

PREMIUM VINYL GABLE ROOF PAVILION STICK-BUILT ASSEMBLY MANUAL



Shown above is a 17' x 17' Open Gable Pavilion

Thank you for your purchase of a new Open Gable Pavilion. Depending on the size of your Pavilion, installation can usually be completed in 1 to 2 days. These instructions are meant to serve as a guide for people with a base knowledge of general handyman skills. ***This assembly requires a minimum of three people to complete.***

Before You Begin

Please always check with your local building codes, they will vary from state to state.

The base for the Pavilion must be solid and level. If installing on a concrete slab or on concrete footers, they should be level where the posts will rest. If they are not, it may be necessary to cut the bottom of the posts so that the bottoms are all level. Other than this, no cutting is necessary. If you feel that you will need to make any additional cuts, please contact us before doing so. ***Making cuts without calling first may make installation difficult or void our warranties.***

When connecting to concrete, use wedge bolts, which are included in the kit. If connecting to an existing deck, a lag bolt and deck screws (not included) will replace the wedge bolt.

The Pavilion does not give the ability to alter the location of the posts. It is important that they are laid out correctly and double checked for accuracy before permanently attaching it to the base.

NOTE: These instructions are for building a standard, rectangular pavilion. "Eaves side" references the long side and "gable side" references the short side (See front page image). If your pavilion has custom dimensions with a longer gable side or square dimensions with equal sides, this reference point will need to be adjusted appropriately by the builder during installation. CALL WITH ANY QUESTIONS.

Site Preparation

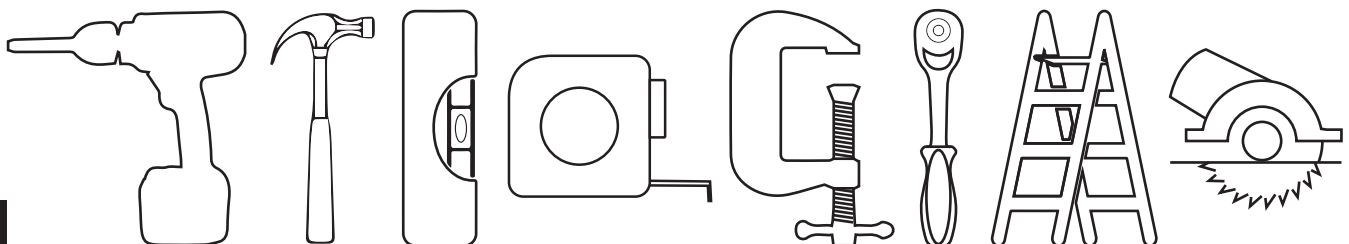
It is important that the site is properly prepared before beginning assembly. It is imperative that the site be level. There are a few choices when installing this structure, the two most common are to anchor the posts to concrete pad/wood decking or attaching to a concrete footer or two Sonotubes. Sinking the posts into the ground is not recommended unless it is called for by your local building codes.

Anchoring the posts to concrete/wood decking, is the most common method and is also the simplest. Please provide a level concrete or wood decking surface, and then lay out the template on the surface. Mark out the squares where the posts and brackets will go. Line up the markings that were made and this is where to set the posts. Posts cannot be anchored into loose pavers or stone. Customer assumes risk if not anchored into concrete or decking joists. This is the method that will be used for the following instructions:

Please check with the local building codes for the depth required for the footers/concrete slab. Also if using concrete footers make sure that all of the tops of the footers are level with each other before starting to build. Contact your Project Advisor with any questions that you may have.

Tools Needed

Hammer drill, hammer, level, tape measure, C clamps, socket set, ladder, circular saw



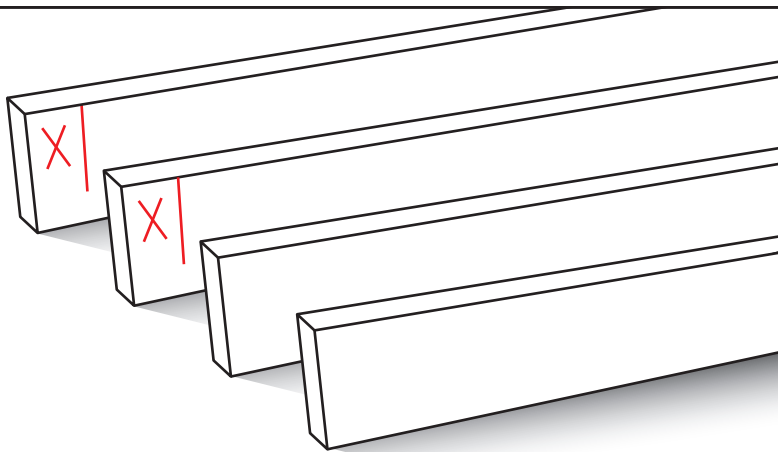
Notes:

An air-nailer or stapler can be used for rubber or asphalt shingles.

(Air nails and staples not included in the kit.)

There will be a parts list sent with the Pavilion. All hardware is included in each Pavilion kit. The specific hardware will vary depending on the Pavilion. Please see the parts list for details.

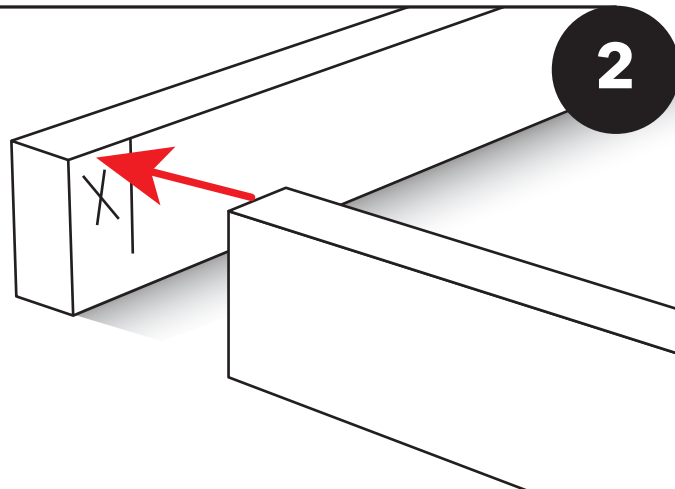
1



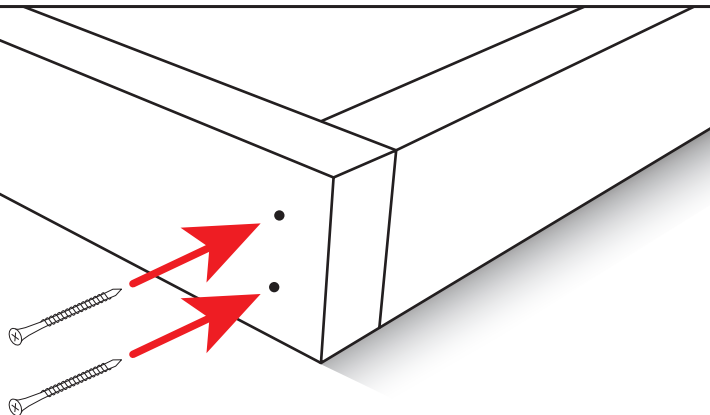
The Pavilion kit includes a wooden template that will be used to mark the post locations. Notice that two of the 2x4 boards have a marking near the ends. Building a box will reveal the outside corners of the posts when properly placed.

Arrange the template pieces so that they are positioned in the exact location of where the Pavilion will be placed. The boards with the marking on the end will be across from each other. The marks will show where the other boards will be attached to create this box.

2

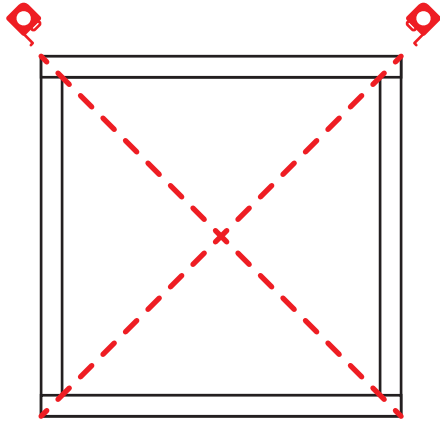


3



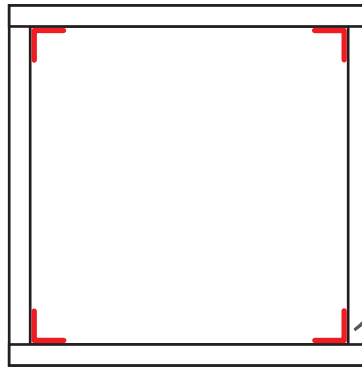
Connect the corners of the template pieces by driving two 2 1/2" screws through the side of the template boards.

4

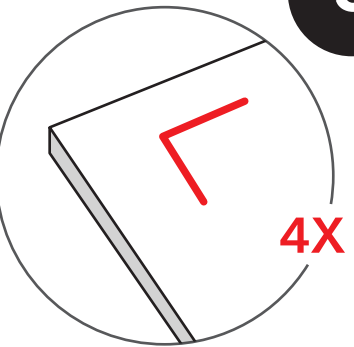


Once the template is in position, square the template. Do this by measuring diagonally from one corner to its opposite corner, then measure diagonally between the other two corners. These two dimensions **MUST** be the same. Adjust the template until the diagonal measurements are identical.

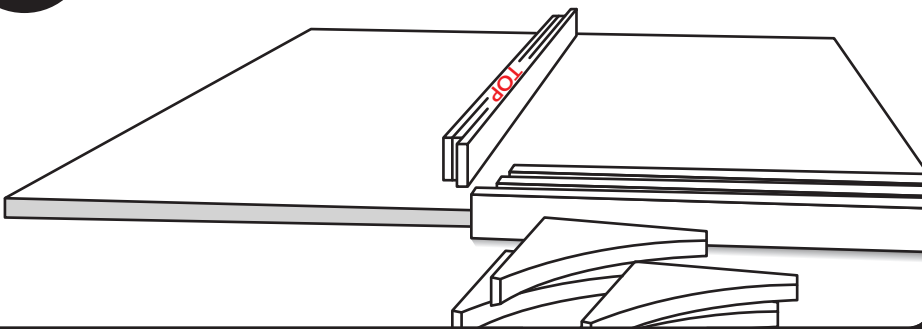
Once the template is "square", mark the post locations using the **INSIDE** corners of the framed box on the concrete slab with a pencil. After all the post locations are marked on the concrete slab, remove the wooden template. Disassemble it and set the 2x4s aside for use in step 13.



5

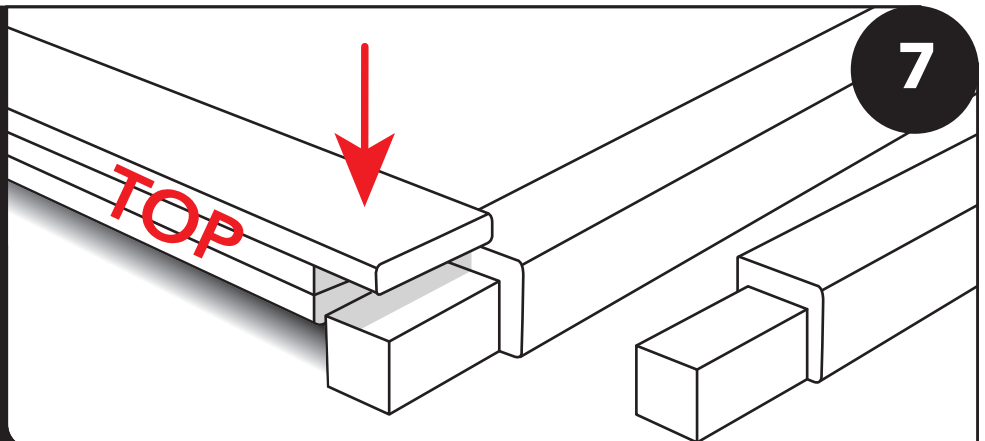


6



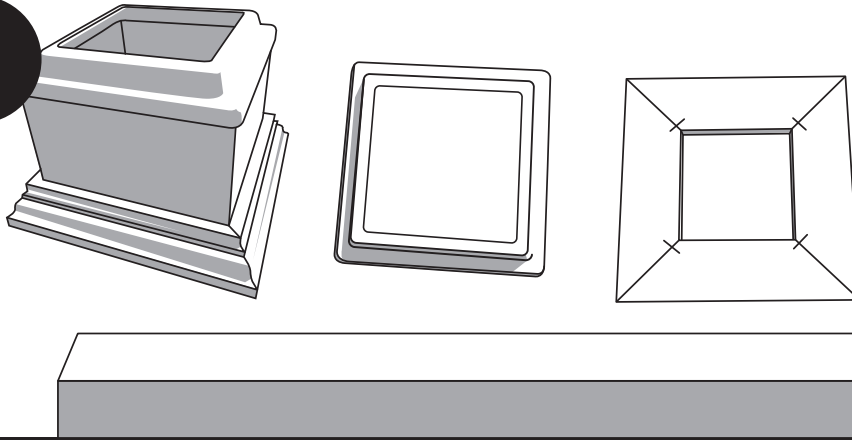
Begin by assembling the frame of the Pavilion structure. Please note that the Pavilion kit includes some pre-assembled pieces.

All of the corner posts will have 2 sides notched. Turn the notches on the post to the outside to accept the headers. The 2 center posts will have 3 sides notched. The unnotched side will face inside the pavilion.



7

8



Collect post components to be placed on posts (Bottom post trim, top sleeve trim, top square trim, and post sleeve). **NOTE: If you ordered an electrical package, there will be a 6X6 post with a notch in one side. Put the sleeve with the receptacle on that post as you complete step**

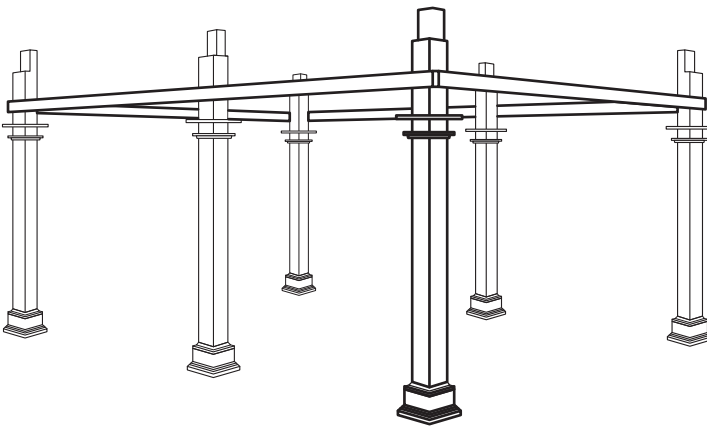
Assemble post vinyl kit. **NOTE: The notched side is the top.** With the post on the ground, slide the sleeve onto the post. Now install the base trim from the bottom. Slide the sleeve trim on from the top followed by the square trim. Complete this on all 4 posts and then set the posts upright.

If you ordered Heavy Duty Anchors for High Wind, see page 21 Step 1 prior to standing up the post.

9

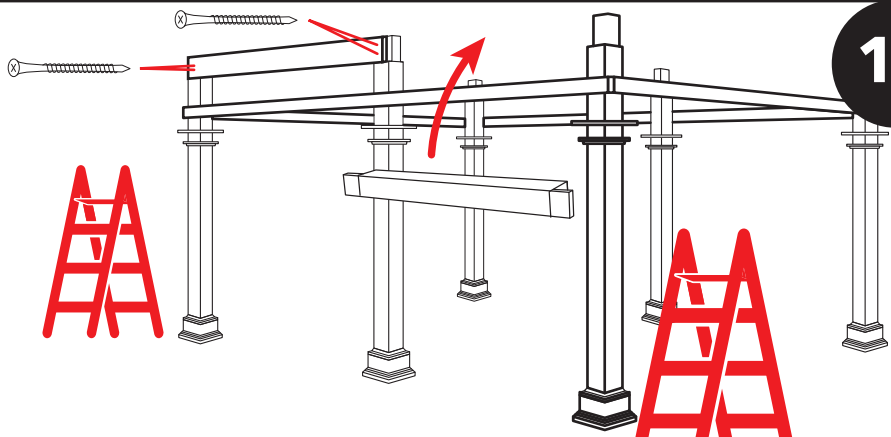


10



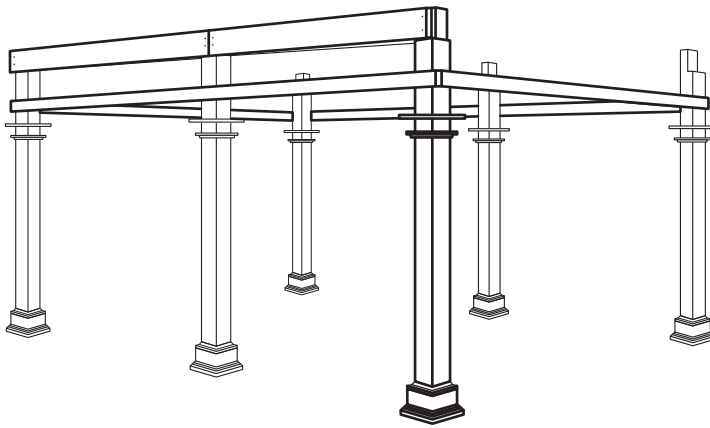
When you have all posts at marks, fasten the template boards to the tops of posts. Make sure all posts components are on, as you cannot put these on later. Make sure all posts are level and everything is square.

Starting with the center post from step 10, attach header with two 3 1/2" screws (not in pre-drilled holes) to hold header in place.



11

12

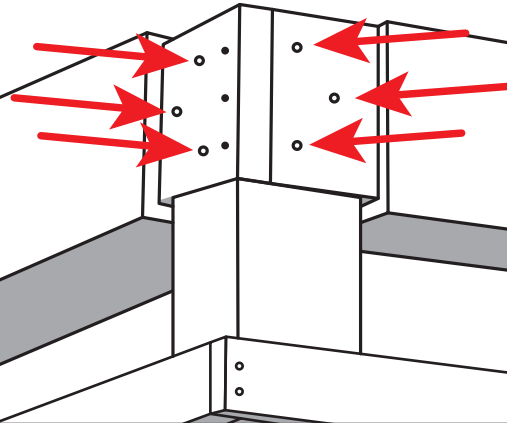


Attach short end headers with three 3 1/2" screws (in the pre-drilled holes) into the end of the other two beams. Repeat on opposite side with the last remaining beam.

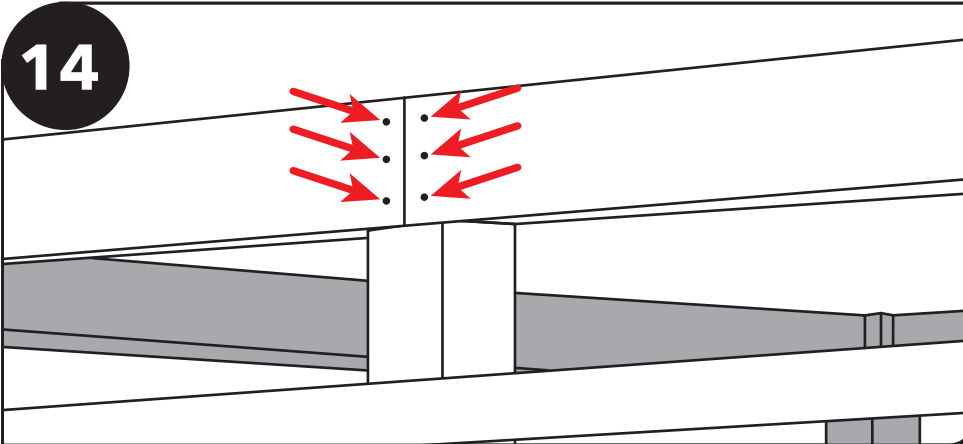
Locate twenty-four 8" GRK screws in the hardware box (if you have a standard 4 post structure). Those go in the pre-drilled holes at the corners of the beams. (6 per corner)



13



14

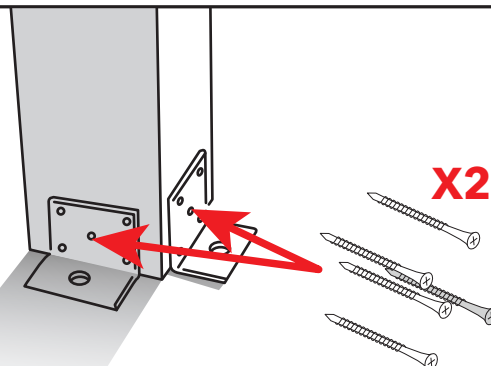


Locate the 12 GRK 4" screws. Screw three GRK 4" into left and right side of the header seam on the center post (using the pre-drilled holes). Repeat on the opposite side of the pavilion anchoring your last two beams.

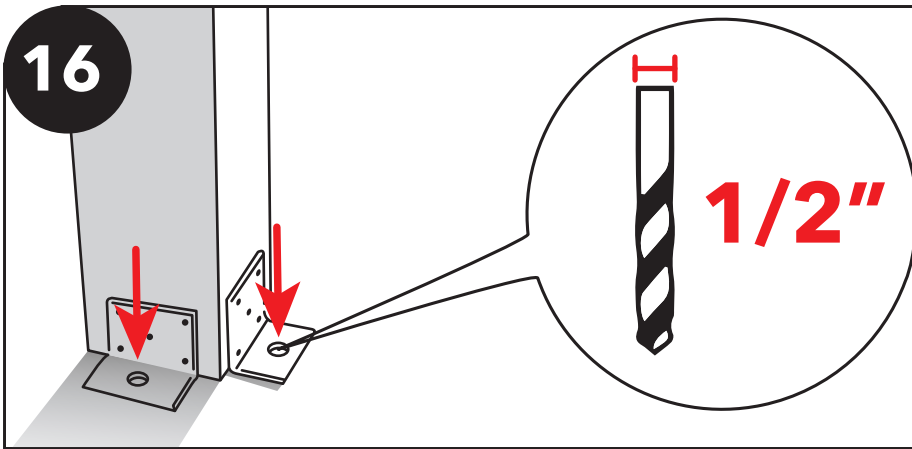
Make sure the posts are all level and everything is square. With base trim still raised, fasten two L-brackets on the outside edges of each post with five 2 1/2" screws per bracket. Some engineering specifications may require 4 brackets per post. **NOTE:** For HD High Wind brackets see bracket appendices on page 20 Steps 2-4.

6

15

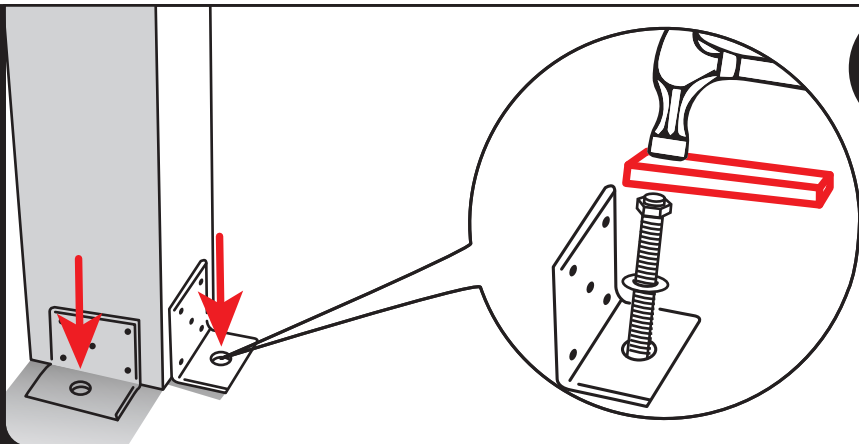


16



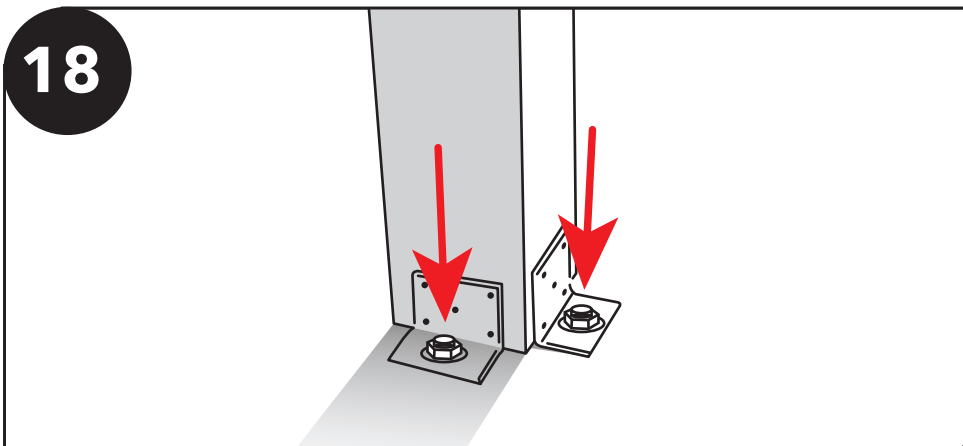
When all posts have two L brackets on, use a drill with 1/2" masonry bit to drill down about 1/2" farther than length of wedge anchor.

Before inserting the bolt, make sure dust is removed from hole. Then screw the nut and washer on about 1/8" below the top of the bolt. Next, insert the wedge anchor bolt into the hole. To protect the threads and nut, tap the bolt into the ground with a piece of wood as a buffer.



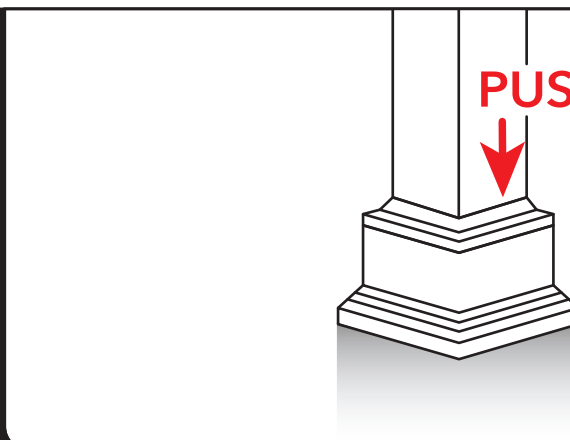
17

18



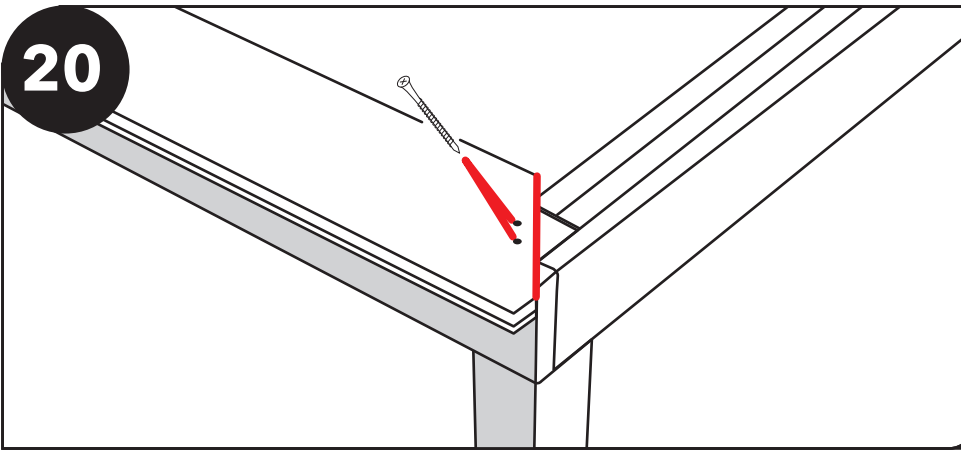
Once the wedge anchor is down against the bracket, use a wrench and tighten it down. Do that with all the anchors.

When all of the nuts have been tightened fully and the posts are securely mounted to the concrete slab, slide the sleeve and post trim down.



19

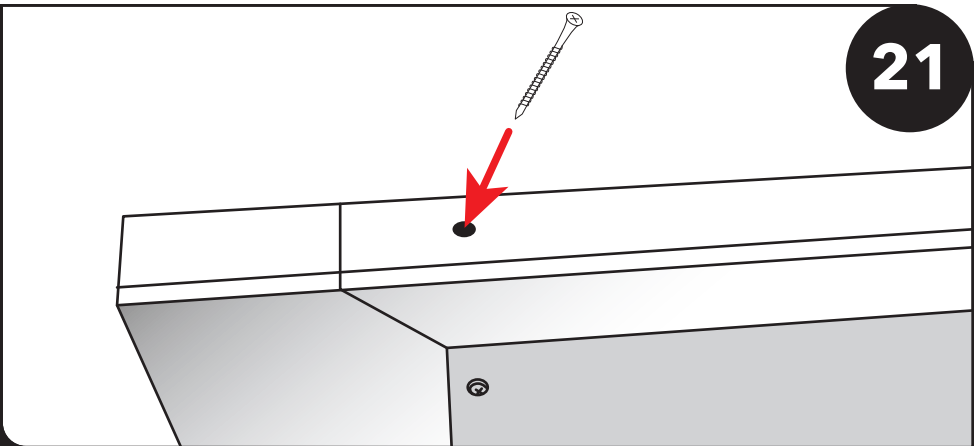
20



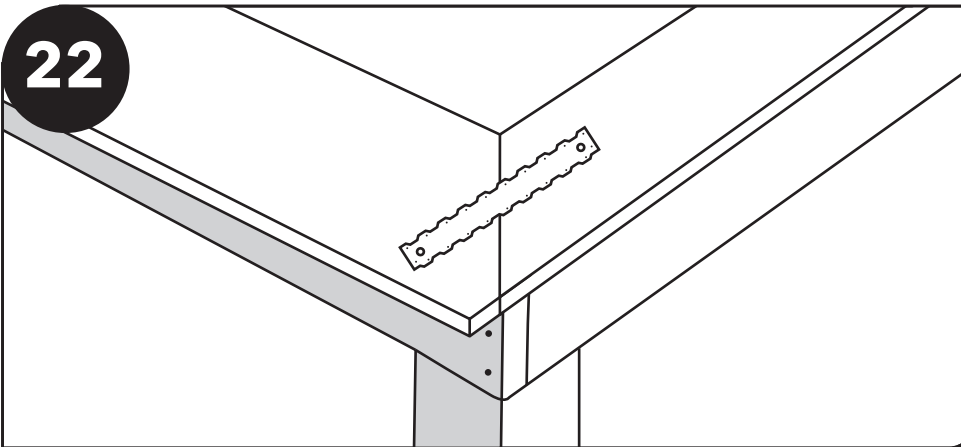
Install the top plates, vinyl side down. Position one 2x12 on the eaves side of the pavilion. Center the plate so that both ends fall at the same place on the top of the post, visually splitting the post-top from corner to corner. Be sure the overhang measurement matches on both ends. Use two 3 1/2" screws to fasten the plate. **DON'T CUT WITHOUT CALLING.**

Position the 2x8 plate against the 2x12, vinyl side down. Fasten the 2x8 to the 2x12 plate at the corner with one 3 1/2" screw. Once you have all four corners together, put two 2 1/2" screws down into the header approximately every 16" all around and repeat on all remaining sides.

21



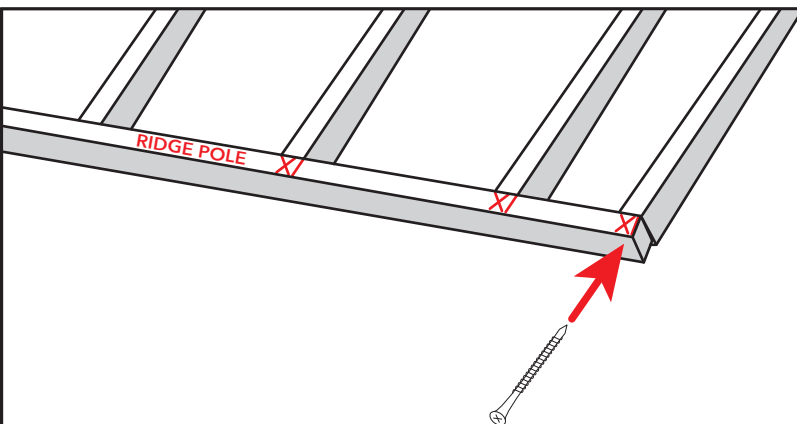
22



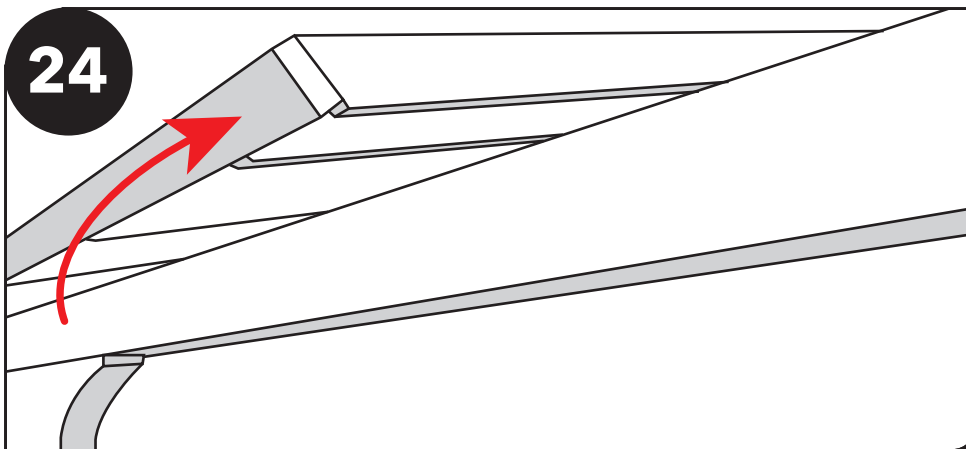
Fasten tie straps, ST2215, with 1 1/2" screws at every seam on the top of the plate.
NOTE: ST2215 tiestraps not needed for pavilions under 16' wide.

Fasten the marked "Side Rafters" to a marked "Ridge Pole" at each "X", keeping one edge of the rafters flush with the vertical line and the top edge flush with the top of the ridge pole.

23

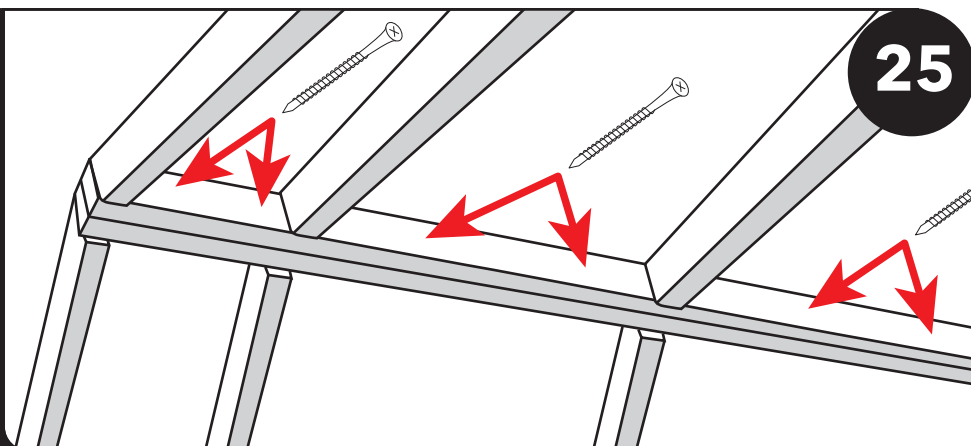


24



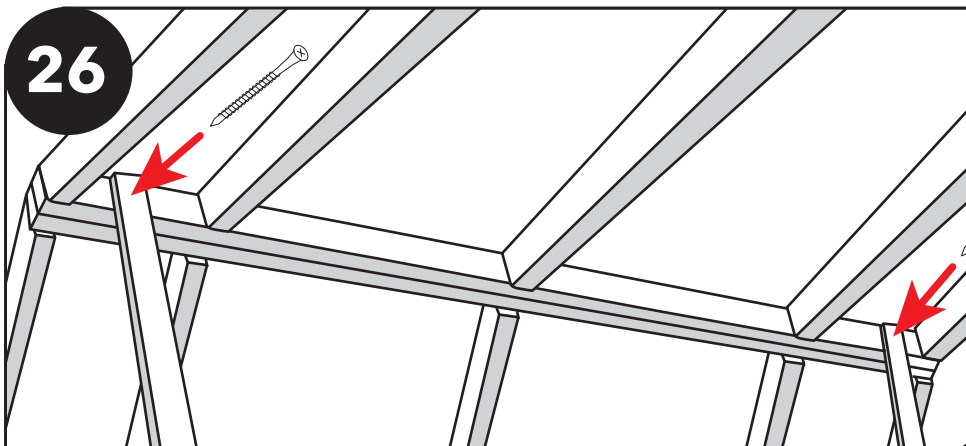
Set finished sections up onto plate.

Screw the two sections together at the top with two 2 1/2" screws between every rafter. Keep ends even.



25

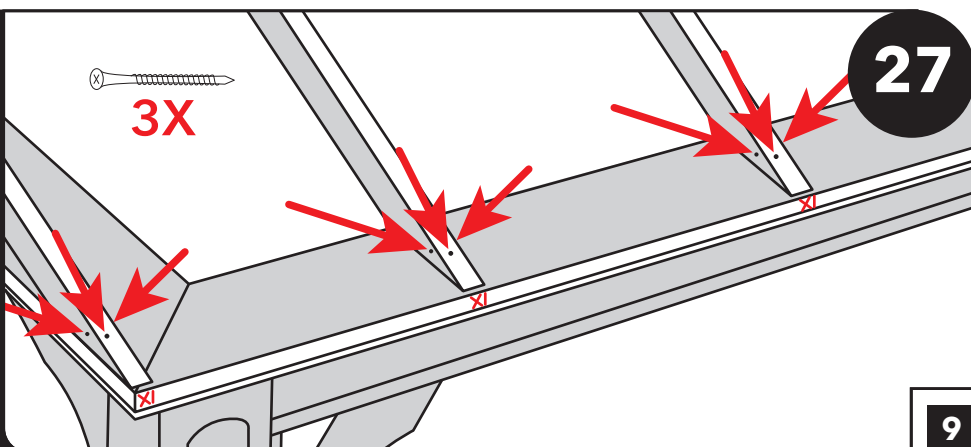
26



Fasten two 2x4 temporary props at either end of ridge pole to hold in place.

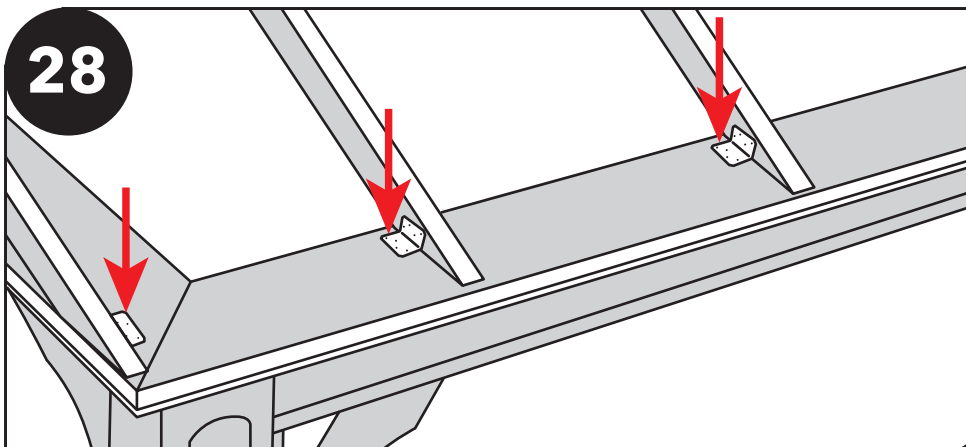
NOTE: If you purchased an electrical package turn to page 21 for installation instructions.

Anchor each rafter to the plate on the marked "X"s using three 3 1/2" screws, staying flush with the vertical line keeping 1/4-1/2" away from the edge of the plate.



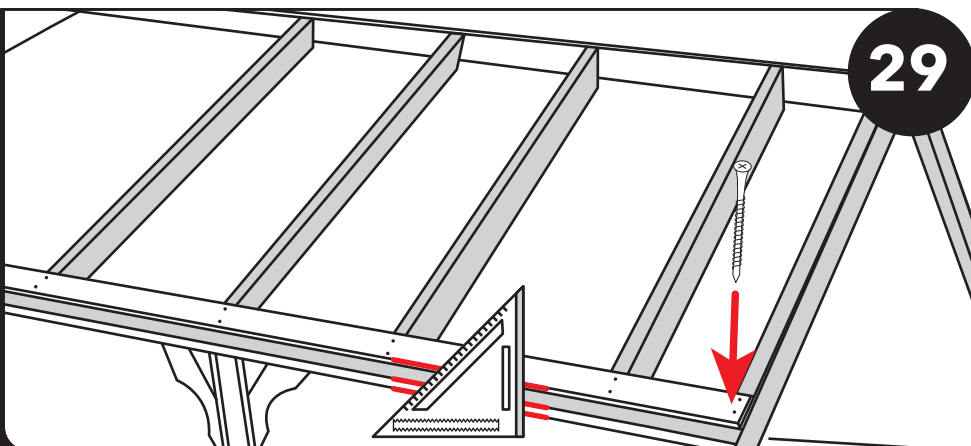
27

28



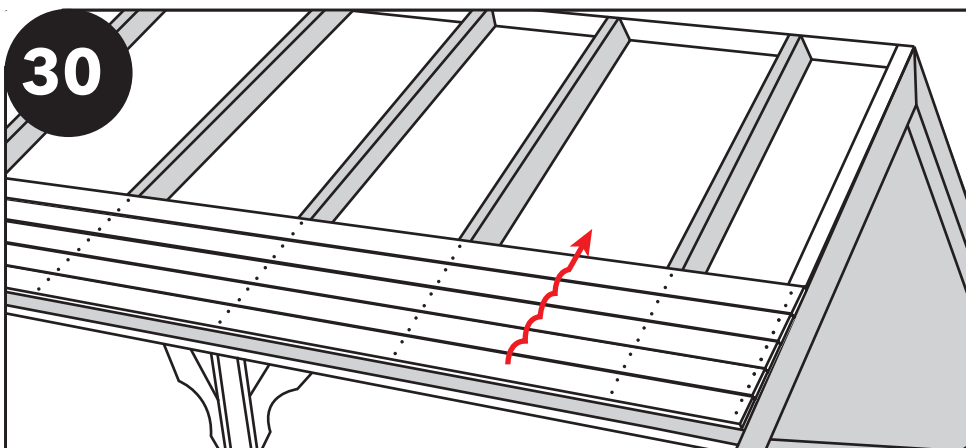
Fasten one "A23 Simpson" bracket to the side of each rafter with 1 1/2" screws. Then anchor the bracket to the plate with more 1 1/2" screws. **NOTE: A23 Simpson Brackets not needed for pavilions under 16' wide.**

Install the first piece of roof decking making sure not to extend past plate edge. Board may need to be cut to length. (At times decking may need to be spliced on a single rafter.) Fasten decking using two 2" nails per rafter.



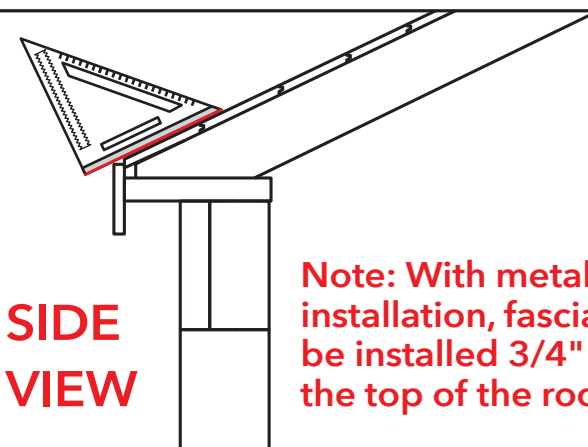
29

30



Securely interlock each piece of the roof decking, starting from the bottom and working up. Repeat step 33 on the remaining side of roof.

Starting on the long side, hold fascia in place butting the top of the fascia board against a square, following the pitch of the decking. Fascia should not be lower than the pitch of the decking; the end of the fascia should remain flush with the end of the plate.

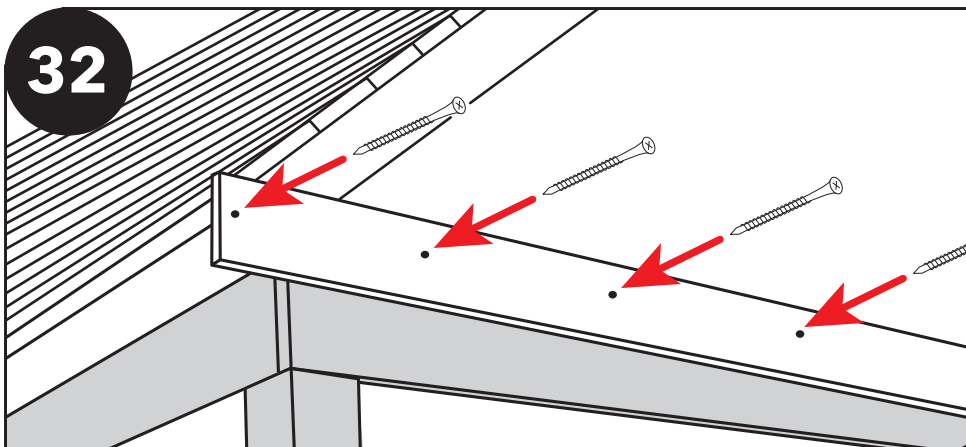


**SIDE
VIEW**

Note: With metal roof installation, fascia should be installed 3/4" higher than the top of the roof decking.

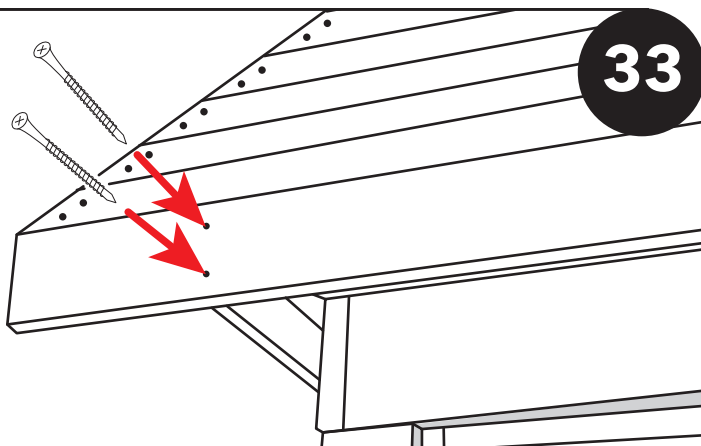
31

32



Next, drive 2 1/2" screws every 16" along the entire length of the fascia board. Follow these same steps with the other short side fascia board as well.

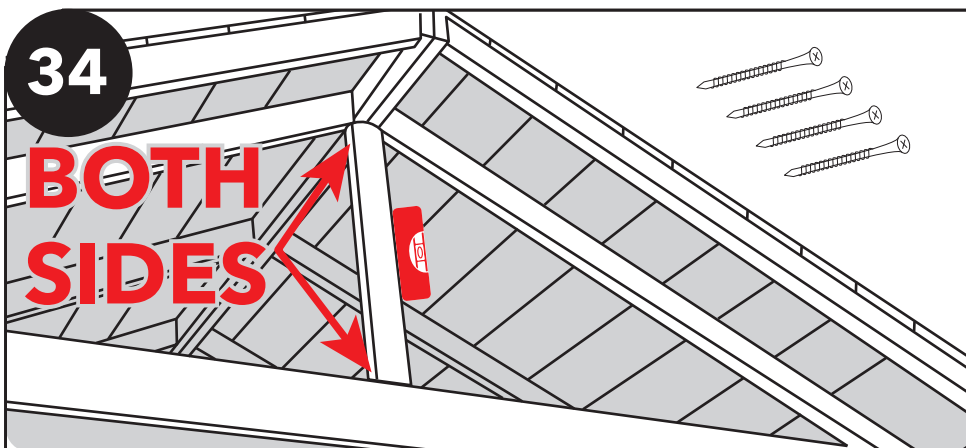
The long side fascia boards will overlap the short sides and will extend out past them 11" (12" past the top plate). Align the pre-marked line with the end of the short side fascia board ends. Attach the long side fascia to the top plate just as was done with the short sides. The long fascia will need to be connected to the short fascia boards with 2 1/2" screws. Follow this process until all fascia boards are installed.



33

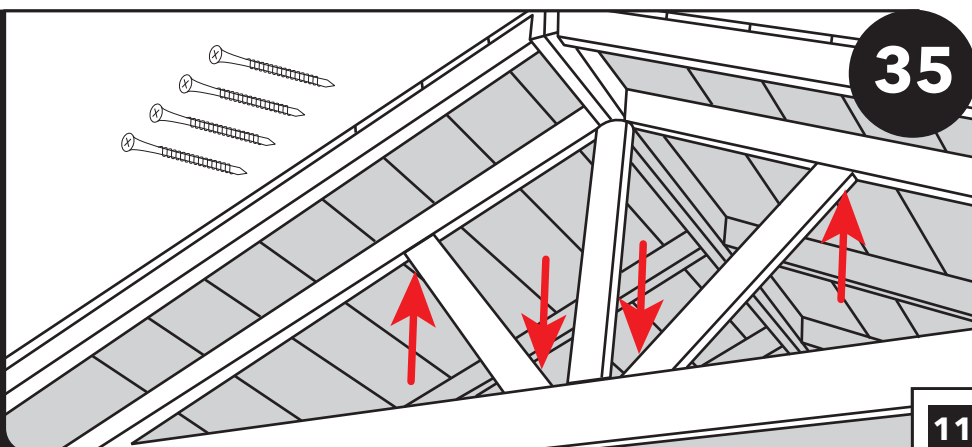
34

BOTH SIDES



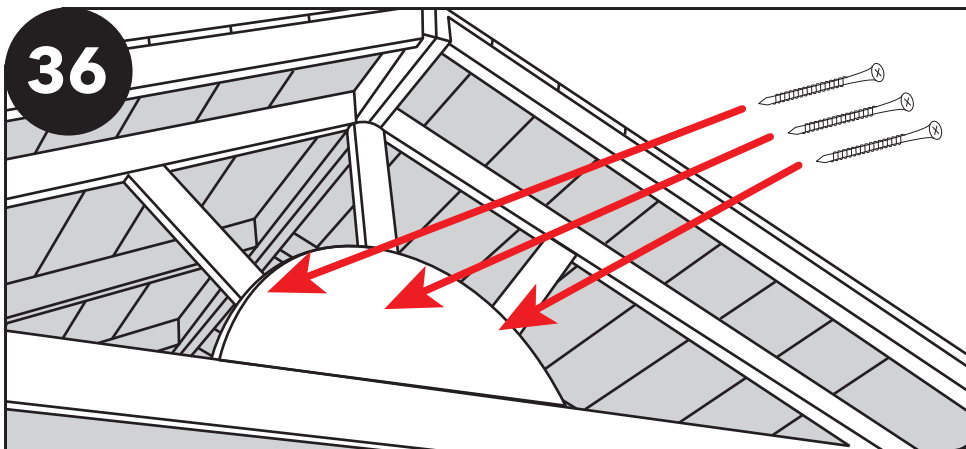
Once all the rafters are connected, install the vertical board of the gable sunburst design. Make sure it is in the center of the building. Fasten with four 2 1/2" screws. Two on top, two on bottom.

Install the slant pieces. You might have to cut them if they do not fit. Fasten with two 2 1/2" screws per board. (One on the top and one on the bottom)



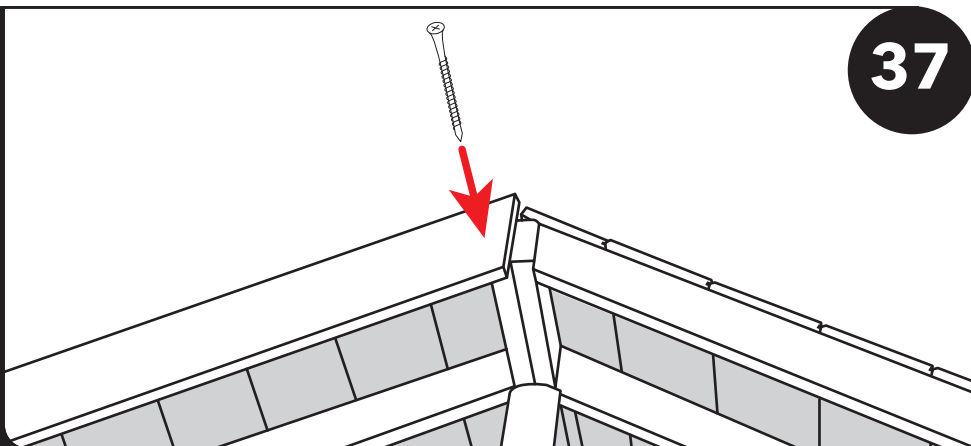
35

36



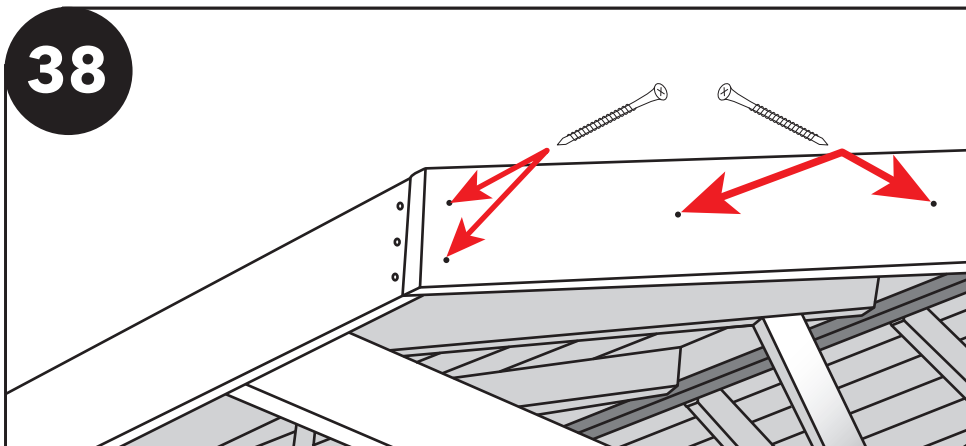
There will be two different size half-moon trim pieces. The smaller one goes on top of the fascia. The larger one fits on the inside. Fasten the half-moon trim pieces to all three boards with one 1 1/2" screw. Repeat the same process on the inside.

Now you are ready to install gable end fascia. These are the boards that have slant cuts on both ends. It might need to be cut down to size. Keep it flush on top of roof panel and center of ridge beam.



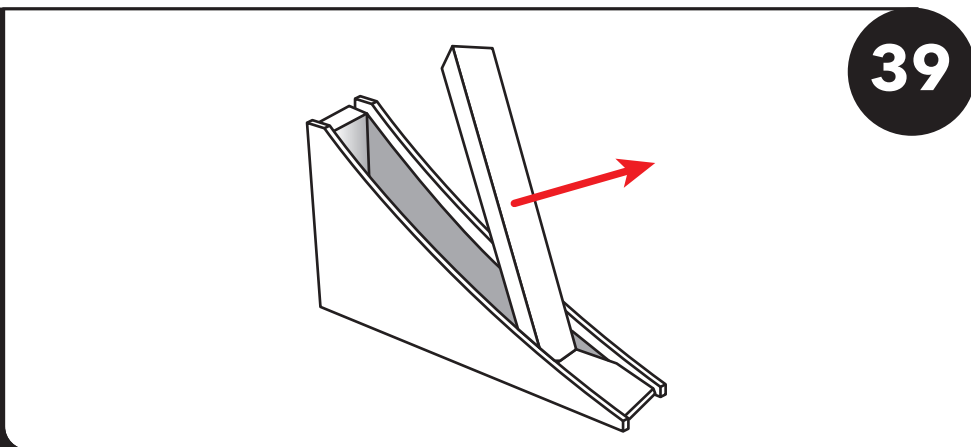
37

38



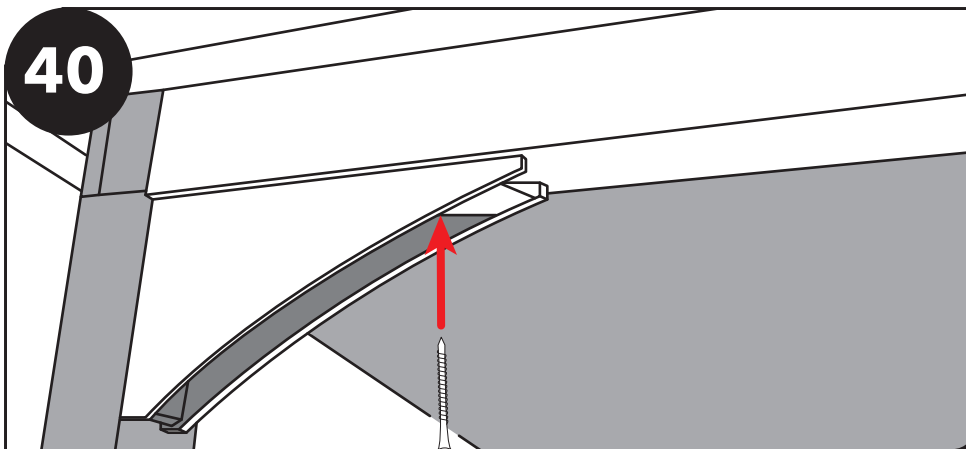
Fasten to the 2x4 rafter. One 2 1/2" screw at top and two at the bottom going into fascia. Then one every 16".

Locate the corner braces. Take the 2x4 board out from center of brace.



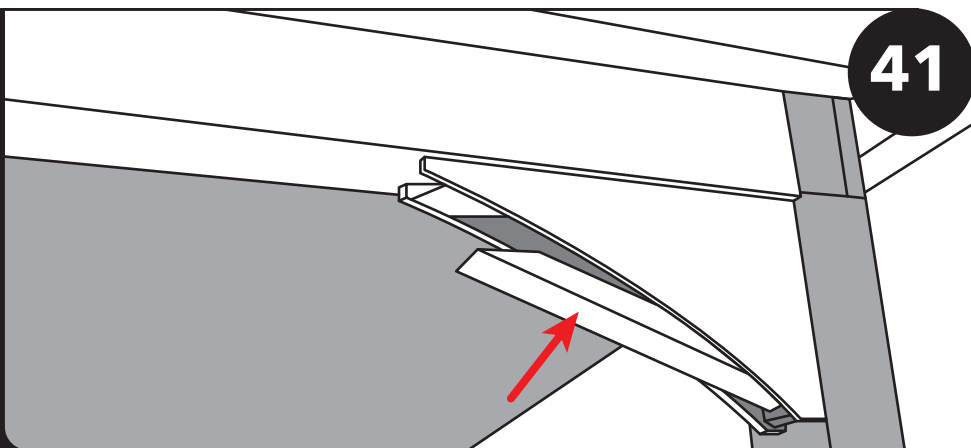
39

40



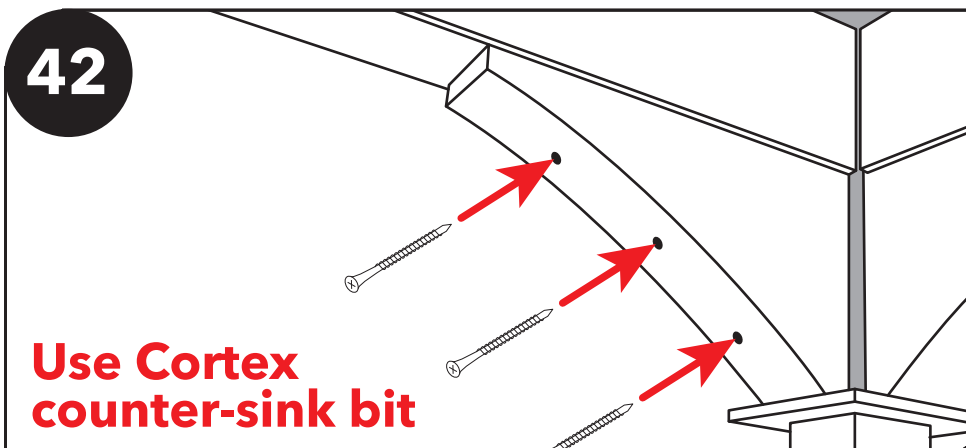
Keep the brace flush on the outside of the post. Fasten to post with two 3 1/2" screws and up into the header with two 3 1/2" screws. Line the top of the brace up with the header seam above staying 5/8" from flush. Being sure to keep the back of the brace flush with the post below.

Once you have all the braces installed, put the 2x4 block back in place, fasten with two 2 1/2" screws at the top and two 2 1/2" screws at the bottom.



41

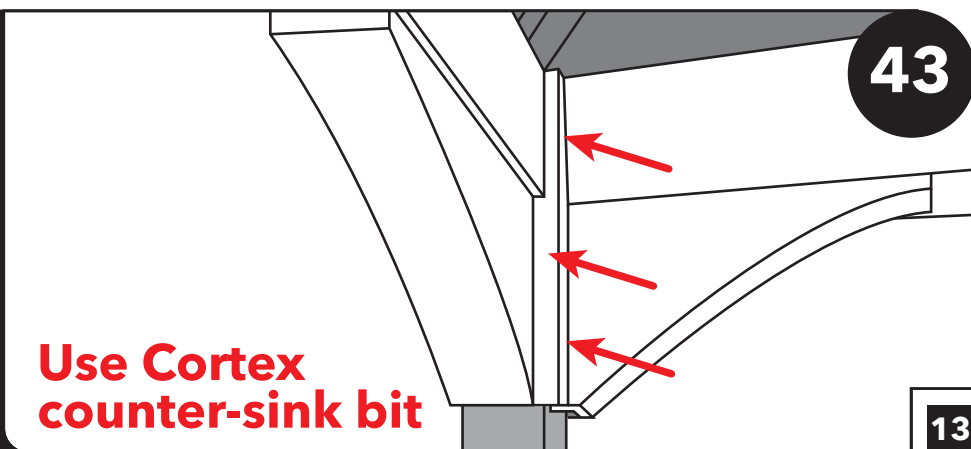
42



Use Cortex counter-sink bit

Install the bottom brace covers using three 2 3/4" Cortex screws. Continue with all 8 braces.

Install the inside corner trim. Fasten with three 2 3/4" Cortex screws.

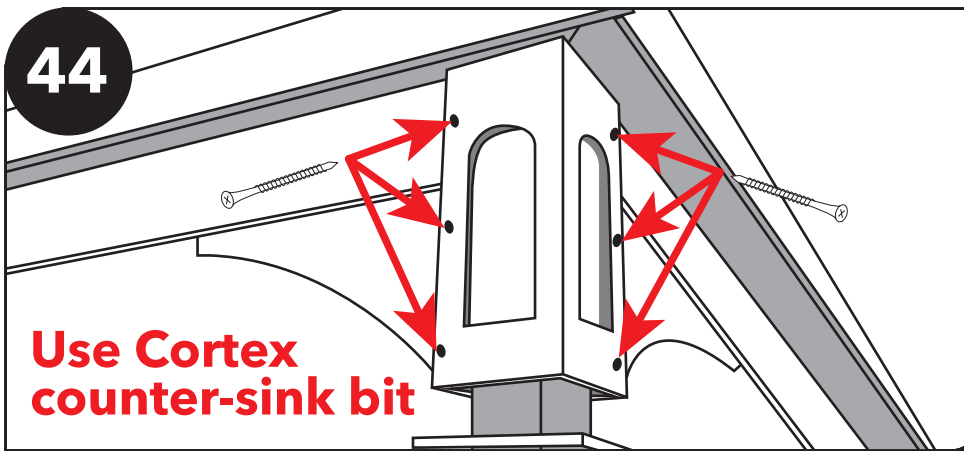


Use Cortex counter-sink bit

43

44

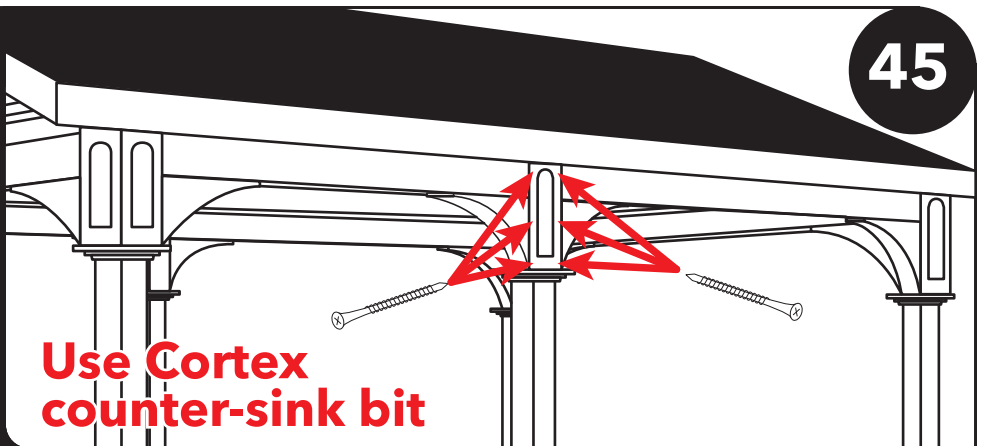
**Use Cortex
counter-sink bit**



Place the outside corner trim box flush against the header and the brace, being sure that the top corner point is centered on the plate seam. Fasten with six 2 3/4" Cortex screws into the pre-drilled holes on the face of the corner trim.

Install the outside center trim by fastening it to the top of the center post with six 2 3/4" Cortex screws into the pre-drilled holes on the face of the outside center trim.

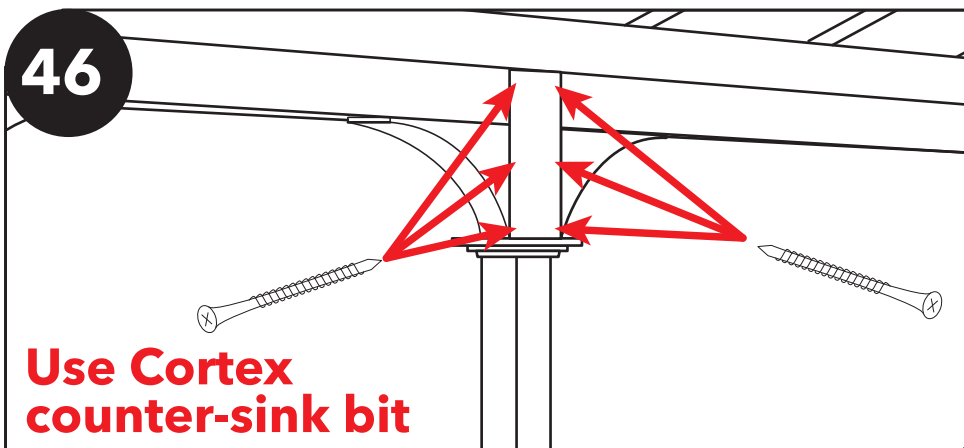
**Use Cortex
counter-sink bit**



45

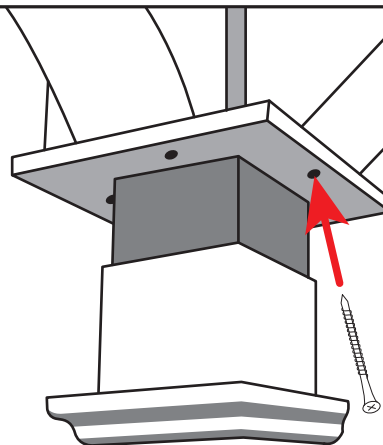
46

**Use Cortex
counter-sink bit**



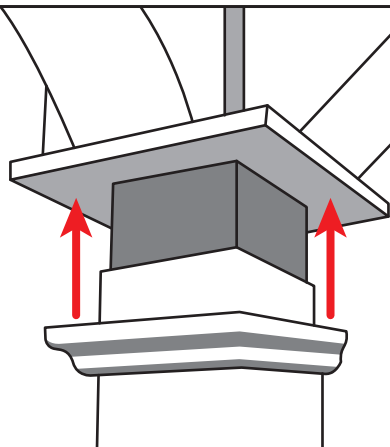
Install the inside center trim by fastening it to the top of the center post with six 2 3/4" Cortex screws into the pre-drilled holes on the face of the inside center trim.

Fasten top square trim to bottom of braces with four 2 1/2" screws. Repeat on all posts.



47

48



Slide the 6x6 top sleeve trim up to the top square trim and fasten with 1 1/2" pan head screws one centered on every side. Repeat with all posts.

Plug all countersunk Cortex screw holes with provided plugs, and using the provided caulk, caulk all gaps in the trim components.

49

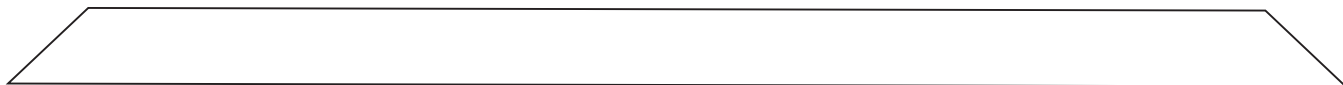


Installing Collar Ties

Your pavilion kit may include collar ties. Collar ties prevent the middle of the main beams from bowing outwards due to the downward pressure of the roof due to gravity (i.e., the weight of the roof).

1

Identify the collar ties in your kit. A collar tie is a 2x4 (2x6 for larger sized pavilions) with the ends mitred to match the pitch of your roof, like this:



For the purposes of these instructions, we will assume you have a 2x4 collar tie, rather than a 2x6.

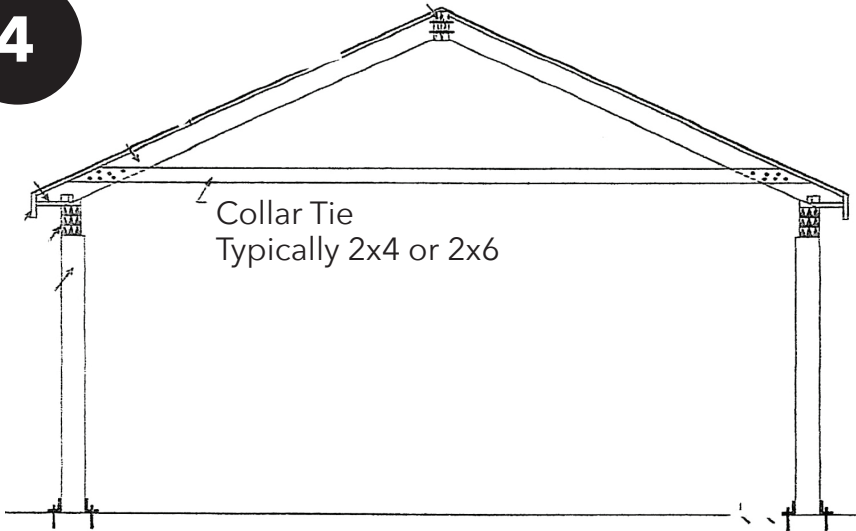
If you have only one collar tie, you will fasten it to the center rafter (skip to Step 4 on the next page). If you have more than one collar tie, space the collar ties on the ground evenly along the length of the structure, each collar tie directly below a rafter.

2

3

Grab a collar tie and raise it up to the interior ceiling of the structure. Push the collar tie up against the bottom of T&G so that the mitred end of the collar tie is flush with the bottom of the T&G, and the 4" face of the 2x4 is flush against side of your rafter.

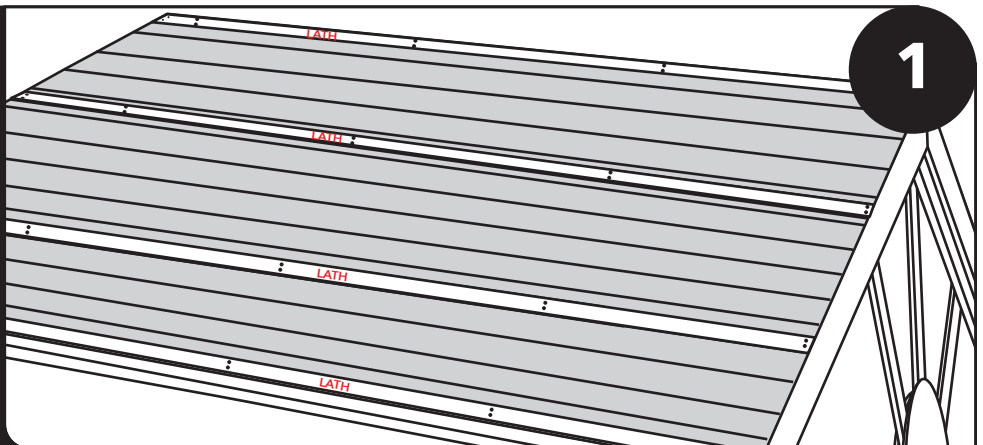
4



Fasten the collar tie to the rafter with six 2 1/2" screws at each end of the collar tie.

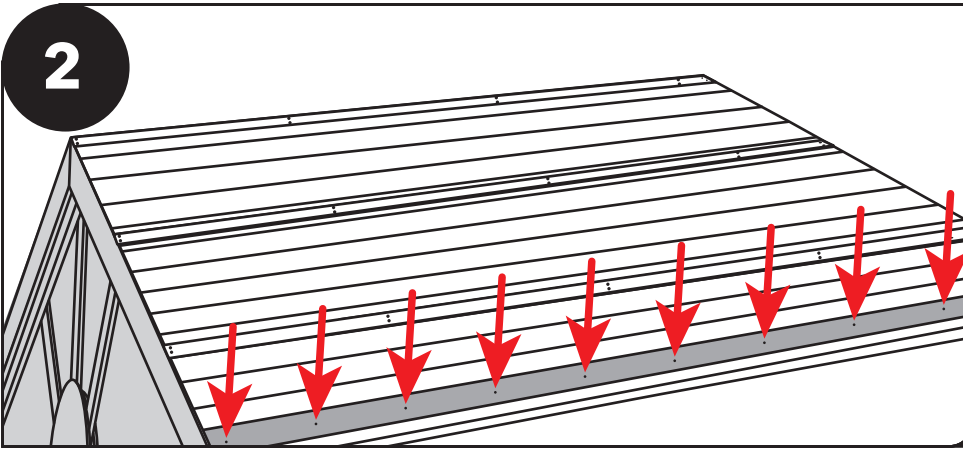
Roofing Option 1: Installing A Metal Roof

Fasten horizontal "Roof Lath" pieces with two 2" roofing nails at each rafter. Place the first piece of lath directly on top of the lowest decking board. Space each lath board roughly 20-24" apart with the longest piece placed at the bottom and the shortest piece at the top. (Lath boards may need to be cut to length.)



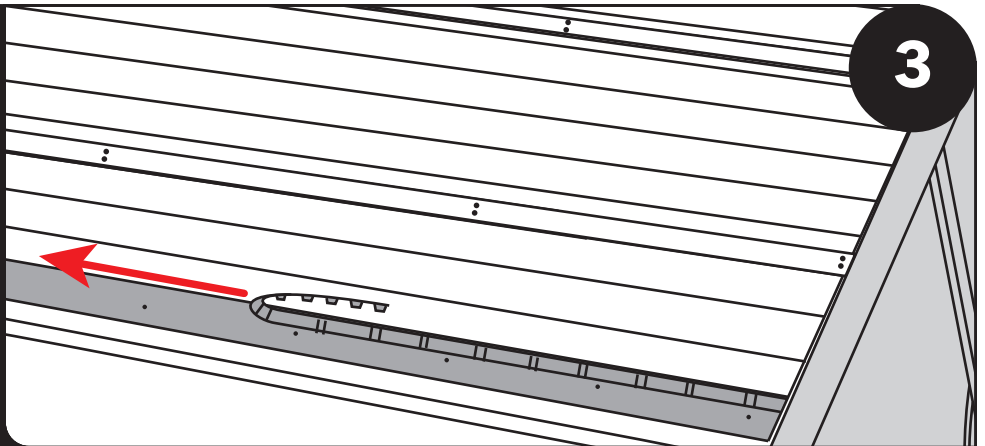
1

2



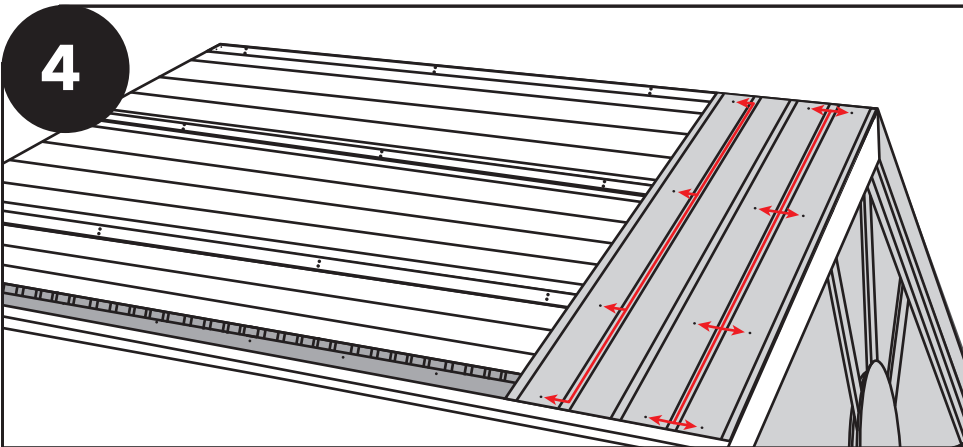
Install the drip edge over the bottom lath piece. Cut each piece to length. Fasten with 1" screws, staples, or nails every 16".

Install the ribbing roughly 1 1/2-2" from the bottom of the drip edge. Do not stretch the ribbing because the grooves of the roof must line up with the ribs.



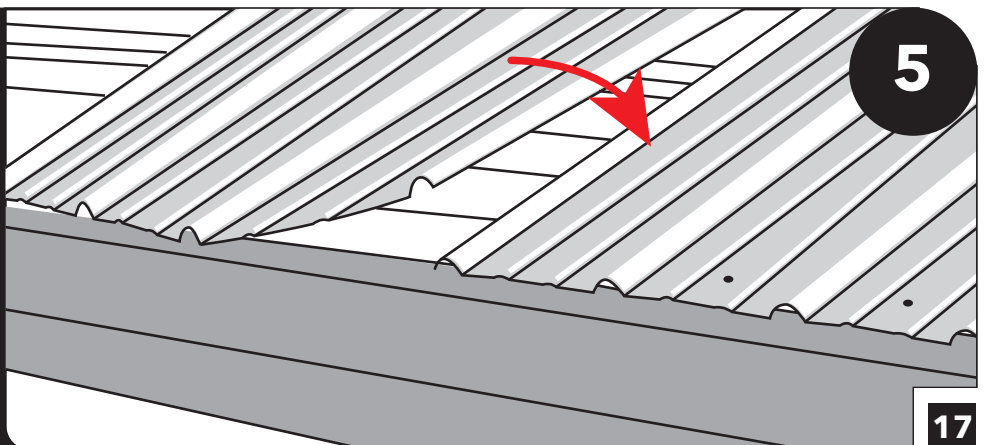
3

4



Install the tin, starting at right side and moving left. Ensure the first piece is installed squarely. Keep the bottom of the tin flush with the drip edge. Fasten with 1" screws. The first piece will have three screws at every lath.

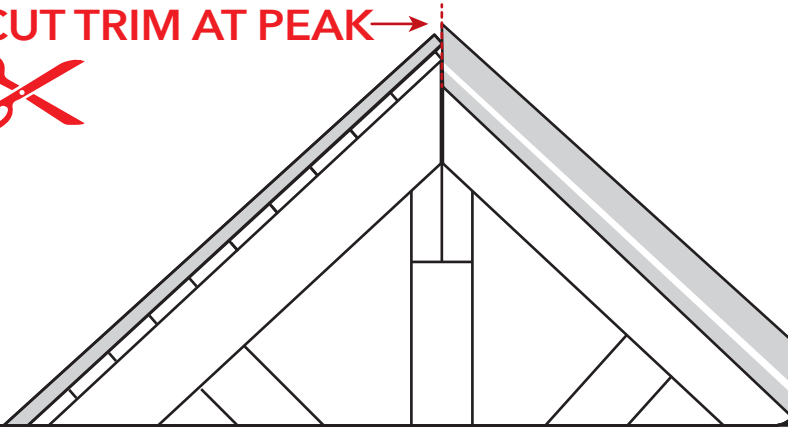
The next piece must properly overlap on the far edge. Last piece may need to be cut to size to be flush with the edge of the fascia.



5

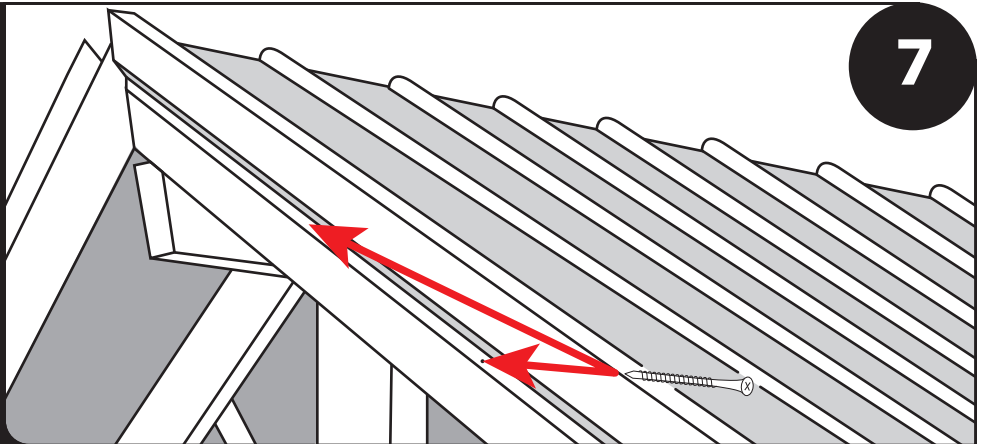
6

CUT TRIM AT PEAK →



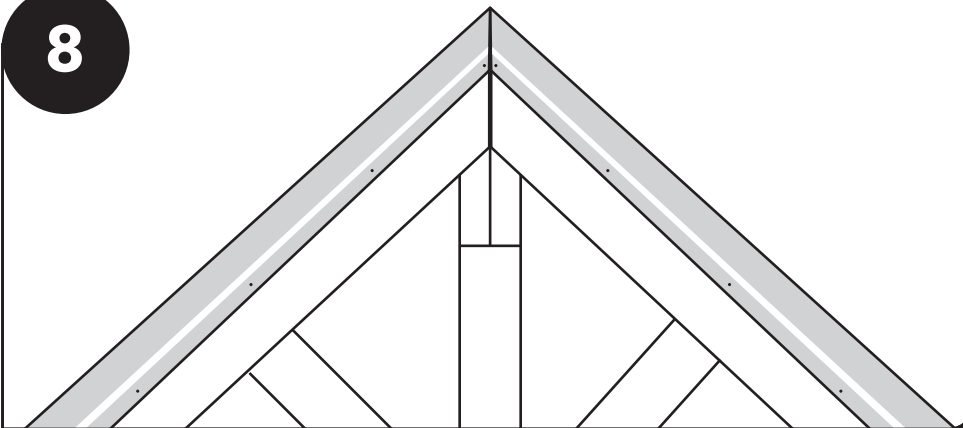
Once you have all the tin installed, hold the gable end trim in place to mark the upper end of the trim that will need to be cut to meet flush with the other side.

Once gable end trim is cut to the correct angle, attach the trim piece with one 1" screw into the fascia board every 24" of the open gable end. Next, fasten the top of the same trim piece with 1" screws at every roof lath.



7

8



When complete, repeat steps 6-8 on the other gable end.

Locate ridge cap. Remove backing from foam and attach to the underside of the ridge cap. Place ridge cap, flush with previously installed trim, fastening every 24" with 1 1/2" screws on both sides.



9

Roofing Option 2: Installing An Asphalt Roof

NOTE: Before you begin the steps below, install roof paper starting at the bottom. Be sure to overlap 2" as you work upward. Drip edge will then be installed on all edges of the roof, using a fastener every 16".

Roofing Fasteners

Please note we do not include fasteners for asphalt shingles with our kits. This is because some states require different fasteners than others, and because some customers have different tools than others (hammer, nail gun, pneumatic stapler, hammer tacker, etc.).

Please use shallow depth fasteners to fasten your shingles to your 1x6 roof decking. For example:

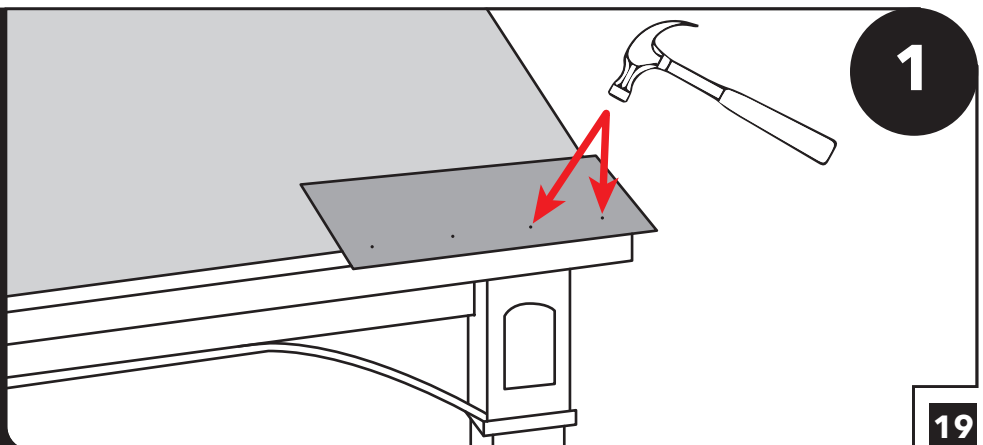
- 5/8" long roofing nails
- Roofing staples with 5/8" leg and 1" wide crown

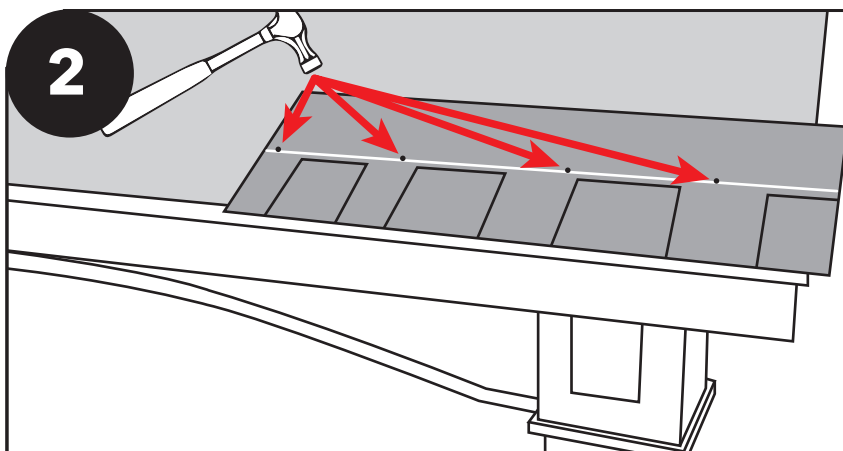
These fasteners will certainly be sufficient to hold the shingles to your roof in high storm winds, and will not pierce the bottom surface of the 1x6 roof decking.

DO NOT PLACE PLYWOOD, OSB (ORIENTED STRAND BOARD) OR OTHER DECKING ON TOP OF THE 1X6 TONGUE AND GROOVE.

It is not necessary and is too heavy for your structure.

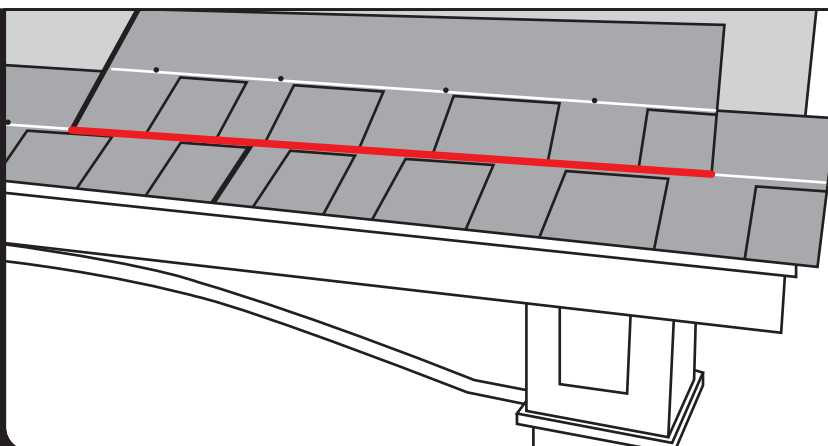
To install 1st row of shingles, turn shingle upside down with black tar line at bottom edge, facing up; and attach to roof using four 5/8" roofing nails. Place nails approximately 3" from bottom.



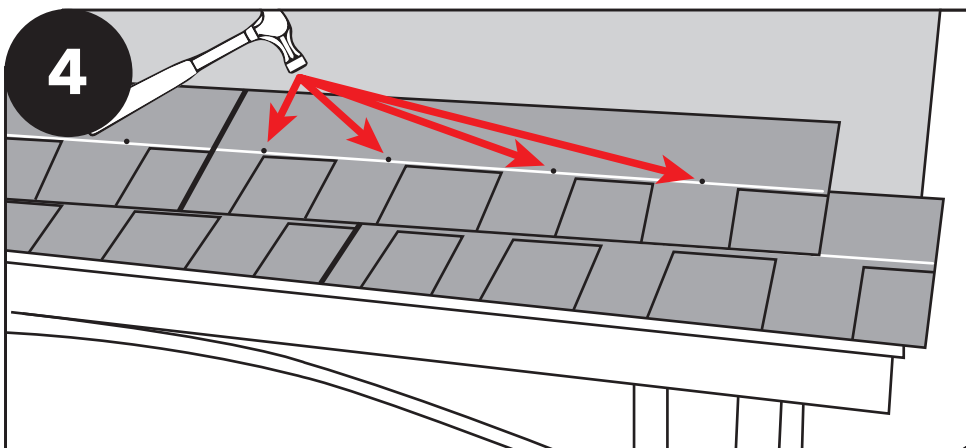


Use four 5/8" roofing nails and attach to roof through shingle at the center line marked on the shingle. Do not fasten below the line or your fasteners will be exposed.

Start second row, line up bottom of shingle with the architectural line on the shingle below.

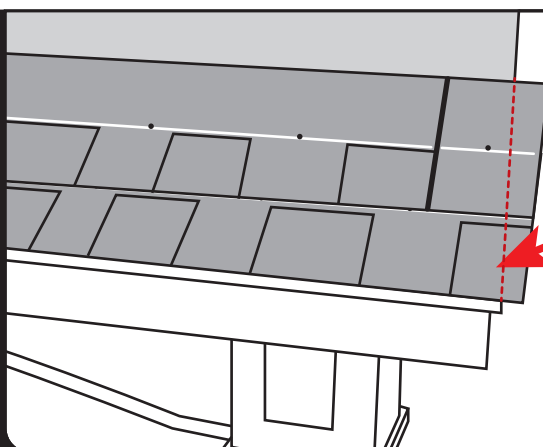


3



Attach second row of shingles to the roof using 5/8" roof nails provided or a power stapler. Do not use long nails or staples that protrude through 1X6 roof decking.

Trim corner shingles using a shingle scissor or utility knife. When using a knife, cut on the bottom side.

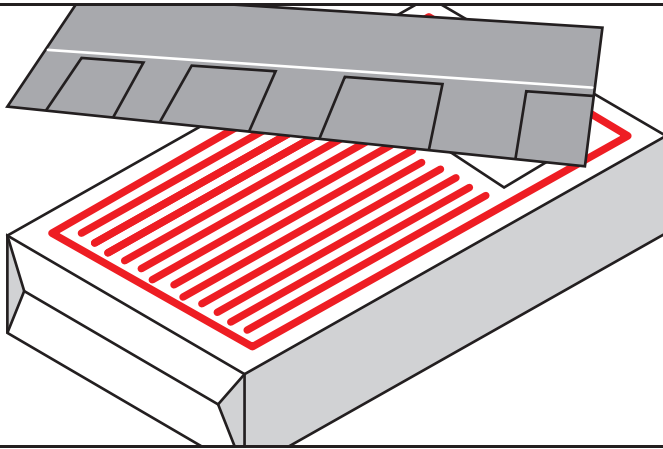


**CUT SHINGLES
AT ROOF'S EDGE**



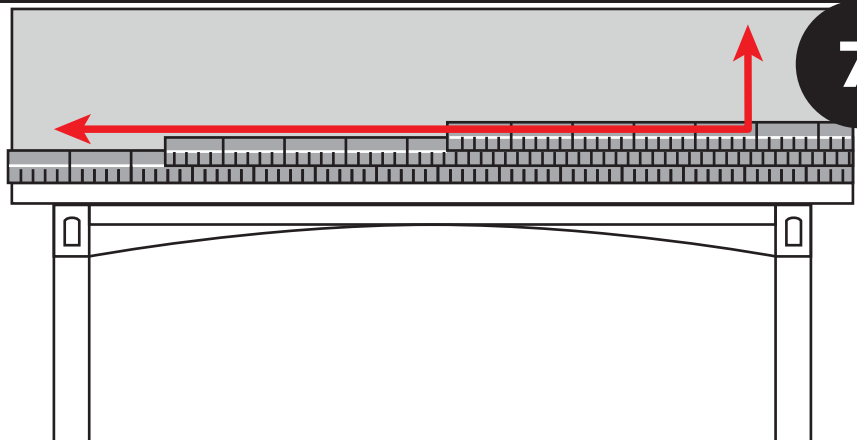
5

6



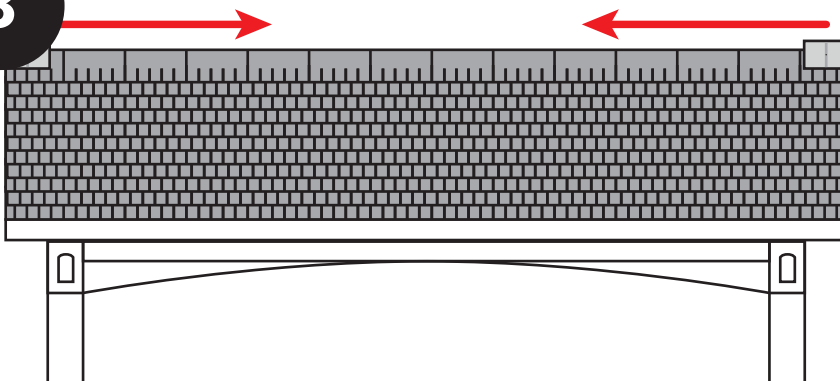
Also, be sure to use shingle instructions for further reference needed.

Work across, then up. Continue to the top.



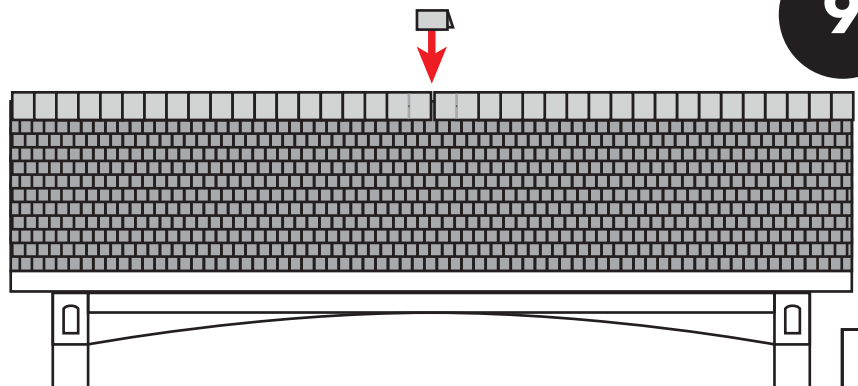
7

8



Start at both ends of ridge and work toward the center of the ridge.

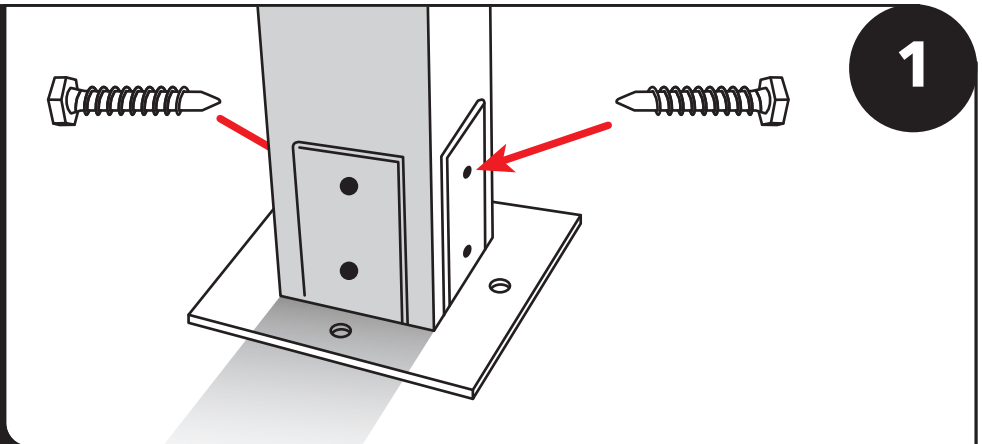
Last piece will need cut in half and will bring the corners together.



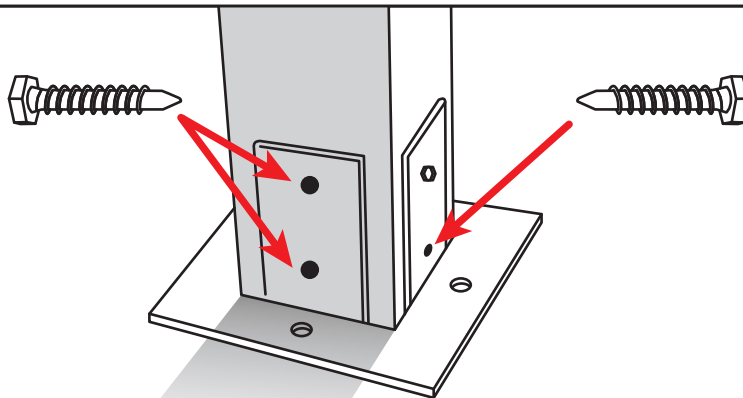
9

Heavy Duty Anchors for High Wind

After placing post bases on from step 9, slide HD high wind bracket onto the bottom of the post. Screw two 3/8"x3" hex lags into the pre-drilled holes on opposite sides of the bracket. Repeat on all posts. Continue on with regular instructions, starting at step 10.



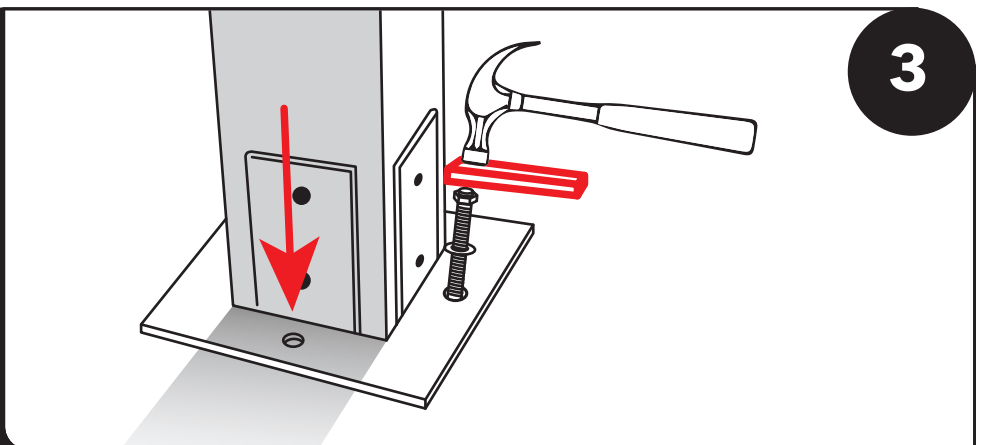
2



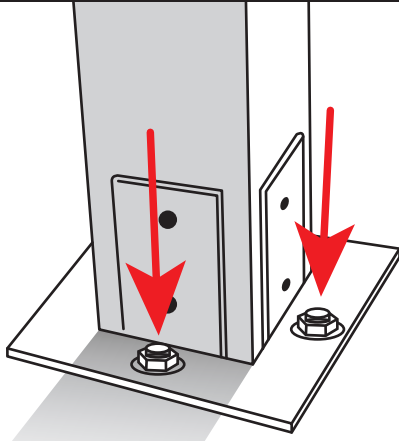
Screw the remaining six 3/8" X 3" hex lags into each post, using the pre-drilled holes. Repeat with all posts.

Remove dust from hole. Next, screw the nut and washer on about 1/8" below the top of the bolt. Insert the wedge anchor bolt into the hole. Tap the bolt into the ground using a piece of wood as a buffer to protect the threads and nut. Repeat on remaining 3 sides of the post then repeat on other posts.

22



4



Continue on with regular instructions at step 22.

Notes: