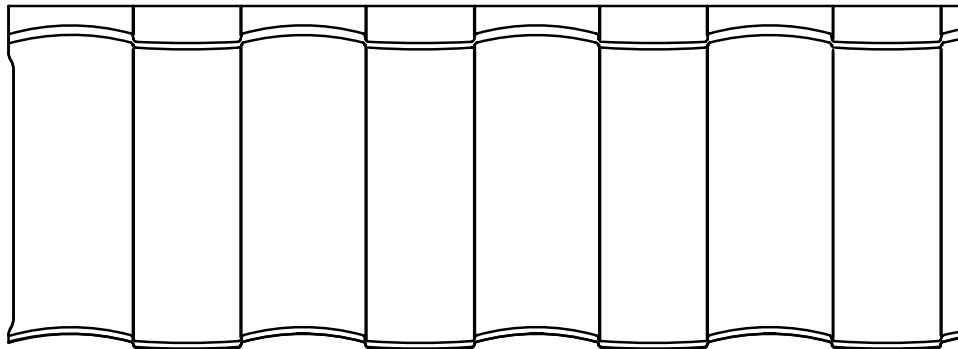


GERARD ROOFING TECHNOLOGIES BARREL VAULT

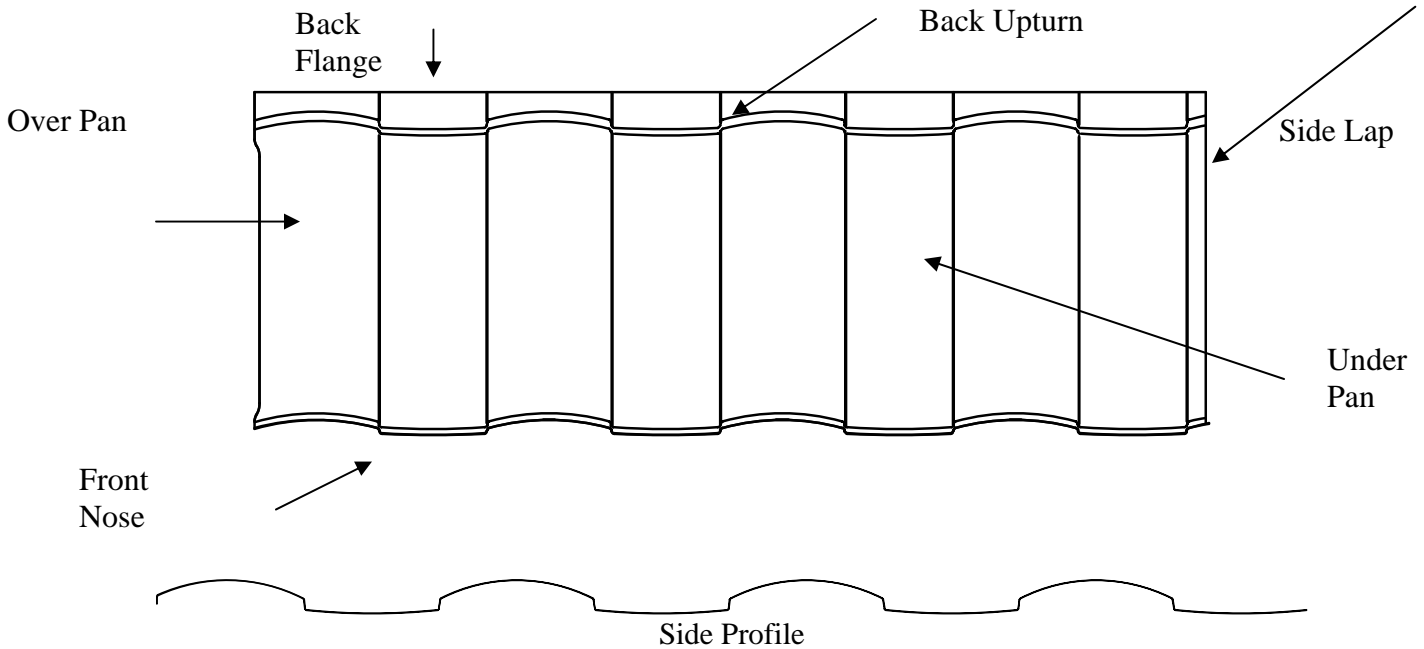
BATTENLESS INSTALLATION MANUAL Miami Dade NOA 06-0420.04 FL 6233-R1

These details are provided to demonstrate the suggested installation details for Gerard's Battenless Barrel Vault & Corresponding Accessories



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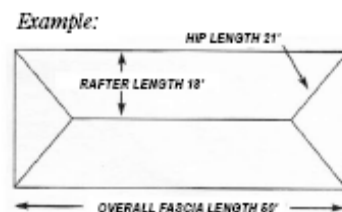


Actual Size: 45.5" long by 16.25" wide
Exposure: 43.5" x 13.5"
Pieces per Square: 24
Average Weight per panel: 5.5 lbs
Average Weight per square: 132 lbs
Average Weight per square foot: 1.32 lbs

Determine How Much Material you will Need

Quick step method, USA Standard (approximate)

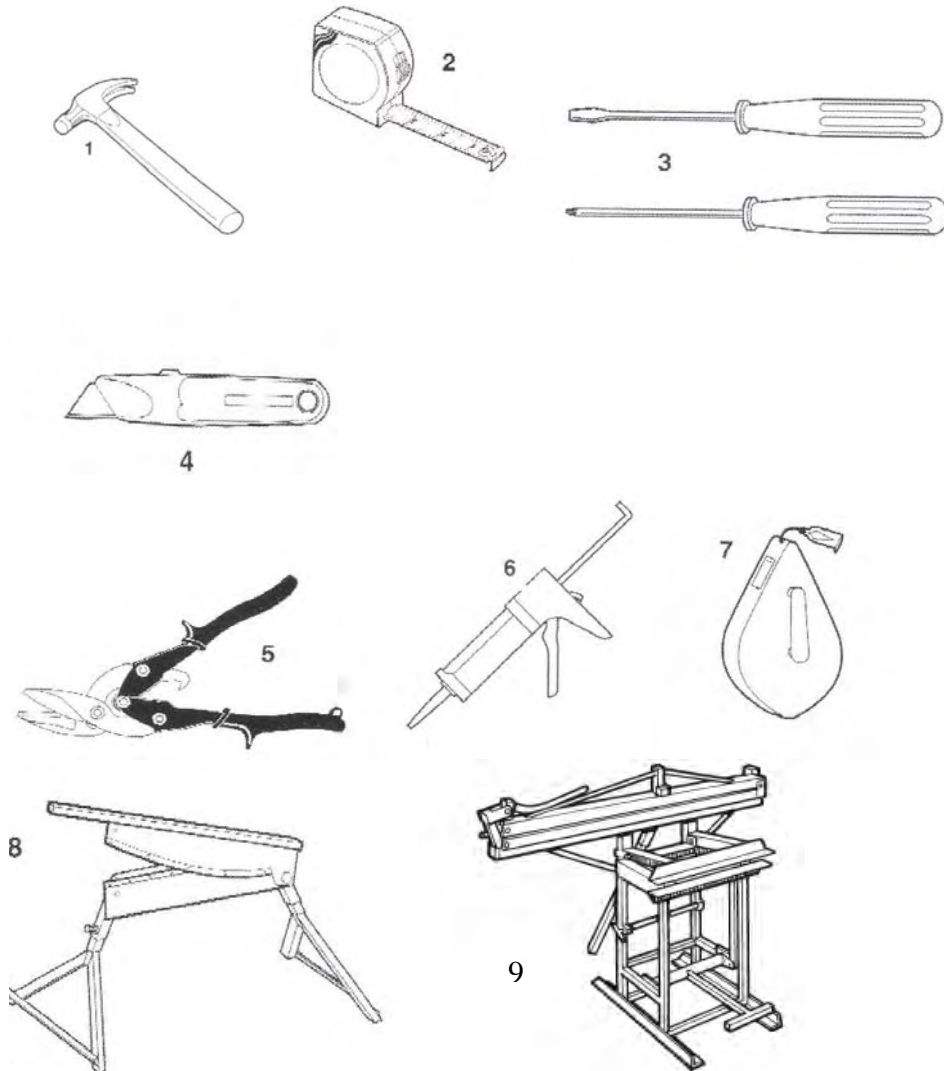
- 1.) Determine roof square foot feet with-out waste.
- 2.) Add liner feet of hips and valleys. Multiply by 2
- 3.) Add totals from steps 1 and 2
- 4.) Multiply total by 1.06. This yields roof square feet including waste
- 5.) Divide total from step 4 by 100. This yields roof squares.



- 1) $50 \times 36 = 1800$ s/f w/o waste
- 2) Hip $\times 4 = 84 \times 2 = 168$ linear feet
- 3) $168 + 1800 = 1968$
- 4) $1968 \times 1.06 = 2085.88$
- 5) $2085.88 \div 100 = 20.86$ sqs

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TOOLS NEEDED



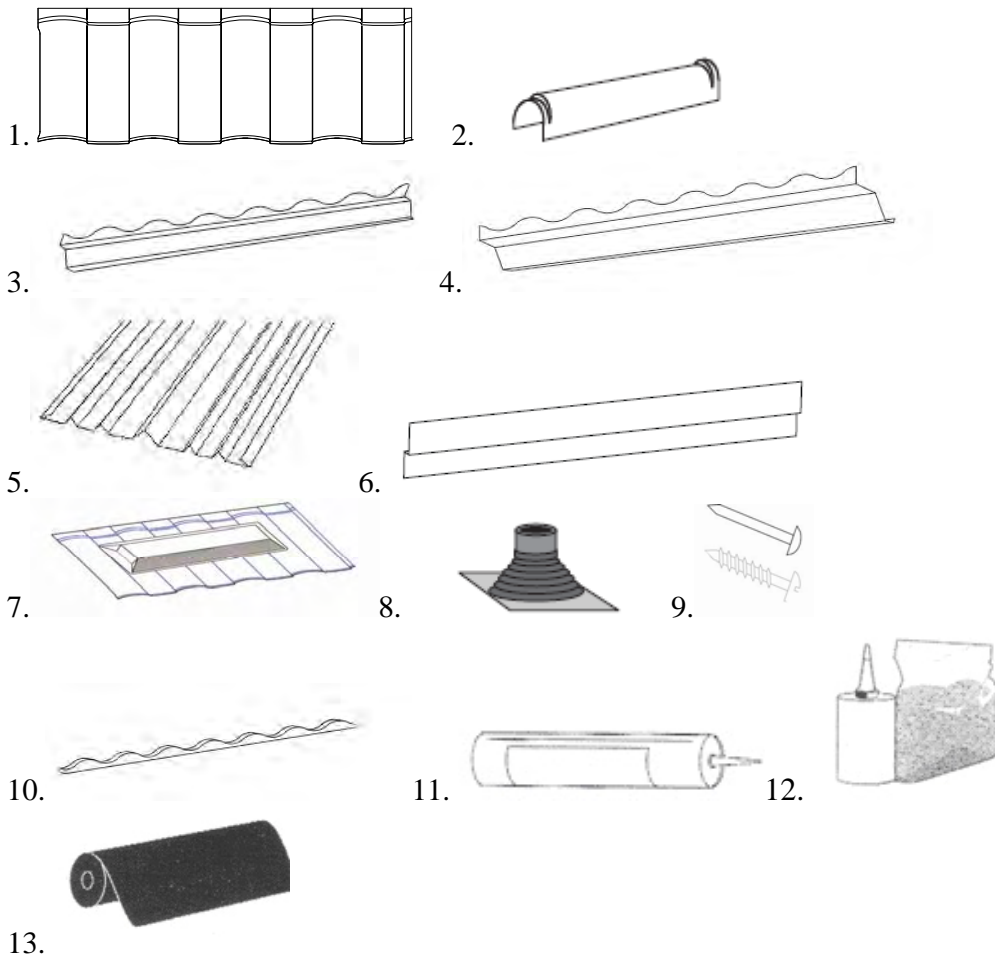
- 1- Standard claw hammer
- 2- A 50' or 100' tape measure
- 3- Screw Drivers (optional power driver)
- 4- Utility Knife (when re-roofing over composition shingle)
- 5- Tin Snips
- 6- Caulking Gun
- 7- Chalk Line
- 8- Gerard Cutter, creates neater, straighter cuts
- 9- Gerard Top and Bottom Bender

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MATERIALS

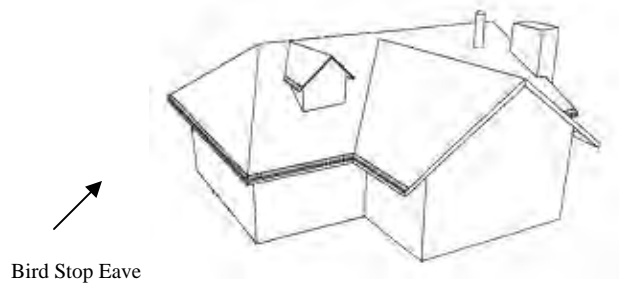
1. Barrel Vault Tile
2. Mission Trim
3. Bird Stop Eave 3.75"
4. Bird Stop Top Row
5. Valley
6. Z Bar
7. Barrel Vault EZ Vent
8. Master Flash
9. .131 x 2 3/8" Ring Shank Nails or #10 x 2" Screws and 16D x 3 1/2" Ring Shank Nails
10. Foam Closure
11. NP1 or Equivalent
12. Finishing Kit
13. 30# Felt (min.)

**** Note: Barrel Vault Tile is 24 pieces per Square**



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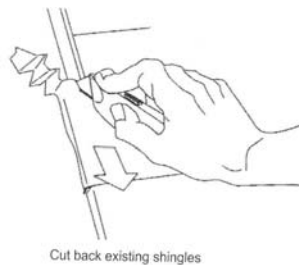
ROOF PREPERATION



Gerard Barrel Vault can be installed over low profile composition shingle or over solid sheathing with a minimum type 30 felt underlayment. If you choose to re-roof over lower profile composition shingles the procedures are as follows;

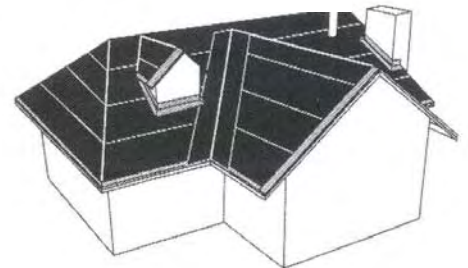
- 1- Cut back existing shingles flush with the perimeter of the roof. (see Figure A)
- 2- Remove existing drip edge.
- 3- Remove hip and ridge cap.

Figure A



Notes

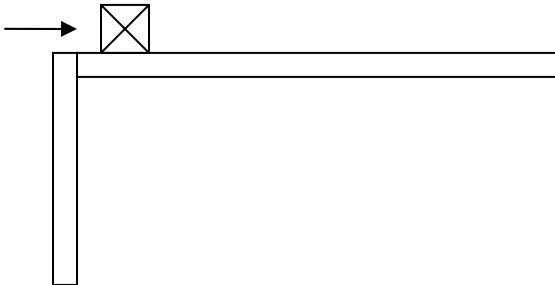
- 1- Make sure deck attachment is to code but at a minimum .131 x 2 3/8" Ring Shank Nails spaced 6" O.C.
- 2- Minimum underlayment should be ASTM D226 Type II 30# felt fastened according to code.
- 3- If a fire barrier is required any UL listed fire barrier is approved when installed according to code.
- 4- Install any approved type of peel and stick in the valleys. In areas of extreme weather this is also recommended for the eave edges.



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RAKE DETAILS

Set batten in 1 1/2" from edge



1- Install nominal 2"x 2" batten along gable edges.

2- Batten must set in 1.5" from edge. (Refer to diagram on left)

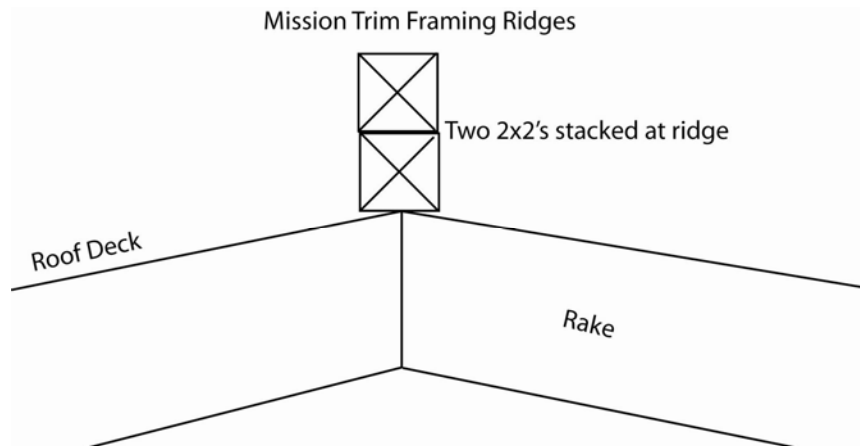
3- Battens are to be nailed every 6" with 16d ring shank x 3 1/2" nails

4- A 1" x 4" may be installed at the eave edge if desired to adjust the pitch.

Note: Lumber may not be pressure treated

FRAMING RIDGES

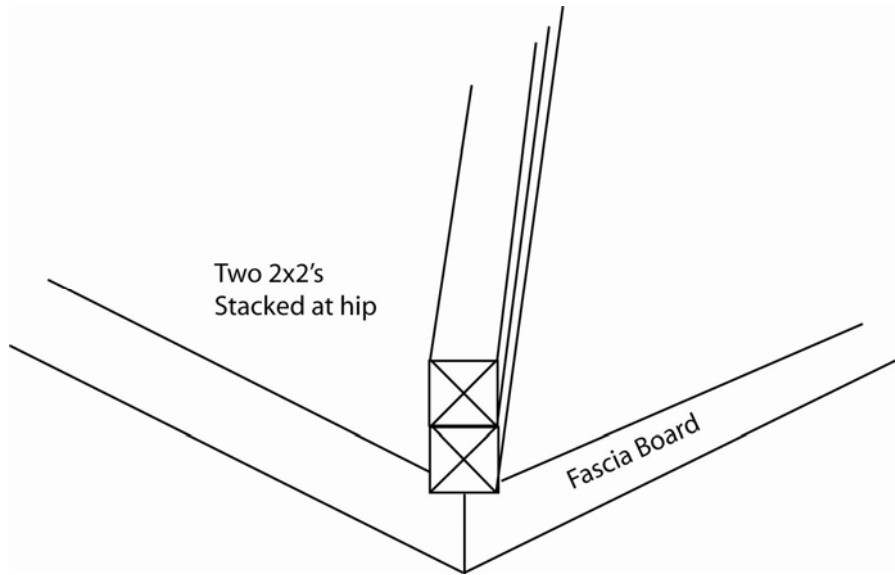
1. Position two 2x2 battens over the center of the ridge.
2. Make certain that the nails penetrate the framing members and nails are a maximum of 12" on centre.



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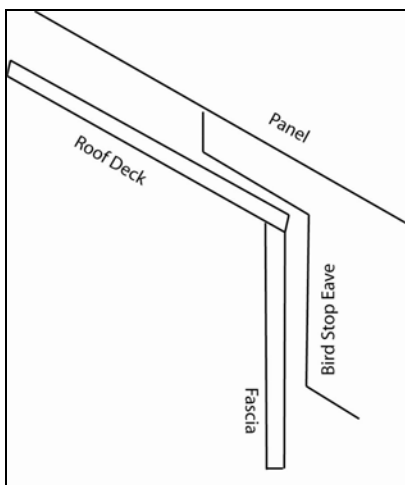
FRAMING FOR HIPS

1. Stack two 2x2 battens secured with fasteners over the hip. Ensure that the fasteners penetrate the framing members a minimum of 1" spaced 12" on center. The Barrel Vault panels will be cut and bent up to the nailers later.

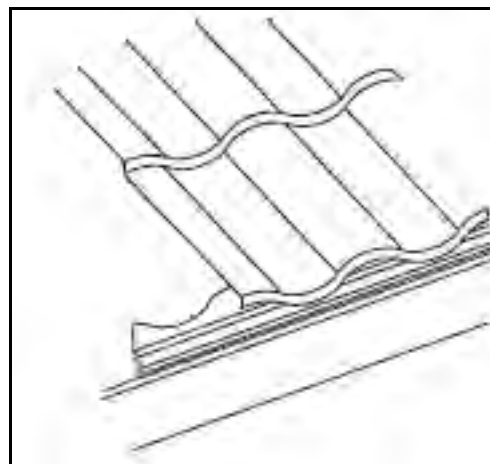


EAVE EDGE DETAILS

Install Bird Stop eave fascia securing with .131 x 2 3/8" Ring Shank Nails every 16" on the front face.



Bird Stop Eave Fascia
Side view



Bird Stop Eave Fascia Top View

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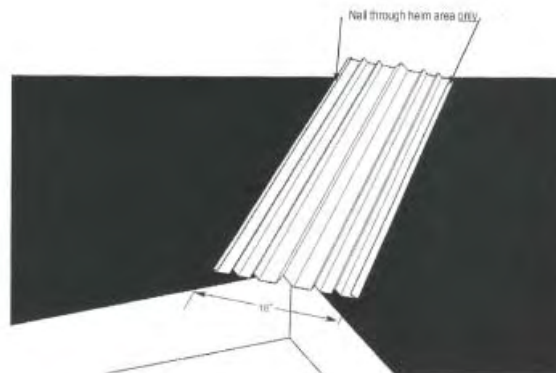
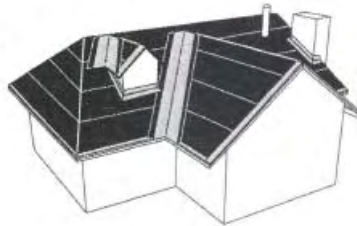
OPEN VALLEYS

- 1- Install stone coated 20" Barrel Vault valley. Fasten the valley with .131 x 2 3/8" Ring Shank Nails through the outside hem.
- 2- If more than one length is required it must be overlapped 6" and set in a bead of sealant.
- 3- Bird Stop Eave will extend in to the valley to the first 3/8" diverter.
- 4- Measure the top of valley. Cut 1 1/4" longer than the measurement to the inner small diverter.
- 5- Bend down the 1 1/4" overhang in to the valley. (this will seat the cut panel securely in to the valley metal)
- 6- Using 3/4" sharp point screws fasten the nose of the panel to the next panel. Take care not to penetrate the valley metal.

Open Valley Detail Drawing



NOTE: Location of valley at edge of fascia should be at the beginning of the first inside flutes of the valley. (See diagram below)

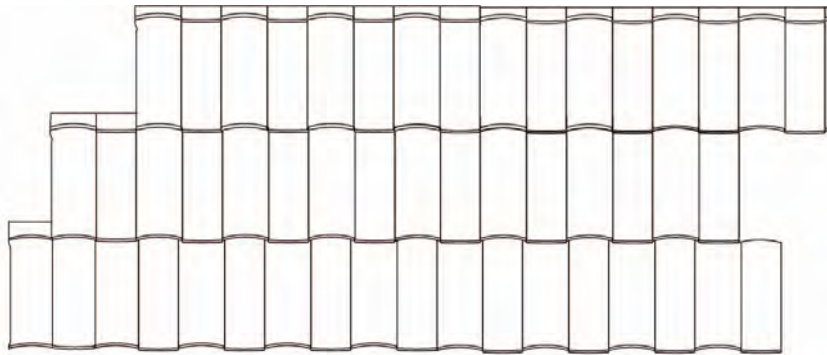


Note: Be careful not to penetrate the valley care must be taken.

GERARD ROOFING TECHNOLOGIES BARREL VAULT

LAYOUT AND INSTALLATION OF PANELS

- 1- The Barrel Vault Battenless installation is started at the left side aligning the Bird Stop Eave fascia with the contour of the panel.
- 2- Always stagger panels 1 to 2 pans to eliminate continuous side laps.
- 3- Full panels are installed upwards until the last full course can be laid.
- 4- Barrel Vault panels are laid left to right.
- 5- Use a string line or chalk line to insure the first row is straight (as the fascia may bow)
- 6- Measure up from each corner of the building to set string line. This line will be the extreme top edge of the panel. Adjust the line location to compensate for irregular fascia with a minimum $\frac{1}{4}$ " from fascia. The line can also be adjusted for the needed overhang for rain gutters or a steep roof slope. **NOTE: The panel courses must start and remain straight.**



PANELING

- 7- The first course is fastened through the back flange with a minimum 5 .131 x 2 3/8" Ring Shank Nails or #10 x 2" screws
NOTE: For installation in high velocity hurricane zones 9 fasteners are installed (see figure A below)
- 8- After the first course is installed, fall back and install 5 fasteners per panel. (see figure B below)
- 9- After all the panels are laid, open spaces are to be measured, cut and bent to fit. (see Figure C below)
- 10- The panels must turn up 1 1/2" at the gable and hips against the 2" x 2" batten.

Note: Fastening should be done on the right side of the over pan.

Note: Screws must penetrate the decking by 1/2"

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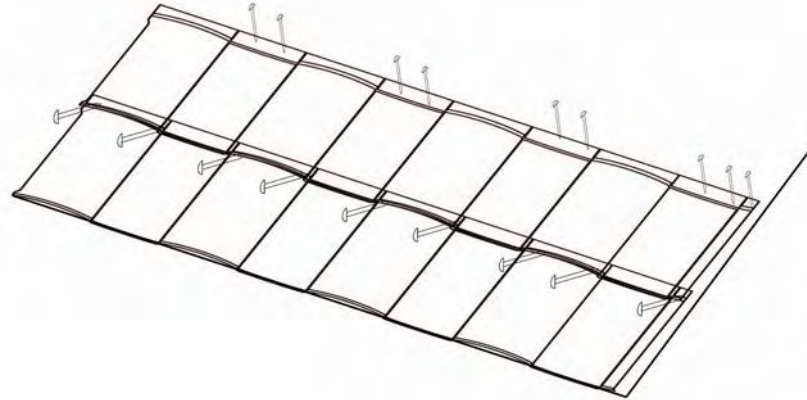


Figure A) Fastening points for HVHZ

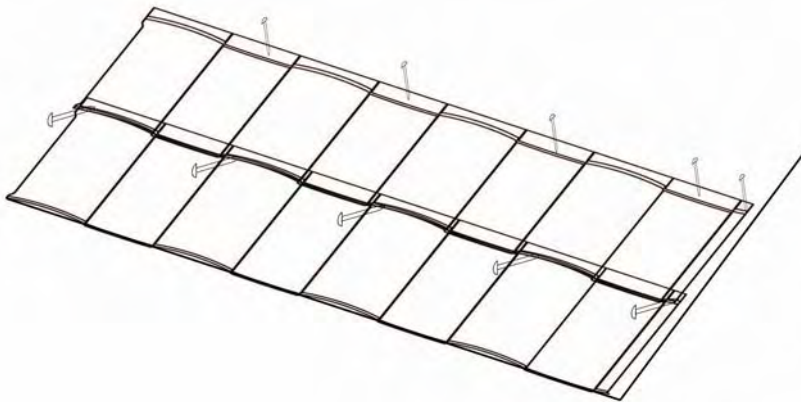
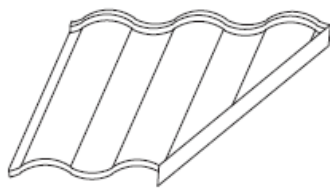
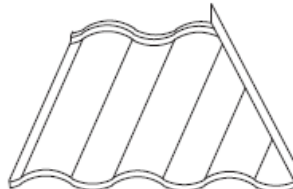


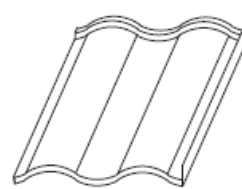
Figure B) Fastening points outside of HVHZ's



VALLEY



HIP



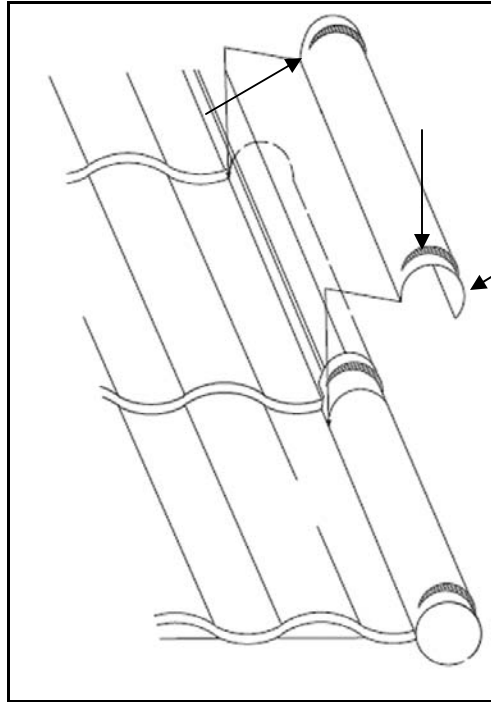
GABLE

Figure C) Bends and cuts

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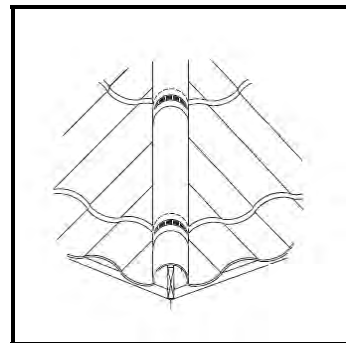
RAKE TRIM DETAILS

- 1- Mission Trim is used to complete the rake, hips and ridges.
- 2- Three .131 x 2 3/8" Ring Shank Nails or appropriate screws are used to secure each mission trim. Two nails fasten in to the sides and the third fastens through the cap and in to the 2" x 2" batten.
- 3- Use finishing kit to touch up the exposed fastener.



HIP DETAILS

1. Secure caps with .131 x 2 3/8" ring shank nails or #10 x 2" screws through the top of the cap in to the nailer.



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RIDGE DETAILS

- 1- Stack two 2" x 2" battens on top of each other to form a solid backer to nail in to.
- 2- Turn panel up 2" on to ridge nailer. If ridge venting is desired place Cor-A-Vent on each side of the ridge nailer and turn the top panel up 2" and secure through the Cor-A-Vent into the ridge nailer. In areas of High Velocity Wind Zones (HVHZ) the use of EZ Vent is recommended. *See Figure A*
- 3- Install Bird Stop Top Row with foam closure under it. *See Figure B*
- 4- Install mission trim with two .131 x 2 3/8" Ring Shank Nails or #10 x 2" screws through the ridge cap and in to nailer. *See Figure C*

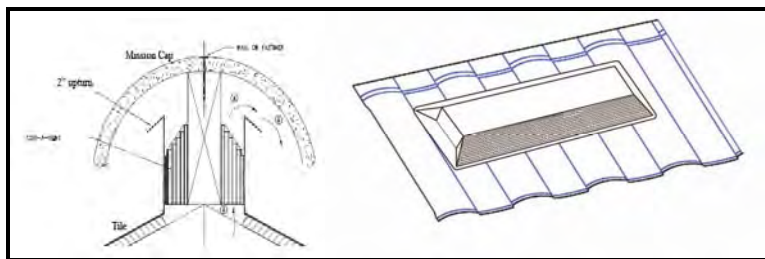


Figure A (Left shows Cor-A-Vent picture to right shows EZ Vent)

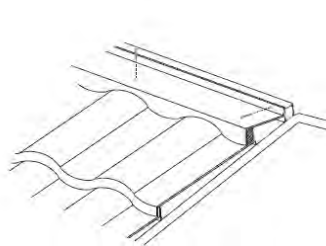


Figure B

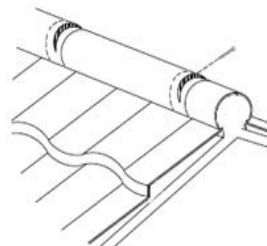
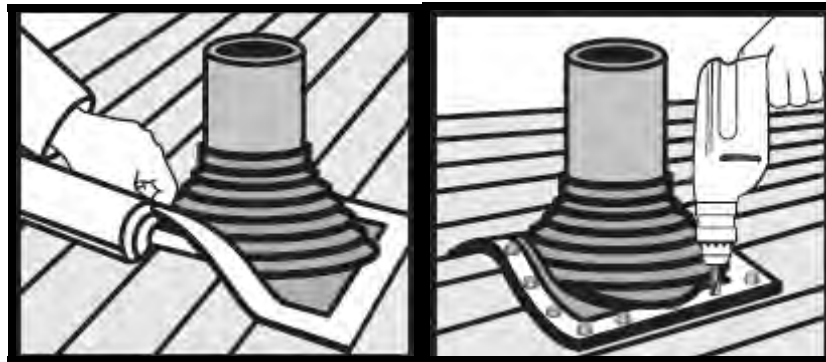


Figure C

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INSTALLING PIPE JACKS

1. Cut panel closely to fit around vent pipe.
2. Cut Master Flash to size of pipe.
3. Press Master Flash in place to conform to the panel.
4. Seal with NP1 under the base and at the leading edge after installation.
5. Fasten with screws securing to panel.



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CHIMNEY / SKYLIGHT FLASHING DETAILS

- 1- In front of the chimney measure, cut and turn up panel 2"
- 2- Measure and cut Bird Stop Top Row even with the front of the chimney, allow enough top edge to wrap around the chimney 2'.
- 3- Install foam closure under Bird Stop Top Row.
- 4- Cut panels for the side of the chimney bending the panels cut 2".
- 5- The first panel cuts at the sides of the chimney will have bend ups protruding forward below the front of the chimney. These need to be cut at an angle and bend back down and secured to the top surface of the lower chimney cut and top row closure, secured with sharp point 3/4" screws, caulked and chipped.
- 6- At the back of the chimney, install chimney saddle as shown. Extend saddle a minimum of 4" past each side of the chimney. Turn up ends 1" to keep water on the saddle.
- 7- Install foam closure on the saddle prior to installing the next row of panels.
- 8- Apply bead of sealant across foam closure. Panels are fastened through the front downward turn in the panel, foam closure and saddle in to the sheathing.
- 9- Z bar is used to cover all bent up edges.