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Before You Begin

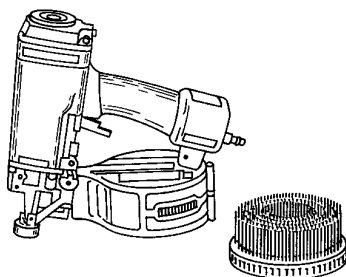
These installation techniques describe and illustrate the steps involved in installing CertainTeed's WeatherBoards™ FiberCement Siding. Before you begin, we suggest that you read these instructions twice. First, read them from beginning to end to get a feel for the overall flow of the project. As you begin to work, re-read the section covering the specific task you are completing.

If you need more comprehensive instructions, contact us at 800-233-8990. Additional instructions are also available on our website, www.certainteed.com, or through our Fax-On-Demand Service (dial 800-947-0057 and follow the prompts).

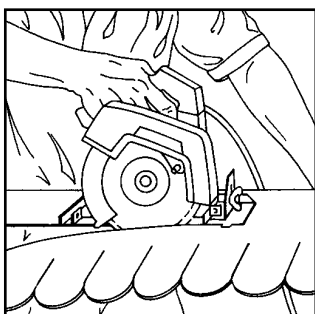
Your installation methods for this product must be in compliance with all applicable local and state building codes.

Inspect the unit for breakage, foreign objects, surface defects, color consistency and correctness. **Do not install questionable product!** If you should find a siding defect, contact CertainTeed's Consumer Service Group immediately at 1-800-999-3654. Should you elect to install questionable product and a manufacturing defect is not found to be the source of the problem, any claim may not be honored.

Use Pneumatic Nailers



The WeatherBoards Diamond Tip Blade Is Recommended



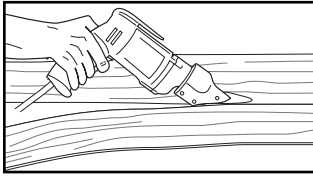
Tools

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.

Cut fiber cement siding and trim face down with a diamond tip blade (dry-cut). We recommend you use the WeatherBoards Diamond Tip Blade, which is designed specifically for cutting fiber cement. You can cut four or five pieces at one time with this type of blade installed on a radial arm or chop saw.

When equipped with diamond tip blades, power miter saws can also be used to cut WeatherBoards Siding and Trim. To avoid breaking the fiber cement, use extra care when cutting near the edge of lap siding. Be sure to read the safety section on page 2.

Mechanical Shears Can Also Be Used



For irregular or radius cuts, use a mechanical shear or a jigsaw equipped with a medium or coarse-grit carbide blade or a diamond jigsaw blade.

Use a standard hole saw for making penetrations similar to those needed for plumbing pipes.

Fiber cement siding can be ripped lengthwise both partially or at its full length. Notched or narrow pieces can be handled and installed if you take reasonable care.

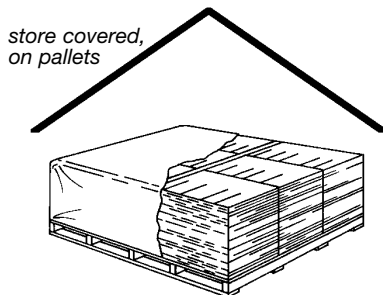
When you cut prefinished siding, seal all the cut edges with touch-up paint or a field-applied top coat.

Safety

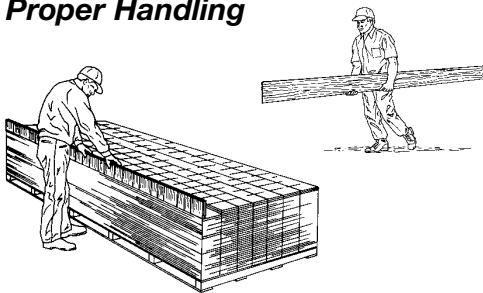
Work outdoors where feasible or use mechanical ventilation when possible.

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.

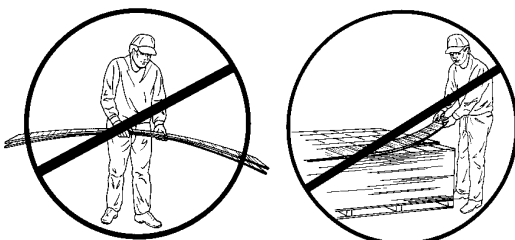
Proper Storage



Proper Handling



Improper Handling



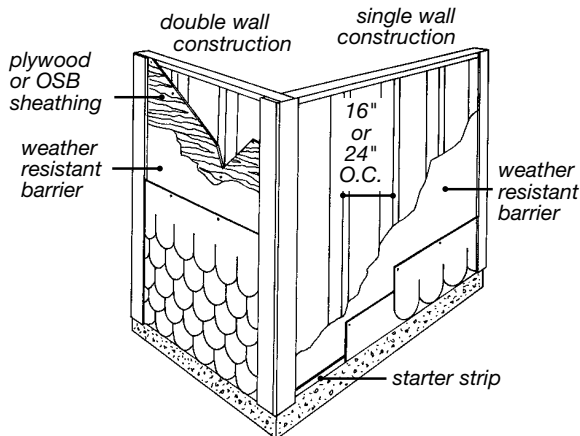
Storage and Handling

Fiber cement must be kept covered and stored up off the ground, on a clean flat surface. Protect it from direct exposure to the weather.

- Don't store fiber cement siding or trim directly on the ground.
- Use the plastic wrapper that is provided to keep the product dry. Prefinished siding must be kept covered with the bonnet provided and kept dry at all times.
- All WeatherBoards FiberCement Siding and Trim is sealed with our proprietary FiberTect Sealing System. Even with this sealer, the product can become saturated if not protected during storage. **If fiber cement becomes saturated, don't install it until it dries out.**
- Carry fiber cement siding or trim by its narrow edge, as shown, and support it when you cut large pieces.
- Keep the boards covered so that moisture does not settle on the siding. If handled incorrectly, the surface of prefinished siding will scratch, so pick up the boards from the center to avoid marring the surface of the board below.

- **BEFORE YOU BEGIN:** Inspect the siding or trim for breakage and surface defects. Examine it for color correctness, consistency, and surface defects. Report any problems **BEFORE** you begin installing WeatherBoards Siding and Trim.

Sheathing and Wraps



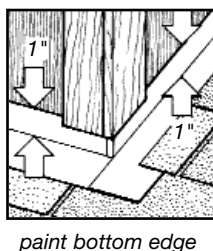
- **Do not install siding or trim that is saturated.** Installing siding that is wet or saturated may result in shrinkage at butt joints.

Sheathing and Wraps

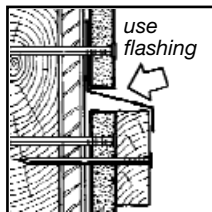
When fiber cement siding is installed, it should be applied over plywood, OSB, or comparable sheathing. Builder board and foam-type sheathings are also acceptable. Before you install the siding, review and comply with all local building codes and regulations regarding the proper use of weather-resistant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

Roof Flashing Detail



"Z" Flashing of Horizontal Joints

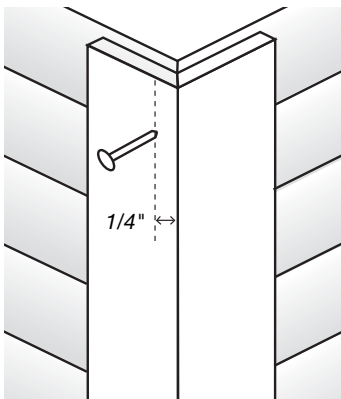
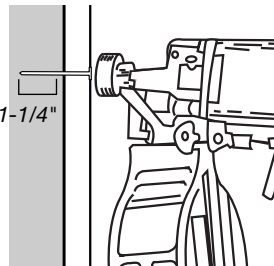
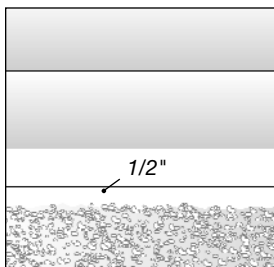
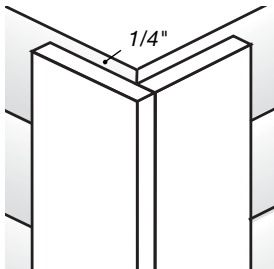
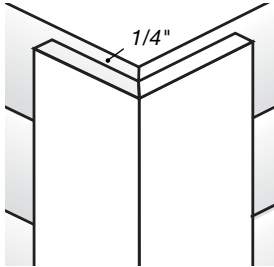
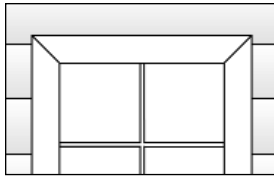


Flashing

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 weathertight installation.

The horizontal joints on a building sided with vertical siding must be weatherproofed with non-corrosive "Z" flashing.

DO NOT caulk the bottom of the horizontal joint that is above the flashing.



Trim

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

Composite Trim

Like WeatherBoards 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.

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 WeatherBoards 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.**

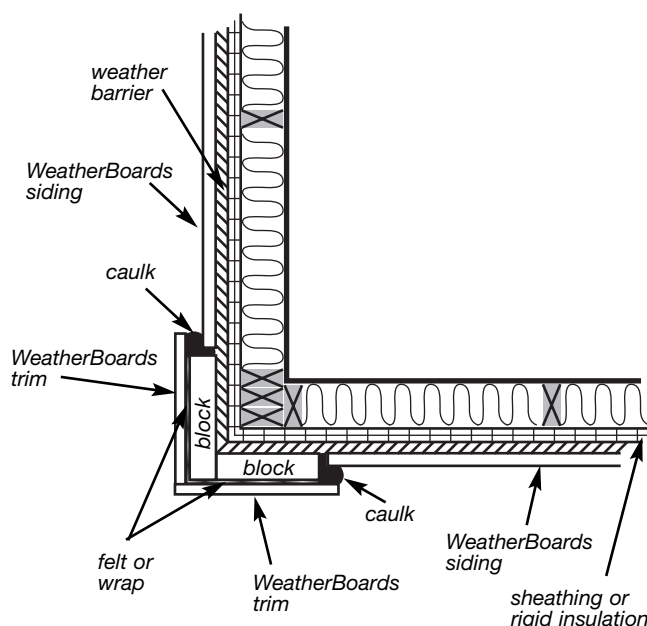
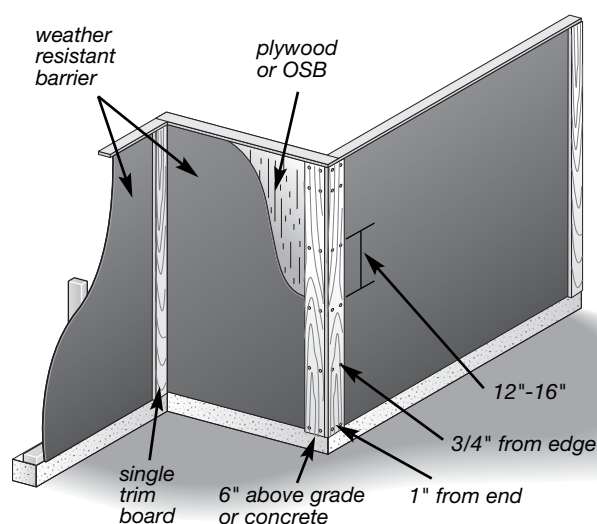
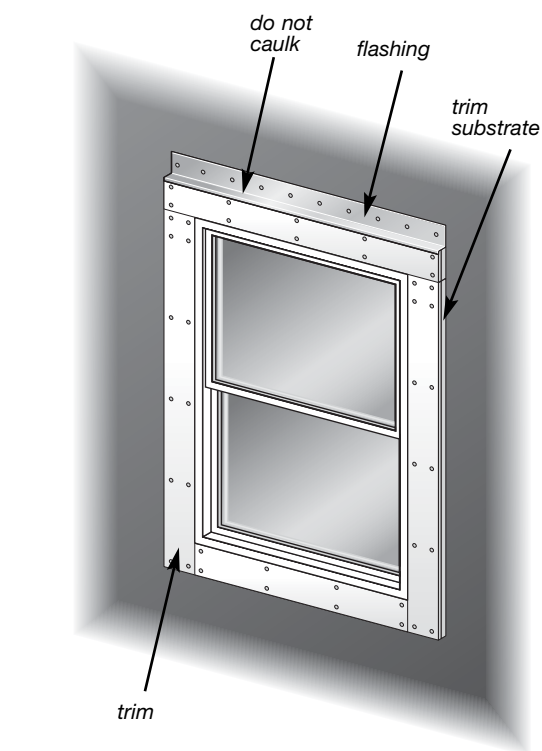
Applying Trim to Trim Substrate

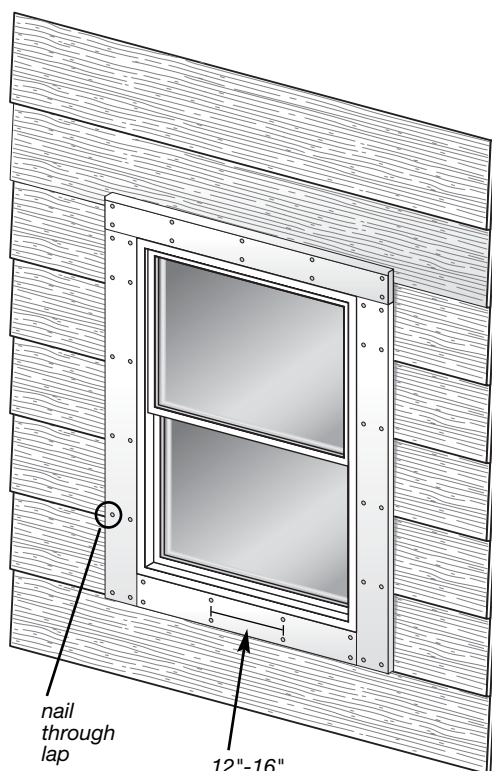
Use a trim substrate that provides a 1/2" (minimum) projection from the sided surface. Attach the trim substrate to the studs; then attach fiber cement trim as described below (see exploded view). Be certain to prime or paint the trim substrate to prevent rot. When applying the siding, leave 1/8" between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

Outside Corners — When assembling a traditional corner from two pieces, one piece may be nailed into the other to make the corner. Fasten the trim to the trim substrate 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.



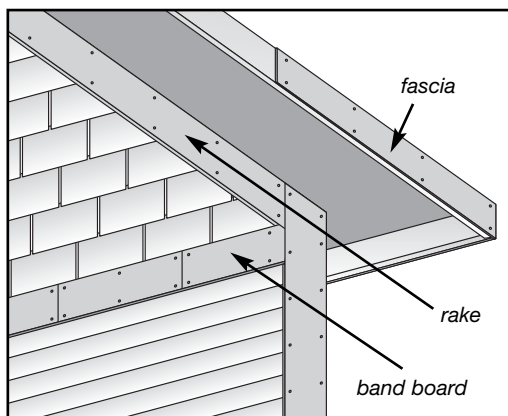
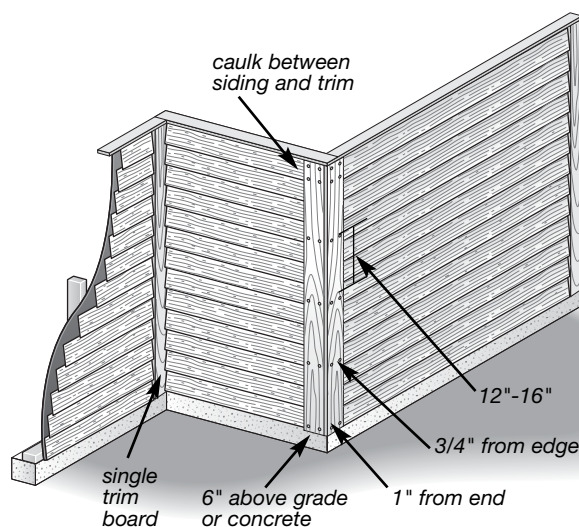


Applying Trim over Siding

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.**



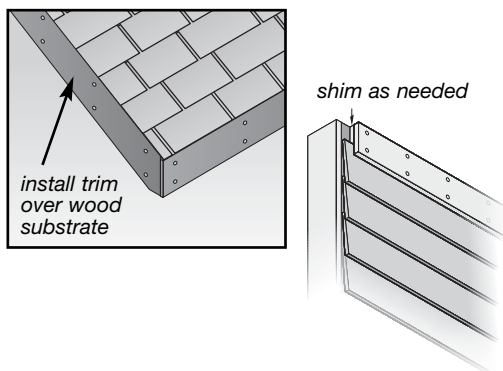
Band and Frieze Boards, Rakes, and Fascia

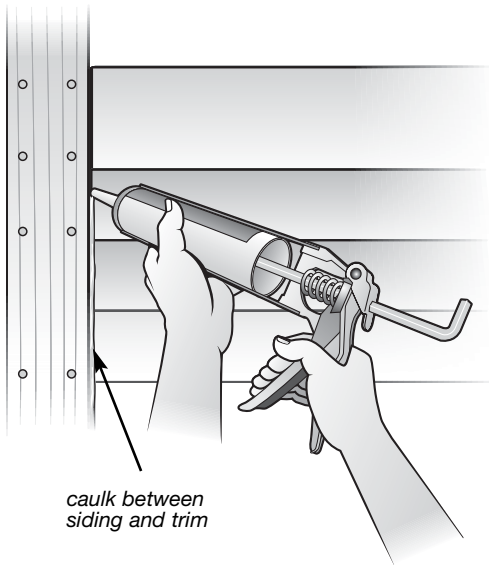
WeatherBoards FiberCement Trim can also be installed as band boards, frieze boards, rakes, and fascia. **Nail no closer than 1" from the end of each board and 3/4" from the edge.**

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

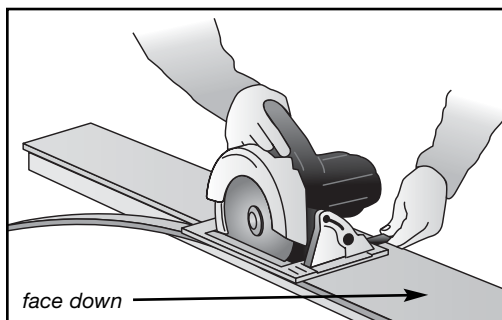
Where the siding meets the trim, leave a 1/8" gap and caulk. Be sure to reseal cut edges of fiber cement trim. Use exterior grade caulks and sealants that meet ASTM Standard C-834 or C-920 (Grade NS, Class 25). Always follow the caulk/sealant manufacturer's application instructions. Before you begin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

Wood and Vinyl Trim

Wood and vinyl trim can also be used successfully with WeatherBoards Siding. Test the trim for color compatibility with WeatherBoards 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.

Cutting and Fastening



Cutting

When cutting WeatherBoards FiberCement Siding and Trim, 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.

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-ES Legacy Report NER-537 for approved nailing schedule.

Color-matched, double hot-dipped, galvanized nails and hammer caps are available for face nailing prefinished siding. Color-matched nails are available from MAZE, Hitachi.

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 install fiber cement siding.

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 three screw threads penetrate the stud. Pneumatic pins must also be corrosion-resistant.

Fastening to Wood Studs

Remember: You will be fastening WeatherBoards 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 WeatherBoards 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, a minimum of 3/4" must penetrate the stud.

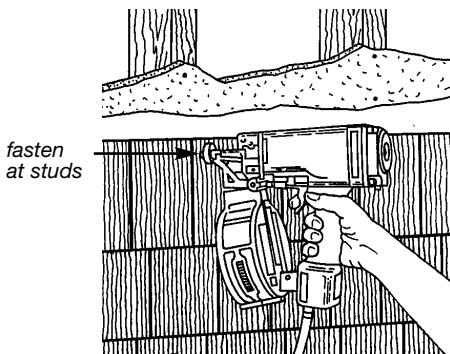
Fastening to Metal Studs

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

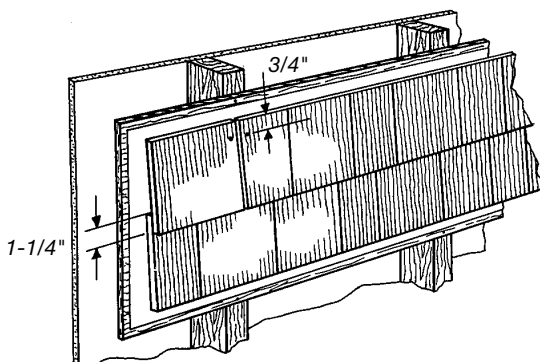
For blind or face application, use 1-5/8" long, #8-18 x 3/8" HD self-tapping, corrosion-resistant ribbed bugle head screws.

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

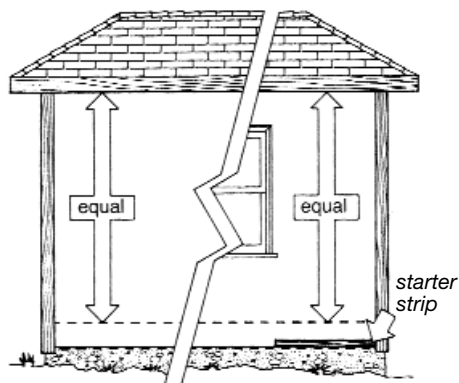
You may also use corrosion-resistant pneumatic pins to fasten the siding to steel studs. Consult the pin manufacturer for application instructions.



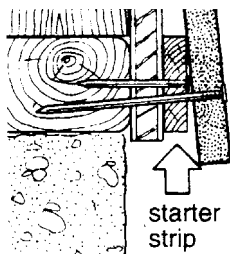
Blind Nailing



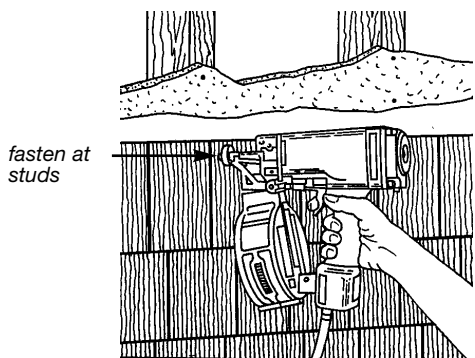
Snap a Chalk Line



Install a Starter Strip



Fasten at Studs



Shapes Siding

Perfection Shingles

Chalk Line

To establish a straight reference line to guide the positioning of the starter strip and the first course of siding, snap a chalk line.

1. Find the lowest point of the sheathing and partially drive a nail at one corner approximately 1" above the lowest corner. Make sure this point is high enough to ensure that 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.

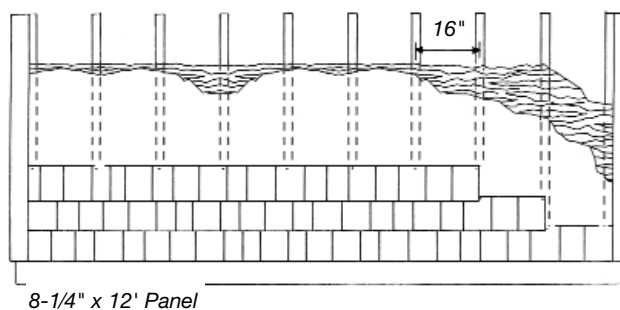
Starter Strip

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

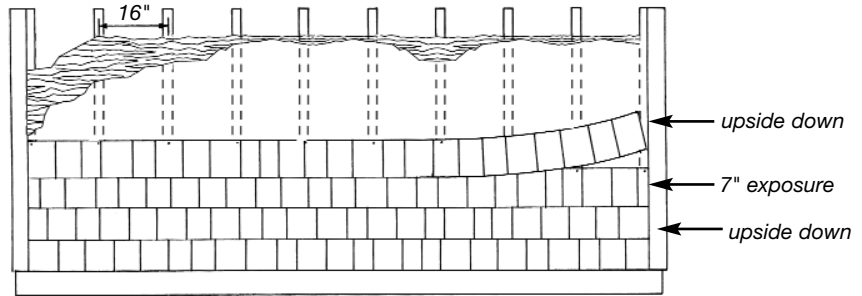
1. Using the chalk line as a guide, attach a starter strip.
2. Position the starter strip so that the bottom edge of the siding will project at least 1/8" below the bottom edge of the starter strip.

Attaching to Wood Studs

Using the starter strip as a guide, install the first course of Perfection Shingles no closer than 6" to the finished grade and at least 1" above surfaces where water may collect. Be sure to install all siding with the proper textured, sealed, or painted surface facing out.

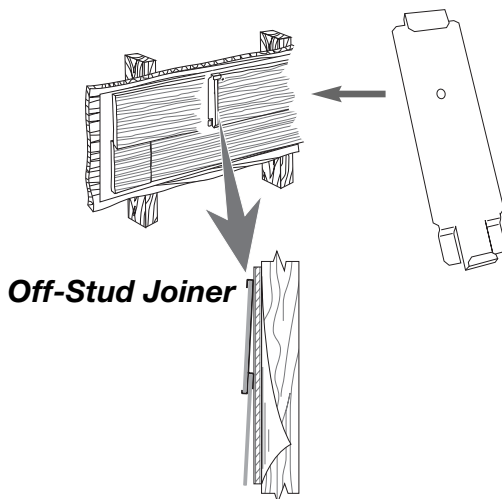


Even Number Courses Are Rotated 180° and Installed Upside Down for Best Appearance



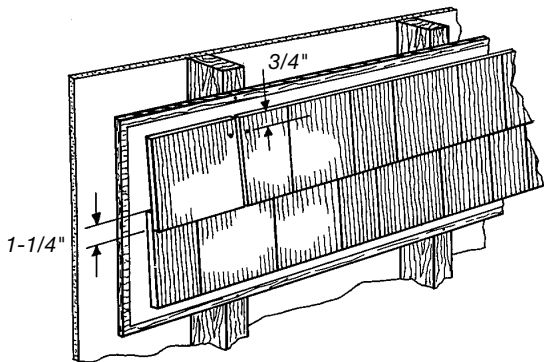
1. Leave a 1/8" gap between the siding and the trim to allow for structural movement.
2. Fasten the siding at all stud locations.
3. To prevent drawing the siding to uneven walls, shim the siding as needed.
4. Uncut siding should be installed with joints butted in moderate contact. Caulking is not necessary. 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 joint 1/8" and caulk. Always leave a 1/8" gap and caulk between the siding and the trim.
5. For subsequent courses, overlap the siding 1-1/4".
6. To achieve a random pattern, Perfection Shingles must be installed with every other course "upside down." Install the 1st course as described above. When you install the 2nd course, turn the panel upside down and fasten. Install the 3rd course with the panel in the same direction as the first, and so on.

Using Off-stud Joiners



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 edge), 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.

Blind Nailing

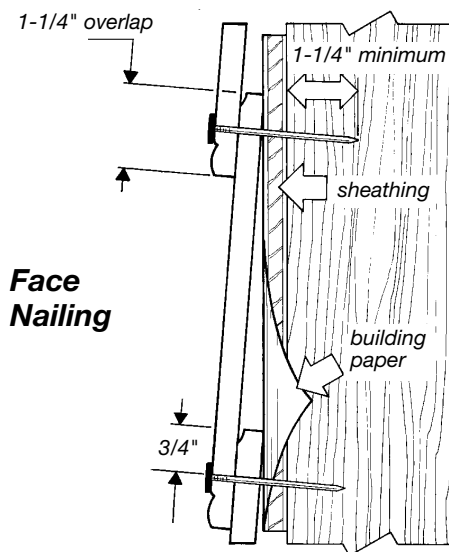


For Blind Fastening

1. Please refer to ICC-ES Report NER-537 for approved nailing schedule.
2. Place the fasteners $\frac{3}{4}$ " from the top of the plank and no closer than $\frac{3}{8}$ " from the butt edge.
3. Don't over-drive the fasteners because seating them below the surface of the siding reduces its holding power.
4. **Work from the center of the plank to the ends or from one end to another.**
5. Install the 3rd course with the panel in the same direction as the first.

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 $\frac{3}{4}$ " from the top, $\frac{3}{8}$ " (minimum) from the end.



1. Please refer to ICC-ES Report NER-537 for approved nailing schedule.
2. Place the fastener $\frac{3}{4}$ " from the bottom of the overlapping plank. This will help ensure that the fastener penetrates both courses of siding.
3. If you are hand-nailing, pre-drill the holes at the corners.
4. Install the 3rd course with the panel in the same direction as the first.

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

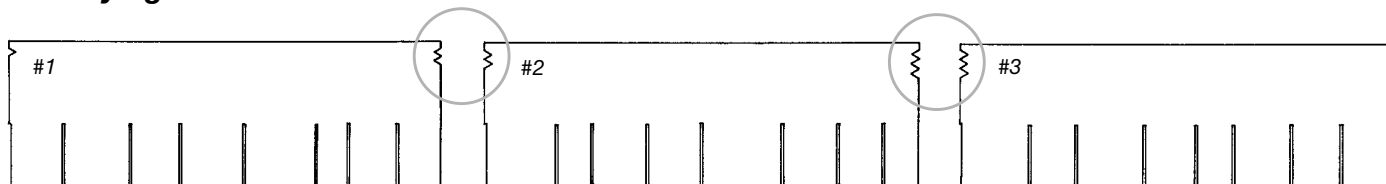
Random Square Straight Edge and Staggered Edge

Note: To ensure that the keyways are fully backed by fiber cement, install the first course of Random Square, Octagons, and Half-Rounds siding over a full piece of $8\frac{1}{4}$ " lap siding. If you are transitioning from lap siding to Shapes siding, simply use a piece of $8\frac{1}{4}$ " or $9\frac{1}{4}$ " lap as your transition. If you are starting the wall with Random Square, Octagons, or Half-Rounds, place a starter strip of fiber cement, pressure treated wood, or vinyl utility trim ($1\frac{1}{2}$ " wide x $\frac{1}{4}$ – $\frac{5}{16}$ " thick) under the $8\frac{1}{4}$ " lap.

Random Square Straight Edge and Staggered Edge panels are cut into three different panels. Each of the three different panels has a different pattern and is identified by the number of V-notches cut into the top of the panel.

To create a random look, the panels should be installed in the order shown below (Identifying V-Notches.) The panels must also be installed at a 16" horizontal offset on walls made with stud spacing 16" to 24" (max.) O.C. When a window or doorway breaks a course, continue the application as if the opening were not there.

Identifying V-Notches



The starter strip

If the first course is installed over an existing course of fiber cement lap siding ($8\text{-}1/4"$ *minimum*), do not install a starter strip and proceed to installing the first course of Shapes. If not, install a piece of $8\text{-}1/4"$ lap siding as a starter strip. Also note that if the starting point is at the base of a wall at ground level, keep the fibercement at least 6" above grade or concrete surfaces (see step 1).

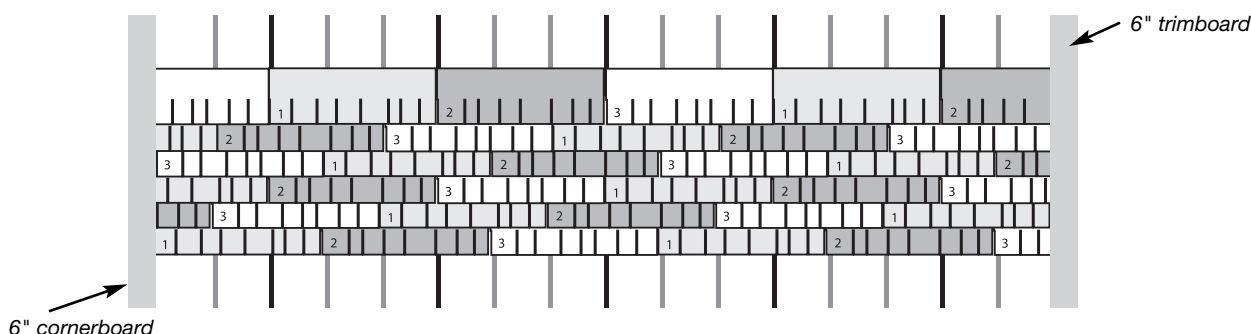
1. Partially drive a nail 8" above the lowest point of the siding application. (Fiber cement siding must be installed at least 6" above the grade.)
2. Stretch the chalk line from this nail to the opposite corner of the house, using a line level or $4'$ (minimum) level to ensure that the lines are straight.
3. Snap the chalk line and repeat the procedure around the entire house.
4. Align the top edge of the siding along the chalk line and install a course of $8\text{-}1/4"$ lap siding. This course is the "starter strip." It provides backing to the open keyways of the first course.
5. Align all the vertical joints with studs.

Installation Sequence for 6 Courses of Random Square Siding

panels are offset 16"

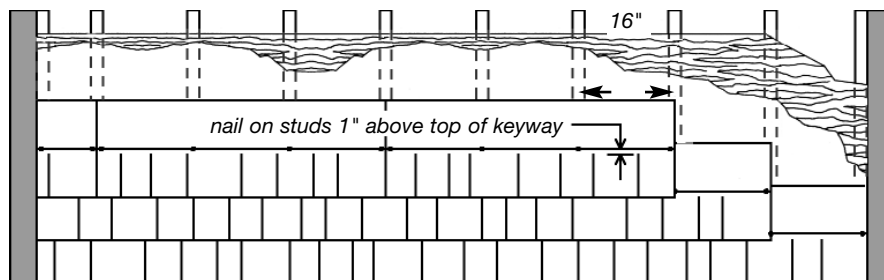
First Course

1. Start at the left side of the wall.



2. Starting with a #1 panel at the left side of the wall, measure from the inside *of the trimboard* to the furthest point so that a 48" panel will hit the center of the stud.
3. Take the measurement from step two, subtract 1/8" and subtract *this dimension* from 48". Trim the resulting dimension from the left edge of the #1 panel.
4. Set the trimmed panel 1/8" from the trim board. Be sure to install the siding with the proper texture, sealer, or painted surface facing out.
5. Using this method of installation, the ends of all panels will fall on the center of a stud (if walls are properly constructed 16" or 24" O.C.)

Nailing Guide for Random Square Siding



6. Nail it approximately 1" above the keyway. Do not nail between keyways.
7. When installing over non-nailable substrate such as foam or fiber sheathing, panels must be nailed into studs (16" or 24" O.C.) Note: using this method nails may show between keyways.

8. Match up the V-notches and install the panels in the recommended sequence.
9. Leave a 1/8" gap between the last panel and the trim for caulk.
10. Always leave a 1/8" gap around windows and doors, etc. Caulk as recommended.

Second Course

1. To ensure a random pattern, start the second course using a #3 panel. Determine the starting point for a #3 panel by measuring 32" back from the right side of the #1 panel on the first course and make a mark.
2. Install the #3 panel from the mark to the right.
3. Install the panels by matching up the identifying V-notches (1 – 1, 2 – 2, 3 – 3) in the recommended sequence, continuing from left to right horizontally across the wall.
4. Backfill the space on the left side of the #3 panel to the cornerboard with a #2 panel (cut to fit).

Third Course

1. To ensure a random pattern, start the third course with a #2 panel. Measuring 32" back from the right side of the #3 panel on the second course or 16" in from the left side of the #3 panel to make a mark. It will be the same point measure from either direction.
2. Working from the mark left to right nail the #2 panel on center and proceed.
3. Install the panels by matching up the identifying V-notches (1 – 1, 2 – 2, 3 – 3) in the recommended sequence, continuing from left to right horizontally across the wall.
4. Backfill the space on the left side of the #2 panel to the cornerboard with a #1 panel (cut to fit).

Subsequent Courses

1. Start the 4th course using a #3 panel, using the same process as the 1st course. Measure from inside of the left trim board to the furthest point that a 48" panel will hit the center of a stud. Trim the left side of a #3 panel so that the right edge hits the center of a stud.
2. Be sure to leave 1/8" clearance between the corner trim and the panel.
3. Continue installing the panels as described for the first course.
4. When a window or doorway breaks a course, continue the application as if the opening were not there.
5. Please refer to the illustrations for course layout.
6. Keep in mind the sequence is: 1, 3, 2, 1, 3, 2, 1 – diagonally up the wall at 16" offset.

NOTE: When installing Random Shapes in gable ends, proceed using the same methods as described above.

Octagons and Half-Rounds

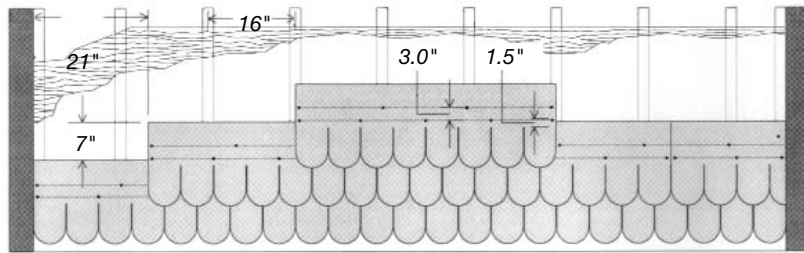
Octagons and Half-Rounds panels are made in a single design. There are eight 6"-wide tabs per panel. When the panels are installed properly, every other course will have vertical seams that align with studs spaced on either 16" or 24" centers. The vertical edges of intermediate courses will not lie on studs. Consequently, you must install a solid substrate such as plywood or OSB sheathing between the studs and the panels. For the best appearance, measure 9" from the top of the previous panel to achieve the proper exposure (approximately 7"). **Important: Make sure the tops of the keyways are concealed by the overlapping panel before fastening the siding panels.**

Vertical Seams on Every Other Course Will Align on Studs

Starter Strip

The first course must be installed over a full piece of 8-1/4" lap siding. If the first course is installed over an existing course of fiber cement siding, do not install a starter strip. If not, start at the bottom and install a starter strip.

Positioning and Nailing Guide for Octagons and Half-Rounds



1. Partially drive a nail 8" above the lowest point of the siding application. (Fiber cement siding must be installed at least 6" above the grade.)
2. 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.
3. Snap the chalk line and repeat the procedure around the entire house.
4. Fasten 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.
5. Install a course of 8-1/4" lap siding. This course provides backing to the open keyways of the first course.
6. Whenever possible, align the vertical joints with studs.

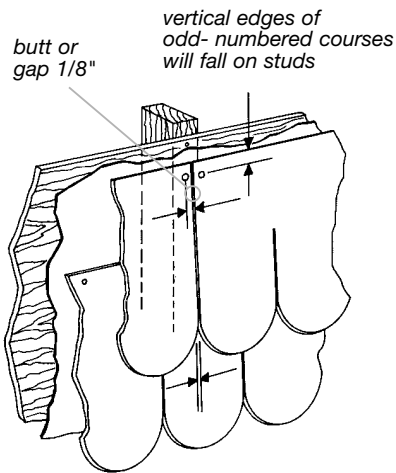
First Course

1. Start at the left side of the wall.
2. Trim the left edge of the first panel so that its right edge hits the stud farthest away from the left side.
3. Set the trimmed panel 1/8" from the left-side trim. Fasten the panel above every other keyway. Do not fasten between keyways.
4. Working left to right, install the panels. **Be sure to install the siding with the proper textured, sealed, or painted surface facing out.**
5. Leave a 1/8" gap between the last panel and the trim for caulk.
6. Octagons and Half-Rounds should be installed with joints butted in moderate contact; caulking is not necessary. Always caulk between the siding and the trim.

Second Course

1. Starting at the left side, identify the first full, untrimmed panel of the 1st course.
2. Offset the 2nd course 21" (3-1/2 tabs) from the first full piece. This horizontal shift will vertically align the center of each tab on the 2nd course with the keyways of the 1st course.

Keyway Lines up with Center of Tab



3. Measure 9" from the top of the previous panel to achieve the proper exposure (approximately 7"). Important: Make sure the tops of the keyways are concealed by the overlapping panel before fastening the siding panels.
4. Fasten the panel. You will have to fasten it to the sheathing because the vertical edges of the 2nd course will not lie on studs set 16" O.C.

Subsequent Courses

1. Install the 3rd, 5th, and all other odd courses in the same horizontal position as the 1st course. Leave a 7" exposure. These panels will always have vertical edges centered over studs.
2. Install the 4th, 6th, and all other even courses in the same horizontal position as the 2nd course. Leave a 7" exposure. The vertical edges of intermediate courses will not lie on studs, so nail them to the sheathing.
3. When a window or doorway breaks a course, continue the application as if the opening were not there.

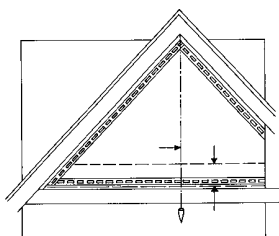
Centering Half-Rounds and Octagons on Gable Ends

NOTE: When estimating for materials, allow for a much higher scrap rate than for a straight wall. Scrap rates can exceed 30% in gable applications.

When possible, gable installations should end with a single round or octagon at the peak. To create this effect, you will need to calculate the number of courses of Half-Rounds you will be installing.

Height of Gable (in.) \div 7" = N
If "N" Is Even, Center Keyway
If "N" Is Odd, Center Round or Octagon

Drop a Plumb Line to Find Center of Gable



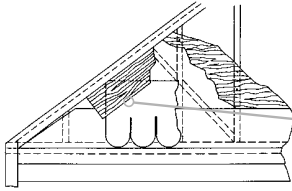
To End with a Single Round or Octagon

1. Measure the height of the gable (in inches).
2. Divide the height of the gable by 7".
3. If the answer is an even number, center the first course of Half-Rounds or Octagon on a keyway.
4. If the answer is an odd number, center the first course on a Round or Octagon.

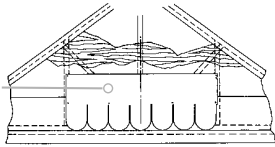
Make a Pattern

1. Mark the center of the gable.
2. If you are continuing from a previous course of 8-1/4" lap siding, do not install a starter strip. If not, install a starter strip and a 8-1/4" piece of lap siding.

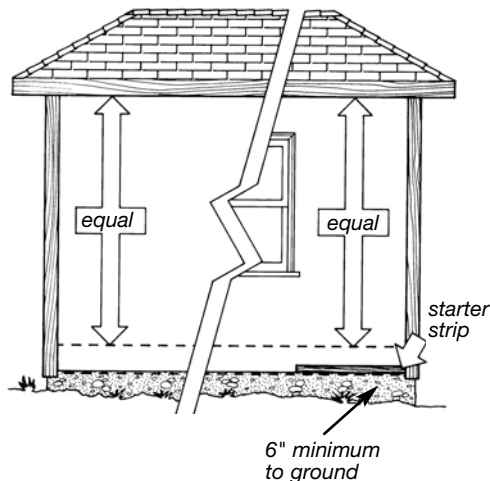
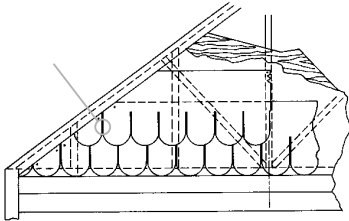
Trace the Angle of the Rake



Center Panel on Gable



Center Keyway over Middle of Tab



3. Hold a short piece of siding along the starter strip against the left edge of the gable.
4. Hold a second piece of siding against the trim at the slope of the gable.
5. Run a pencil along the edge of this piece, transferring the slope angle to the first piece of siding. Use this pattern as a guide when you cut the panels to fit the gable.

First Course

1. Locate the first piece relative to the centerline of the gable. The panel may be positioned anywhere along its length, as long as the keyway or shingle face is centered.
2. Nail approximately 1" above the top of every other keyway. Do not nail between the keyways.
3. Finish to the right and left sides, leaving 1/8" gaps between the trim and the side of the first and last panels.

Subsequent Courses

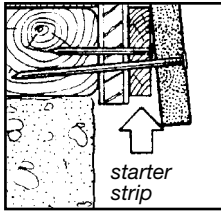
1. Use the rake angle template to trim the starting panel of the 2nd course.
2. Install the 2nd and subsequent courses according to the directions for installing Half-Rounds or Octagons.
3. Face nail the final piece at the top of the gable.

Lap Siding

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.



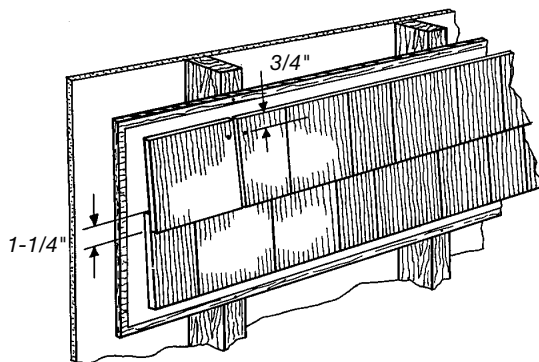
Starter Strip

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

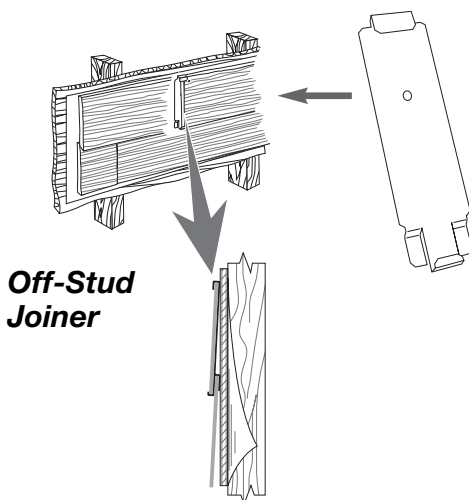
Using the starter strip as a guide, install the first course of lap siding no closer than 6" to the finished grade and at least 1" above surfaces where water may collect. **Be sure to install all siding with the proper textured, sealed, or painted surface facing out.**



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. Overlap the siding 1-1/4".

Using Off-stud Joiners

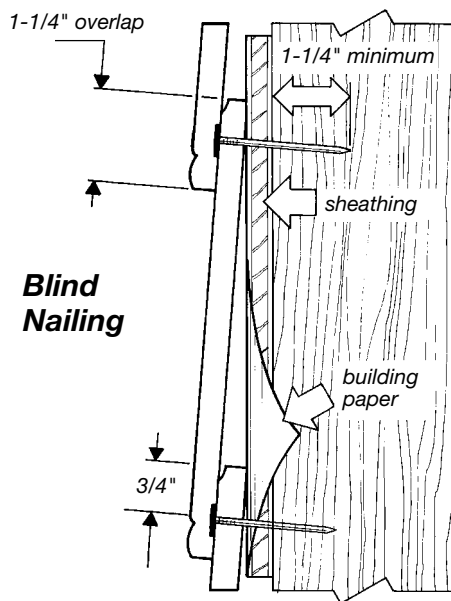
Off-stud joiners are available in different sizes. Choose the joiner that is the correct size for the siding you are installing.



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.

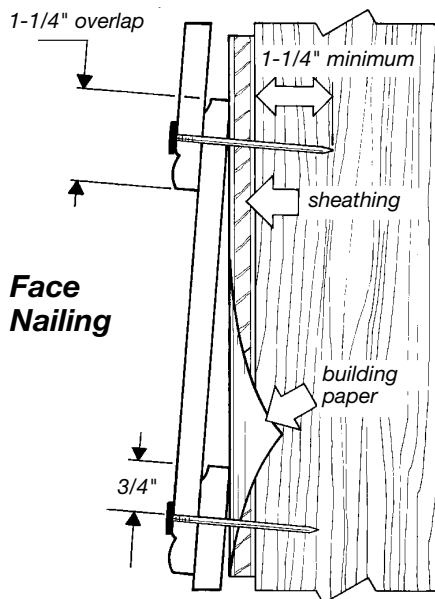


For Blind Fastening

1. Please refer to ICC-ES Report NER-537 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.

For Face Fastening

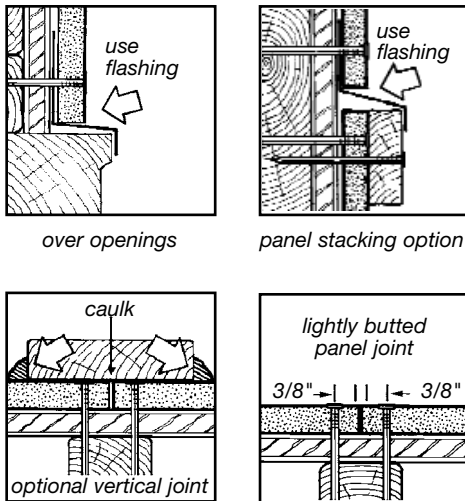
Note: To hold the panel in place while you face nail the product, nail one nail at the top on each end. Nail 3/4" from the top, 3/8" (minimum) from the end.



1. Please refer to ICC-ES Report NER-537 for approved nailing schedule. Make sure the panel overlaps at least 1-1/4" before fastening.
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.

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.

FiberTect-sealed lap siding with 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.



Vertical Siding

Using non-corrosive materials, install flashing around all doors, windows, rake boards, chimneys, and other areas where needed.

Weatherproof the horizontal joints of vertical siding with non-corrosive "Z" flashing. **DO NOT** caulk the bottom of the horizontal joint that is above the flashing.

Install each panel vertically or parallel to wall framing. Because vertical siding is face nailed, it can be installed over properly prepared walls with a maximum 24" O.C. stud spacing. All framing members must have a minimum 1-1/2" face width.

NOTE:

1. Irregularities in framing can mirror through the finished applications.
2. 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.

Chalk Line

To establish a straight reference line:

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.

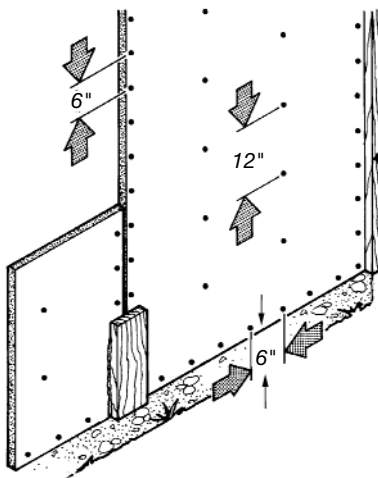
Do not install a starter strip.

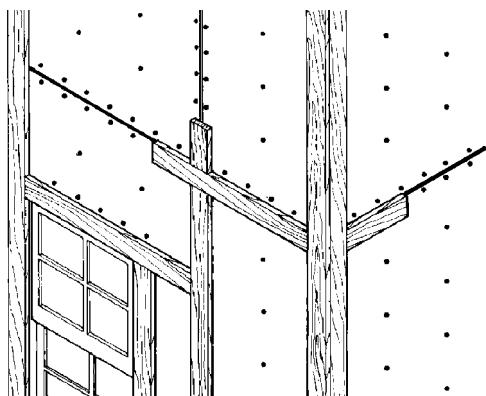
Attaching to Wood

Using the chalk line as a guide, install the first board of fiber cement siding no closer than 6" to the finished grade and at least 1" above surfaces where water may collect.

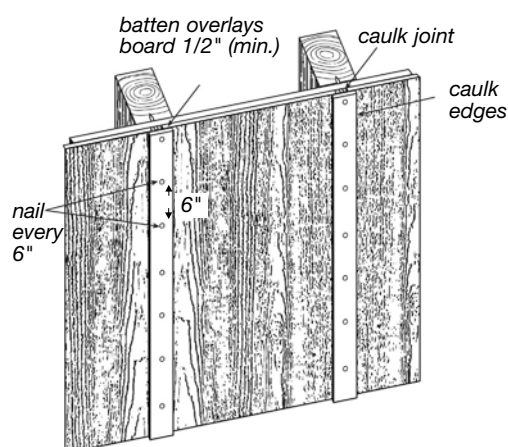
1. Leave a 1/8" gap between the siding and the trim to allow for structural movement. Always caulk between the siding and the trim.
2. Fasten the siding at all stud locations.

Do Not Install a Starter Strip





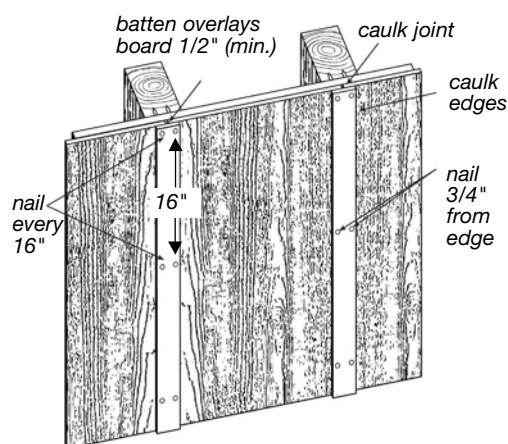
3. Do not fasten closer than 2" from the corners in either direction.
4. Space fasteners vertically for both 6" O.C. on all siding edges and 12" O.C. at intermediate framing members.
5. Fasten from the center of the board to the ends or from one side to another.
6. Support all horizontal joints with framing.
7. Paint all field-cut horizontal edges.
8. At vertical joints, moderately contact the siding.
9. To prevent drawing the siding to uneven walls, shim the siding as needed.



Board and Batten Application

WeatherBoards FiberCement Siding can also be applied in a board and batten style. You can use wood, fiber cement or composite lumber as battens. Battens must be sufficiently wide to overlap the boards at least 1/2".

If you install battens cut from fiber cement soffit or vertical siding, paint or stain the cut ends. **Do not seal the back of fiber cement battens.**



1. At the vertical joints, lightly butt the siding panels.
2. Fasten the siding at all stud locations.
3. Caulk the joints before fastening the battens.
4. If the batten is wood, nail it on both edges, 16" O.C., about 3/4" from each edge. Caulk the edges of the battens.
5. If you are using a material that will not warp (for example, fiber cement or CertainTeed Composite Trim), nail the batten in the center, between the fiber cement panels into the stud. Fasten the battens every 6" through the siding at all stud locations. Caulk the edges of the battens.

Special Situations

Non-Vertical Walls

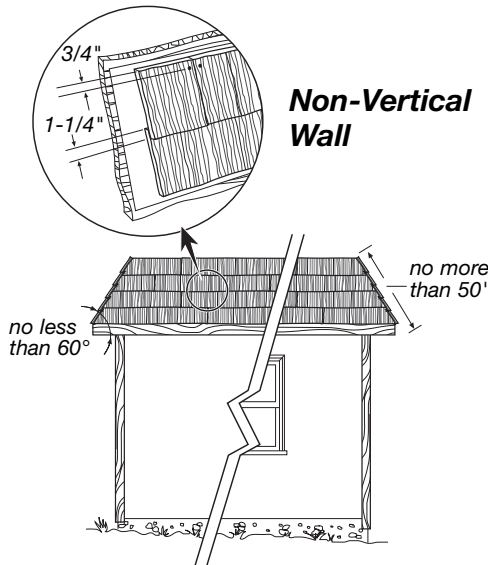
WeatherBoards FiberCement Siding can be installed on non-vertical walls when:

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.

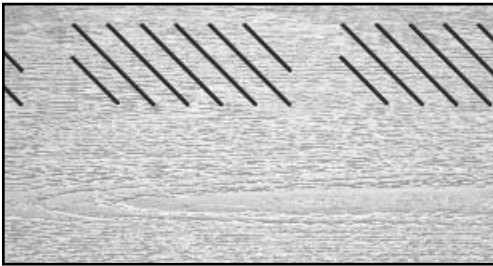
Before you install WeatherBoards FiberCement Siding on non-vertical walls, install an underlayment of 15 lb. (minimum) felt or waterproofing shingle.

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.



Ventilated Soffit



Soffit

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

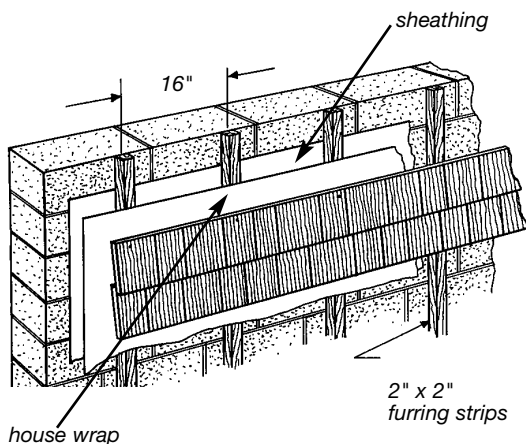
Prepare for soffit installation by nailing 2" x 4" or 2" x 2" backer board along the wall, with the bottom edge of the backer board level with the bottom edge of the fascia. At every 12' butt joint of the soffit, back up the joint with another backer board going from the fascia to the wall backer board. 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.

WeatherBoards Soffit:

- Cut WeatherBoards 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.

Attaching to Masonry

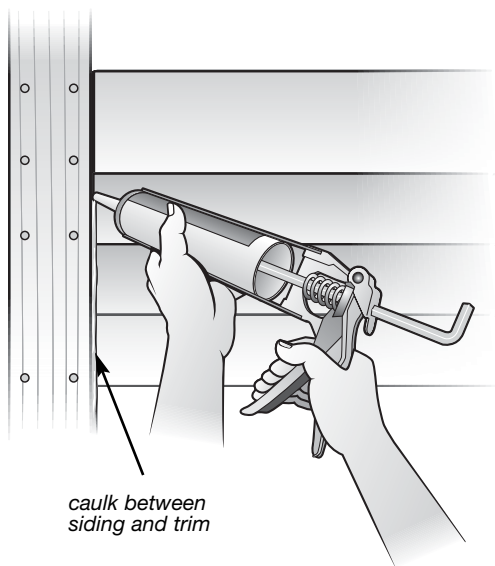


Attaching to Masonry

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.



Finishing

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 WeatherBoards 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.

Painting

CertainTeed WeatherBoards FiberCement Siding, Soffit and 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.**

All WeatherBoards Siding, Soffit, and Trim is sealed with CertainTeed's FiberTect Sealing System. You have up to 24 months to apply a finish coat.

Before applying the finish coat, clean all the siding, soffit, and trim thoroughly. Use a high-quality 100% acrylic latex paint or stain. Always follow the paint manufacturer's instructions when painting or staining.

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

This booklet describes and illustrates the steps involved in installing fiber cement siding, soffit, and trim. Its 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.**

