Pneumatic nailers work best. They speed installation and help ensure consistent penetration. Set the pressure to meet job site conditions (typically, between 80 and 85 psi). A nailer with a flush mount attachment (adjustable depth of drive) will prevent over- driving the nails.

When equipped with diamond tip blades, power miter saws can also be used to cut ColorMax Siding. To avoid breaking the fiber cement, use extra care when cutting near the edge of lap siding.

Cutting

When cutting ColorMax Siding, support the product along its length and near the cut. Always cut fiber cement face down.

For cross cuts and rips, use a circular power saw with a diamond tip blade. To avoid breaking the fiber cement, use extra care when you cut near the edge. When cutting beaded siding profile, the cut should start against the bead. Narrow and notched pieces of fiber cement can snap easily, so handle them carefully.



Diamond blades work best

Fasteners

When you install fiber cement over wood sheathing, use a 6d (6-penny) nail. If the sheathing is thicker than 1", use an 8d (8-penny) nail. Nails must be non-corrosive. Either double hot-dipped galvanized or stainless steel nails are preferred. However, hot-dipped galvanized nails may be used. Nails must always penetrate at least 1-1/4" into the studs. Please refer to ICC-ESR-1668 for approved nailing schedule.

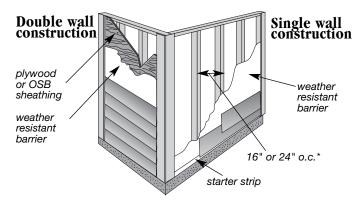
Color-matched, double hot-dipped, galvanized nails and hammer caps are available for face nailing ColorMax siding. Color-matched nails are available from MAZE (800-435-5949).

If you use screws to fasten fiber cement siding to studs, they must be non-corrosive. **Do not use staples or D-head nails.**

To attach siding to metal studs, use either screws or pins. Use 1-5/8" long, #8-18 x 3/8" HD self-tapping, corrosion-resistant ribbed bugle head screws. Make certain that at least 3 screw threads penetrate the stud. Pneumatic pins must also be corrosion-resistant.

Sheathing and Wraps

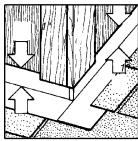
When fiber cement is installed, it should be applied over plywood, OSB, or comparable sheathing. Builder board and foam-type sheathings are also acceptable. Before you install the siding, review and comply with all local building codes and regulations regarding the proper use of weather-resistant barriers, house wraps, vapor barriers, etc.



- 1. Take extra care when installing fiber cement over foam sheathings. Foam sheathings may crush, especially when they are hand-nailed.
- 2. If you install ColorMax Siding over a non-nailable substrate such as foam sheathing, pre-drill the holes at the corners to avoid accidental breakage. Panels must be nailed into studs (16" or 24" O.C.)*.

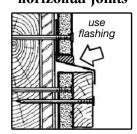
Flashing

Roof flashing detail



paint bottom edge

"Z" flashing of horizontal joints



Using non-corrosive materials, install flashing around all doors, windows, rake boards, chimneys, and other areas where needed. Drip cap flashing above all openings will help ensure a weather-tight installation.

Trim

With ColorMax FiberCement Siding, we recommend you install either CertainTeed Composite Trim or FiberCement Trim.

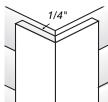
Composite Trim

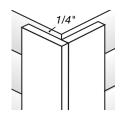
Like ColorMax Siding, composite lumber is a durable, high-performance product that combines the beauty of wood with low maintenance. It is easy to cut, drill, and rout with regular woodworking tools. Install composite lumber just as you would wood trim.

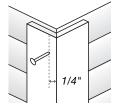
Joining Two Pieces

- Windows and Doors Miter or square-cut the boards, and join them in contact with each other.
- Corners Leave 1/4" at the top and bottom of the wall for corners. All butt joints in the corner can then be in contact with each other. All joints should be caulked. When assembling a traditional corner from two pieces, one piece may be nailed into the other to make the corner.
- Other applications When using full pieces, be sure to leave 1/4" where trim is in contact with other members.
- Keep the trim at least 6" above the grade or concrete surfaces.







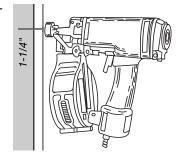


^{*} Refer to the local building codes for wind loads and to ICC-ESR-1668 for approved nailing schedule.

Fastening

CertainTeed Composite Trim can be hand-nailed or installed with a pneumatic nailer. Use 6d or 8d nails or finish nails. All fasteners must be corrosion-resistant; we recommend

hot-dipped galvanized or stainless steel fasteners. All fasteners must be long enough to penetrate a solid wood substrate a minimum of 1-1/4" (or 3 threads for screws into steel studs). **Do not use D-head nails, framing nailers, or staples.**



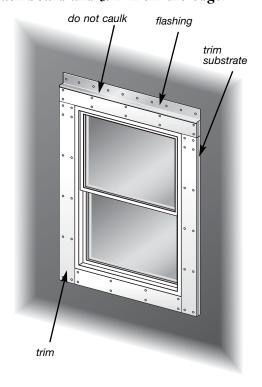
Fastener Placement

Place all fasteners at least 1/4" from the edge. They should be flush or slightly indented into the material. Do not penetrate the trim more than 1/8".

- Place finish nails every 10" to 12".
- Place 6d and 8d nails every 12" to 16".
- Place screws in steel studs every 12" to 16".

Fiber Cement Trim

Install FiberCement Trim just as you would wood trim. You can install the trim either directly to trim substrate or over the siding. Keep the trim at least 6" above the grade or concrete surfaces. Nail no closer than 1" from the end of each board and 3/4" from the edge.

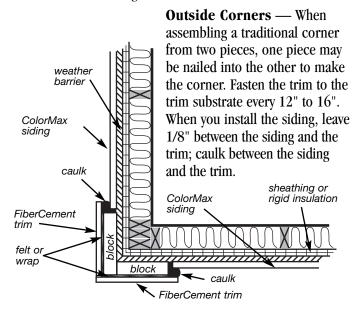


Applying Trim to Trim Substrate

Use a trim substrate that provides a 1/2" (minimum) projection from the sided surface. Attach the trim substrate to the studs; then attach fiber cement trim as described below (see exploded view). Be certain to prime or paint the trim substrate to prevent rot. When applying the siding, leave 1/8" between the siding and the trim and caulk.

Windows and Doors — Square or miter-cut the trim boards, and join them in contact with each other. Nail them flush to the window or door every 12" to 16". When you install the siding, leave 1/8" between the siding and the trim; caulk between the siding and the trim.

Inside Corners — Position a single trim board on the wall, and fasten every 12" to 16". When you install the siding, leave 1/8" between the siding and the trim; caulk between the siding and the trim.



Applying Trim over Siding

Make sure the siding is completely installed before you hang the trim.

Windows and Doors — Square or miter-cut the trim boards, and nail through the siding into the trim substrate every 12" to 16". Nail only on the nailing area of the siding.

Outside Corners — Fasten the boards every 12" to 16". Nail through the siding into the trim substrate. Nail only on the nailing area of the siding.

Band and Frieze Boards, Rakes, and Fascia

FiberCement Trim can also be installed as band boards, frieze boards, rakes, and fascia. Nail no closer than 1" from the end of each board and 3/4" from the edge.

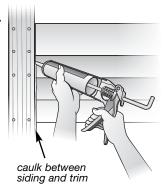
Band Boards — For band boards, install fiber cement trim over the wood furring with the appropriate flashing. Butt the trim and nail every 12" to 16".

Rakes and Frieze Boards — If installing over siding, you may have to shim the frieze board to create an even look. Butt the joints and nail through the trim substrate and siding into the framing or a wood substrate every 12" to 16". Nail only on the nailing area of the siding. Do not nail between the lap joints. If installing directly to trim or wood substrate, leave 1/8" between the siding and the trim when you install the siding. Caulk between the siding and the trim.

Fascia — Install fiber cement trim over a wood subfascia. Butt the trim and nail every 12" to 16".

Caulk

Where the siding meets the trim, leave a 1/8" gap and caulk. Be sure to reseal cut edges of fiber cement trim. Use exterior grade caulks and sealants that meet ASTM Standard C-834 or C-920 (Grade NS, Class 25). Always follow the caulk/sealant manufacturer's application instructions. Before you begin to apply caulk, carefully remove any residual fiber cement.



Wood and Vinyl Trim

Wood and CertainTeed's Restoration Millwork™ vinyl trim can also be used successfully with ColorMax Siding. Test the trim for color compatibility with ColorMax Siding before you install it.

- Typically, trim is from 3" to 12" wide.
- If vinyl corners are used as trim, back-caulk the siding to minimize the possibility of water wicking into any unfinished edges of the siding.
- Where the siding meets the trim, leave a 1/8" gap and caulk.

- Caulk all joints with high-quality caulks or sealants. Use exterior grade caulks and sealants that meet ASTM Standard C-834 or C-920 (Grade NS, Class 25). Always follow the caulk/sealant manufacturer's application instructions.
- Before you begin to apply caulk, carefully remove any residual fiber cement dust from the area with a brush.

Fastening to Wood Studs

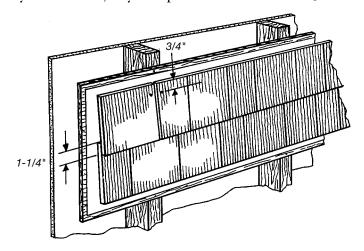
Do not remove the protective sheet until after the siding has been installed.

Remember: You will be fastening ColorMax Siding to the studs, not the sheathing. You can use either nails or screws.

While we recommend using a pneumatic nailer for speed, hand-nailing ColorMax is fine. Fiber cement siding is harder than wood, so be sure the nails are well set before driving them. It may be necessary to pre-drill the holes if you are hand-nailing in colder weather. The nail head must lay on the surface of the siding—do not over-drive the nails.

If you are nailing with a pneumatic nailer, use a flush mount attachment so the nails are driven to the proper depth. Adjust the pressure to field conditions, usually 80-85 psi.

If you use screws, they must penetrate the stud at least 3/4".



Chalk Line

Establish a straight, level reference line to guide the positioning of the starter strip and the first course of siding.

- 1. Find the lowest point of the sheathing and partially drive a nail at one corner 1" above the lowest corner. Make sure this point is high enough to ensure that the siding is installed at least 6" above the finished grade.
- 2. Attach a chalk line, go to the other corner, and pull the chalk line taut.

- 3. Stretch the chalk line from this nail to the opposite corner of the house, using a line level or 4' (minimum) level to ensure that the lines are straight.
- 4. Snap the chalk line and repeat the procedure around the entire house.

Starter Strip

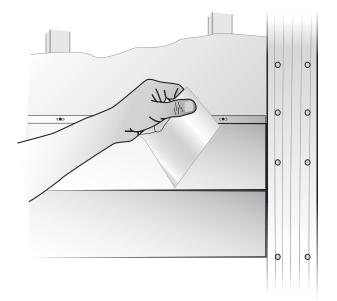
You can use fiber cement, pressure treated wood, or vinyl utility trim as a starter strip, but it must be 1-1/2" wide and 1/4" to 5/16" thick.

- 1. Using the chalk line as a guide, attach a starter strip.
- 2. Position the starter strip so that the bottom edge of the siding will project at least 1/8" below the bottom edge of the starter strip.

Attaching to Wood Studs

Using the starter strip as a guide, install the first course of lap siding no closer than 6" to the finished grade and at least 1" above surfaces where water may collect. **Be sure to install the siding with the protective sheet on and facing out.**

- 1. Leave a 1/8" gap between the siding and the trim to allow for structural movement.
- 2. Fasten the siding at all stud locations. If there is no stud available, use an off-stud joiner behind the butt joints.
- 3. To prevent drawing the siding to uneven walls, shim the siding as needed.
- 4. Remove the protective sheet after you have installed the first **course** of siding. Romove the sheet as you move up the wall. Do not leave protective sheet under the overlap.



Using Off-stud Joiners

Off-stud joiners are available in different sizes. Choose the joiner that is the correct size for the siding you are installing.

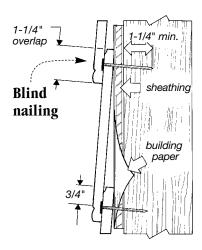
- 1. Insert the butt edge of the siding into the off-stud joiner. Align the edge of the siding in the center of the joiner.
- 2. Insert the edge of the next panel of siding into the other side of the joiner.
- 3. If one end is cut, gap and caulk the joint. Use an exterior grade of caulk and follow the caulk manufacturer's application instructions. If both ends are sealed (either a factory end or a painted cut end), butt the siding in moderate contact and do not caulk.
- 4. Fasten the siding to the wall. Do not fasten the off-stud joiner to the wall.

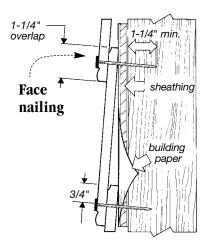
Subsequent Courses

To install subsequent courses of lap siding, measure from the top of the previous panel to achieve the proper exposure: 4" to 10-3/4", depending upon the style.

For Blind Fastening

- 1. Please refer to ICC-ESR-1668 for approved nailing schedule. Make sure the panel overlaps at least 1-1/4" before fastening.
- 2. Place the fastener 3/4" from the top of the plank and no closer than 3/8" from the butt edge.
- 3. Don't over-drive the fasteners because seating them below the surface of the siding reduces their holding power.
- 4. If you are hand-nailing, pre-drill the holes at the corners. This will help prevent the corners from breaking.
- 5. Work from the center of the plank to the ends or from one end to another.
- 6. As you complete each course, remove the protective sheet.





For Face Fastening

Note: To hold the panel in place while you face nail the product, nail one nail at the top on each end. Nail 3/4" from the top, 3/8" (minimum) from the end.

- 1. Please refer to ICC-ESR-1668 for approved nailing schedule.
- 2. Place the fastener 3/4" from the bottom of the overlapping plank. This will help ensure that the fastener penetrates both courses of siding.
- 3. Place the fasteners 3/4" from the top and no closer than 3/8" from the butt edge.
- 4. Don't overdrive the fasteners. Seating fasteners below the surface of the siding reduces their holding power.
- 5. If you are hand-nailing, pre-drill the holes at the corners.
- 6. Work from the center of the plank to the ends or from one end to another.
- 7. Remove the protective sheet before installing the next course of siding.
- 8. Make sure subsequent courses overlap at least 1-1/4" before fastening.

As you install the courses of siding, back all butt joints with framing or an off-stud joiner. Stagger the joints on subsequent courses. Shim the siding as needed to avoid drawing it into uneven walls.

Factory ends should be installed with joints butted in moderate contact. Caulking is not necessary. Cut ends can be sealed or painted, butted in moderate contact, and NOT caulked. If you prefer not to seal or paint the cut ends, gap the joints 1/8" and caulk.

Fastening to Metal Studs

You can also hang fiber cement siding on metal studs. The studs must be a minimum 20 gauge, 3-5/8" C-studs.

For blind or face application, use 1-5/8" long, #8-18 x 3/8" HD self-tapping, corrosion-resistant ribbed bugle head screws.

Follow the earlier directions, attaching the siding at each stud. Make sure the screws penetrate at least 3 screw threads into the studs.

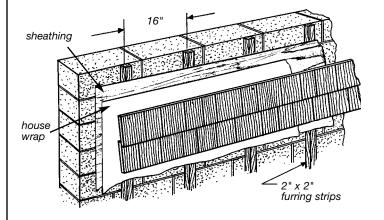
You may also use corrosion-resistant pneumatic pins to fasten the siding to steel studs. Consult the pin manufacturer for application instructions.

Attaching to Masonry

To fasten lap siding to a concrete block or poured concrete wall:

- 1. Furr out the wall with 2" x 2" furring strips.
- 2. For hidden fastening, install the strips on 16" centers.
- 3. For face fastening, install the strips no less than 16" O.C. and no more than 24" O.C.
- 4. Install a house wrap between the siding and the furring or channels.

If you prefer, you can install metal hat channels and screw the siding to the channels.

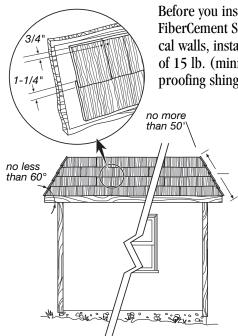


Special Situations

Non-Vertical Walls

ColorMax FiberCement Siding can be installed on non-vertical walls when:

- 1. The walls are at least 60°, measured from the plane of the ground.
- 2. The slope on the non-vertical wall is no longer than 50'.
- 3. The wall is not a functional roof above occupied space.



Before you install ColorMax FiberCement Siding on non-vertical walls, install an underlayment of 15 lb. (minimum) felt or waterproofing shingle.

- 1. Cap the uppermost edge of the top siding course to prevent the water from getting behind the siding.
- 2. Flash all accessories to shed water away from the substrate.

When you install fiber cement siding on structures that

have eaves, begin at the top of the non-vertical wall under the eave. On structures without eaves, install adequate flashing so that water does not run down behind the siding.

Soffit

ColorMax Soffit is for exterior applications. Soffit should be applied to nominal $2" \times 4"$ framing members spaced no more than 24" O.C., with the longest dimension perpendicular to the framing.

Prepare for soffit installation by nailing 2" x 4" or 2" x 2" backer board along the wall, with the bottom edge of the backer board level with the bottom edge of the fascia. At



Ventilated soffit

every 12' butt joint of the soffit, back up the joint with another backer board going from the fascia to the wall backer board. If the soffit corners are going to be mitered, nail another backer board from the corner of the fascia to the corner of the wall. If you are going to use H-channel at the mitered corners, nail the H-channel to the corner backer board and slide the cut soffit into it. Cut the soffit 1/8" shorter than the H-channel to allow for expansion and contraction.

To install ColorMax soffit:

- Cut the soffit panels face down with a mechanical shear or circular saw.
- Prime or paint the cut edges before installing the soffit. Do not prime or paint the back of the soffit.
- Use double hot-dipped galvanized or stainless steel 6d or 8d nails (1/4" head minimum) and a pneumatic nailer set at field conditions (80-85 psi).
- Fasten the soffit at least 3/4" from the side edge, 3/8" from the butt edge, and at least 2" from the corner. Space the fasteners every 16" along both the front and back edge.
- The edges should be in moderate contact, fastened at corresponding ends, and supported by framing.

Painting

CertainTeed ColorMax Prefinished FiberCement Siding and Soffit and FiberCement Trim must be allowed to breathe. Some factory-applied primer, paint, or stain on the back is normal. Never completely prime, paint, or stain the back side.

Touch-up Paint

Touch up ends cuts and minor scratches and blemishes with ColorMax touch-up paint. Touch up only the affected areas.

Repainting ColorMax Prefinished Siding

Before repainting ColorMax Siding, clean all the siding and trim thoroughly. Use a high quality acrylic paint, and follow the paint manufacturer's instructions.

Never apply oil-based paints or stains to FiberCement Siding or Soffit or CertainTeed Trim.

Caulking

Use a high quality, exterior-grade caulk or sealant that meets ASTM Standard C-834 or C-920 (Grade NS, Class 25). The caulk or sealant must be color matched or paintable. It should be compatible with both fiber cement siding and the materials used for the trim. Check the gloss and texture of the caulk to make sure it is compatible with the paint.

Before you begin to caulk, use a brush to remove any dust in the gaps and trim edges. Caulk wherever ColorMax Siding meets the trim vertically at the corners and around windows and doors. Caulk the butt joints at all cut, unpainted ends. Follow the caulk manufacturer's application instructions.