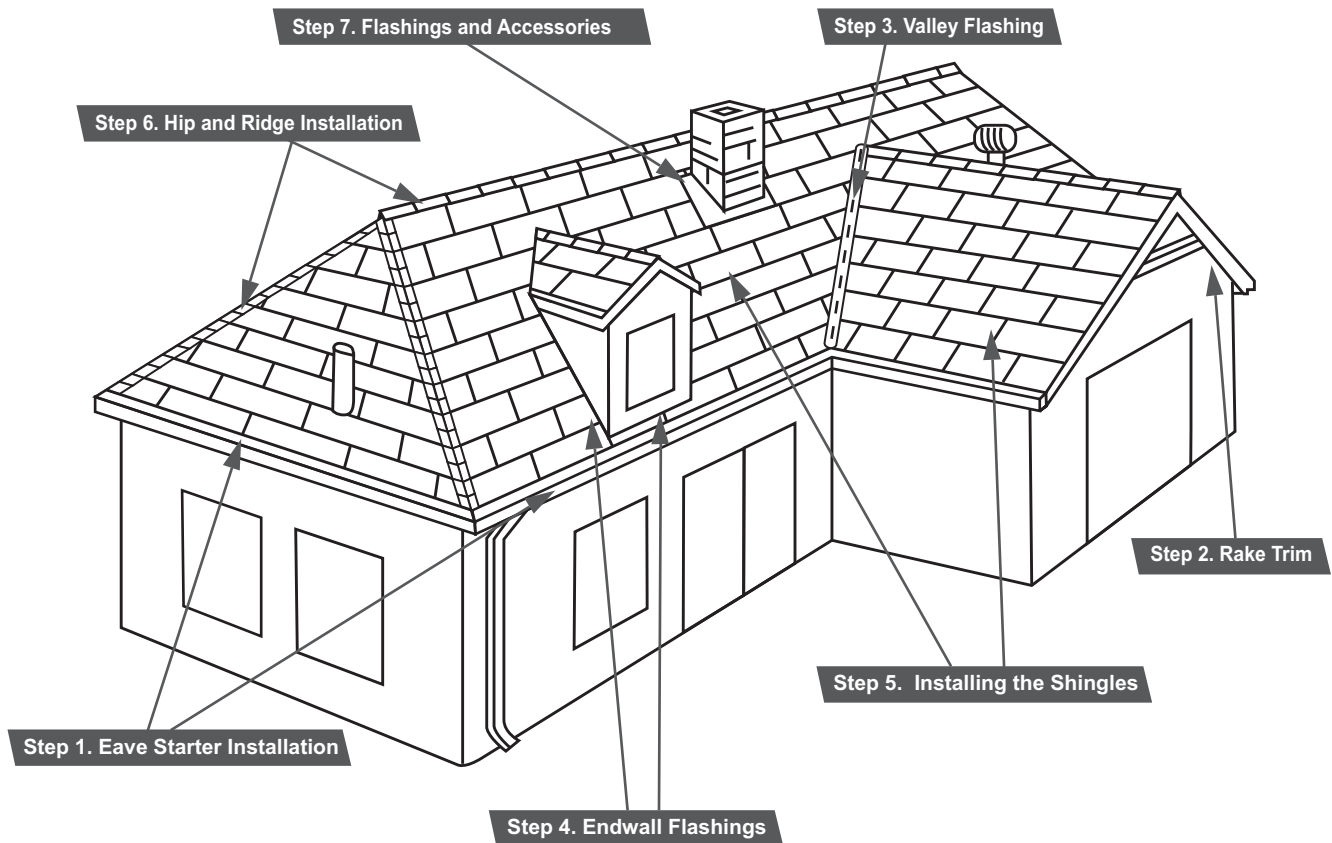




# Shake, Diamond, Slate Installation Guide



[www.buchnermfg.com](http://www.buchnermfg.com)

## BAYVIEW ALUMINUM SHINGLES – The Perfect Fit For Your Roof

Thank you for purchasing another BUCHNER product. These shingles will be the last roofing shingles you will need for 50 years.

### PLEASE READ BEFORE YOU BEGIN

We recommend hiring a professional, experienced roofing installer to perform this installation. Following these installation instructions should ensure a leak free installation. Failure to follow these instructions may void the product warranty. Buchner Manufacturing Inc offers a limited 50 year warranty limited to the cost of replacement product it manufactures (Go to [www.buchnermfg.com](http://www.buchnermfg.com) to view the warranty). The warranty is valid only after the original owner of the property signs and mails the warranty to Buchner Mfg within 30 days of the installation being completed for it to be registered.

Buchner Manufacturing is not responsible for any other costs including those associated with faulty workmanship in installation or for not complying with building code.

It is your responsibility to consult, understand and adhere to local building and safety codes.

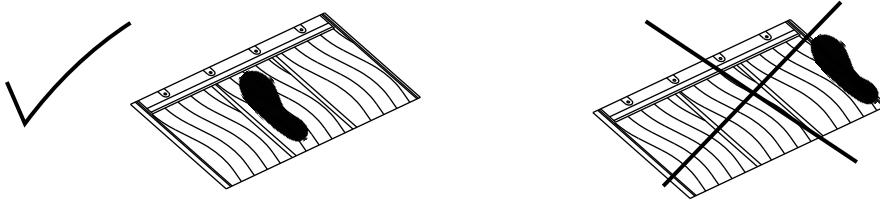
**Roof Pitch** - Bayview Aluminum Shingles should only be installed on slopes of 4/12 or greater.

**Aluminum Shingles** - Our shingles are made from .022 thick aluminum, painted with DURACOAT® coating for steep slope roofs. Do not mix with steel, lead or copper components.

**Storage** - All materials purchased from Buchner Mfg must be stored in a dry, ventilated area protected from moisture and chemicals. It is recommended to install our shingles as soon as possible after purchase.

**Work Safely** - Make sure you wear the appropriate safety equipment to prevent a fall.

**Footwear** - Metal roofs can be slippery. Wear soft soled shoes or foam rubber overshoes which can grip the surface. When stepping on the metal shingles place your foot in the centre of the shingles, not on the interlocking edges.



**\*Helpful Tip** - Before stepping on the roof brush off any debris that has adhered to the bottom of your footwear.

### Product Testing

#### CCMC Evaluation 13631-R

Buchner Bayview Aluminum Shake Shingles have been tested for CCMC evaluation and comply with the National Building Code for metal roofing systems.

The Shake Shingles were tested for material properties including thickness, coating quality, impact resistance, film adhesion and more. Wind uplift testing was done using negative pressure wind loading and a water infiltration test.

A copy of the CCMC evaluation can be obtained from Buchner Mfg or the National Research Council Canada.

## Check The Deck

**Bayview Aluminum Shingles** can be installed on any wood-based panels used for roof sheathing conforming to your local building code. Inspect the deck for any damaged or uneven spots and make repairs. Pressure treated lumber is not recommended as a solid backing

## Preparing the Deck

**Installing Shingles over New Solid Deck** - The entire roof surface needs to be covered with a waterproof membrane/underlayment. We recommend a quality, self adhesive roofing membrane such as RESISTO LASTOBOND PRO HT-N<sup>©2</sup> or a synthetic underlayment such as RESISTO PLUS<sup>©2</sup>. It is critical to provide proper ventilation to evaporate any moisture beneath the shingle and the attic. We recommend venting along the ridge.

**Installing Shingles over Existing Asphalt Shingles** - Bayview Aluminum Shingles can be installed over one layer of existing asphalt shingles. Check with your local codes if this type of install is allowed.

- Any curled, buckled or damaged shingles should be replaced or de-tabbed.
- An even surface is needed to support the Bayview Shingles.
- Cut back the existing shingles flush with the roof edge on all sides of the roof.
- Remove all eaves and gable flashings.
- Remove all hip and ridge cap materials.
- Inspect the roof surface as well as the underside via the attic (if possible) for damage or rot and repair as required.
- Once all damaged areas are replaced lay a new waterproof membrane over the asphalt shingles. We recommend RESISTO PLUS SYNTHETIC UNDERLAYMENT<sup>©2</sup>
- Use stainless steel screws long enough to penetrate the wood sheathing at least 1/2"

**Strong Winds**- In areas where there are strong winds (exceeding 100 km per hour) ensure fasteners are inserted in ALL SCREW HOLES for ALL shingles. For the eave starter insert fasteners on the fascia side as well as the deck.

**Fasteners** - Always use Stainless Steel screws long enough to penetrate the deck a minimum of 1/2"

## Getting Ready

Recommended tools for installation of Bayview Aluminum Shingles:

- |                         |                                 |                            |
|-------------------------|---------------------------------|----------------------------|
| - Metal Snips           | - Cordless Drill and drive bits | - Tape Measure             |
| - Chalk Line            | - Knife and extra blades        | - Ladder                   |
| - Small Square          | - Hand Seamer / Folding Tool    | - Roof Jacks / Johnny Jack |
| - Hammer                | - Caulking Gun                  | - Portable Brake           |
| - Fall Arrest equipment |                                 |                            |

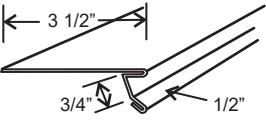
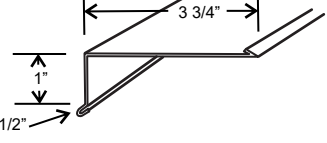
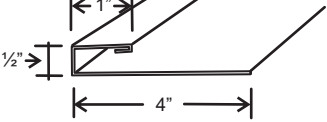
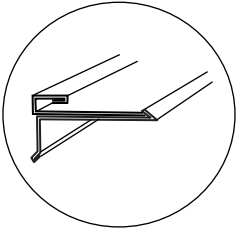
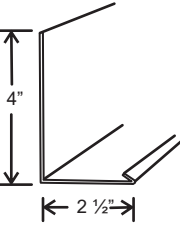
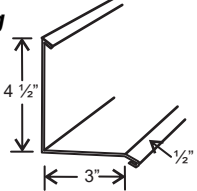
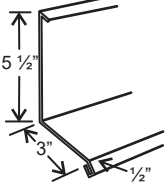
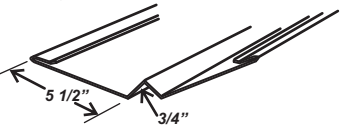

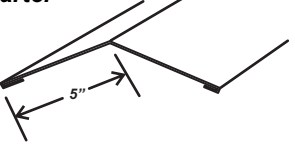
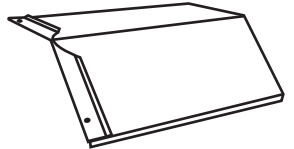

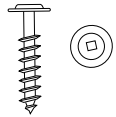
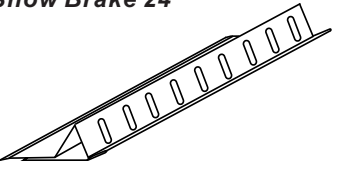
<sup>2</sup> Go to [www.resisto.ca](http://www.resisto.ca) for more information

## Flashings and Accessories

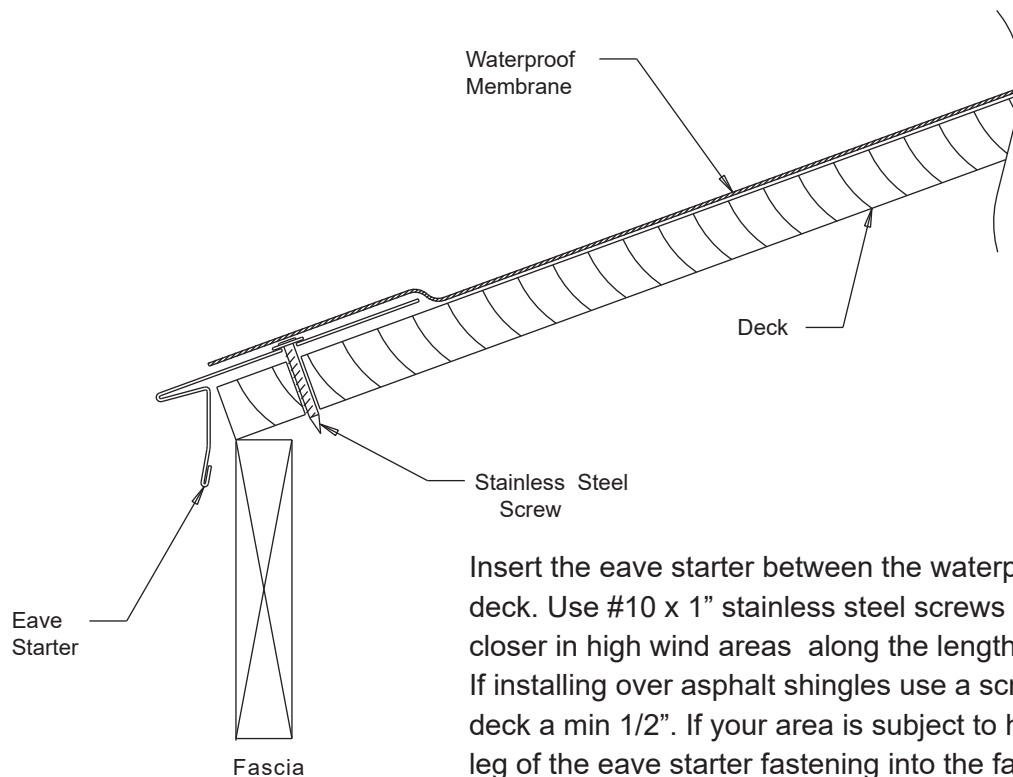
For roof penetrations such as chimneys, vent stacks and pipe vents Buchner sells pipe boots and other accessories to seal the roof penetrations. Many penetrations will require onsite fabrication of transition flashings using our embossed flatstock with DURACOAT® coating. Not using this material means the flashing colour will fade at a different rate than the colour finish on the shingles.

You can order custom flashings from Buchner Mfg. Call **1-800-461-6455** and one of our Sales Staff will assist with the details.

### Trim Specifications

<p><b>Eaves Starter</b></p> 	<p><b>Rake Edge</b></p>  <p><b>Rake J</b></p>  	
<p><b>Basic Flashing</b></p> 	<p><b>Sidewall Flashing</b></p> 	<p><b>Endwall Flashing</b></p> 
<p><b>Valley</b></p>  <p><b>Valley Clip</b></p> 	<p><b>Ridge Cap Starter</b></p> 	<p><b>12" Ridge Cap</b></p> 
<p><b>Embossed Trim Coil</b> 24" x 50 ft roll</p> 	<p><b>Stainless Steel Screws</b> 1", 1 1/4", 2", 2 1/2"</p> 	<p><b>Snow Brake 24</b></p> 

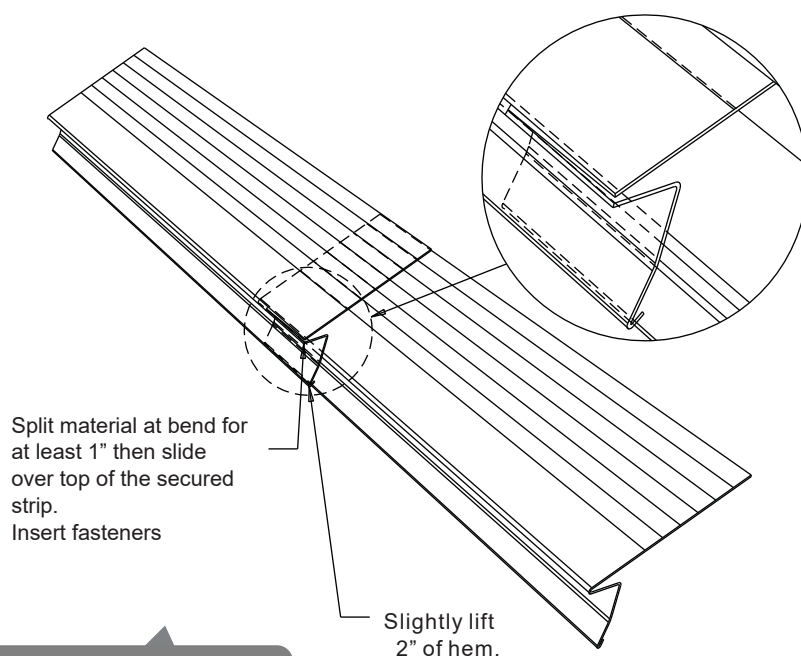
## Step 1. Eave Starter Installation



1.1 Eave Starter Profile

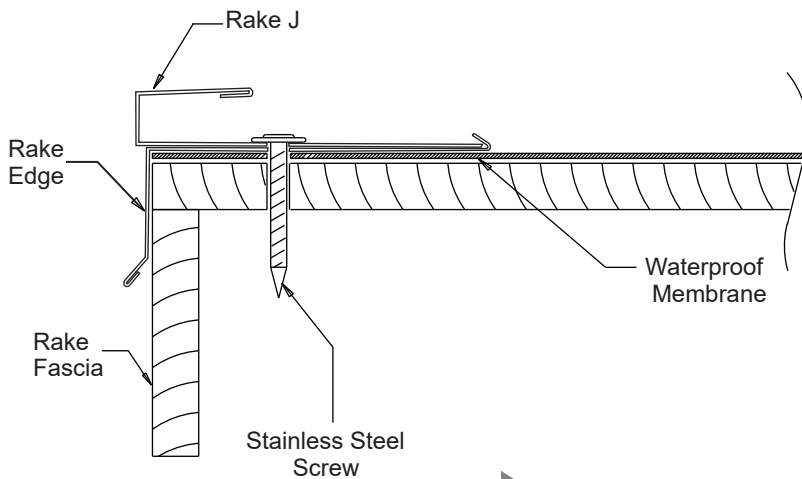
Insert the eave starter between the waterproof membrane and the wood deck. Use #10 x 1" stainless steel screws and insert on center every 16" or closer in high wind areas along the length of the eave starter (Diagram 1.1). If installing over asphalt shingles use a screw length which will penetrate the deck a min 1/2". If your area is subject to high winds add screws along the leg of the eave starter fastening into the fascia board. Buchner can custom fabricate eave starter to fit any roof eave. Keep the eaves starter straight as the Bayview Shingle locks onto it at the first row.

Eave starter trim comes in 9' 10" lengths which means there will be points of overlap. Notch the edge bend on the eave starter leg about 1". Now you can slide the notched eave starter over top of the secured piece. Press the 2 pieces together and insert your fasteners. (Diagram 1.2). NOTE - never install a fastener through the joint. It should be placed at least 2" from the joint.



1.2 Connecting Eave Sections

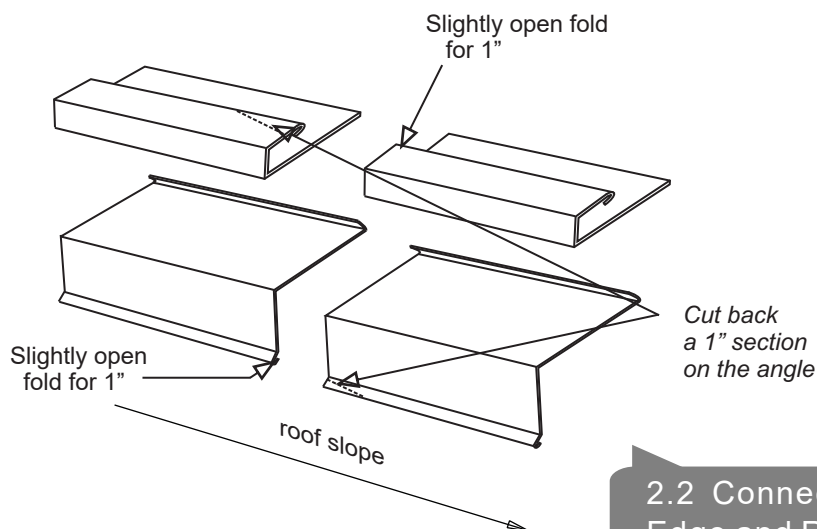
## Step 2. Rake Trim Installation



2.1 Rake Edge profile

The self-adhesive waterproof membrane should be laid down under the rake edge. Ensure that the rake edge is flush to the rake fascia surface.

The Rake J is laid on top of the Rake Edge with the inner edge of the J pushed into the water channel on the Rake Edge. Fasteners are installed through both trims every 16" on center (Diagram 2.1). The lower end of the rake edge and rake J should be flush with the eave starter.



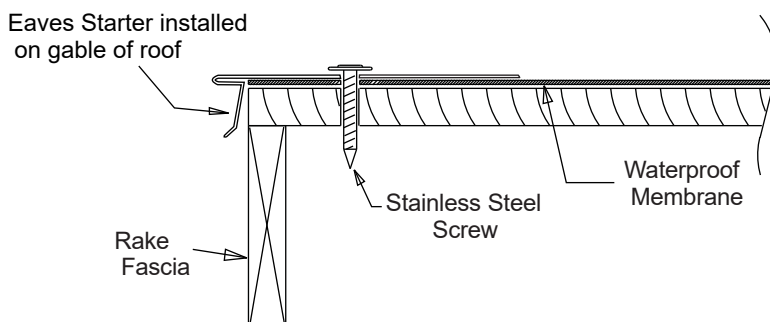
2.2 Connecting Rake Edge and Rake J

To join sections of the rake edge and rake J (Diagram 2.2) notch the bottom edge of the lower rake edge pc. Slide the upper rake edge over the lower pc.

Notch the upper J trim and slide into the lower J trim and insert a fastener.

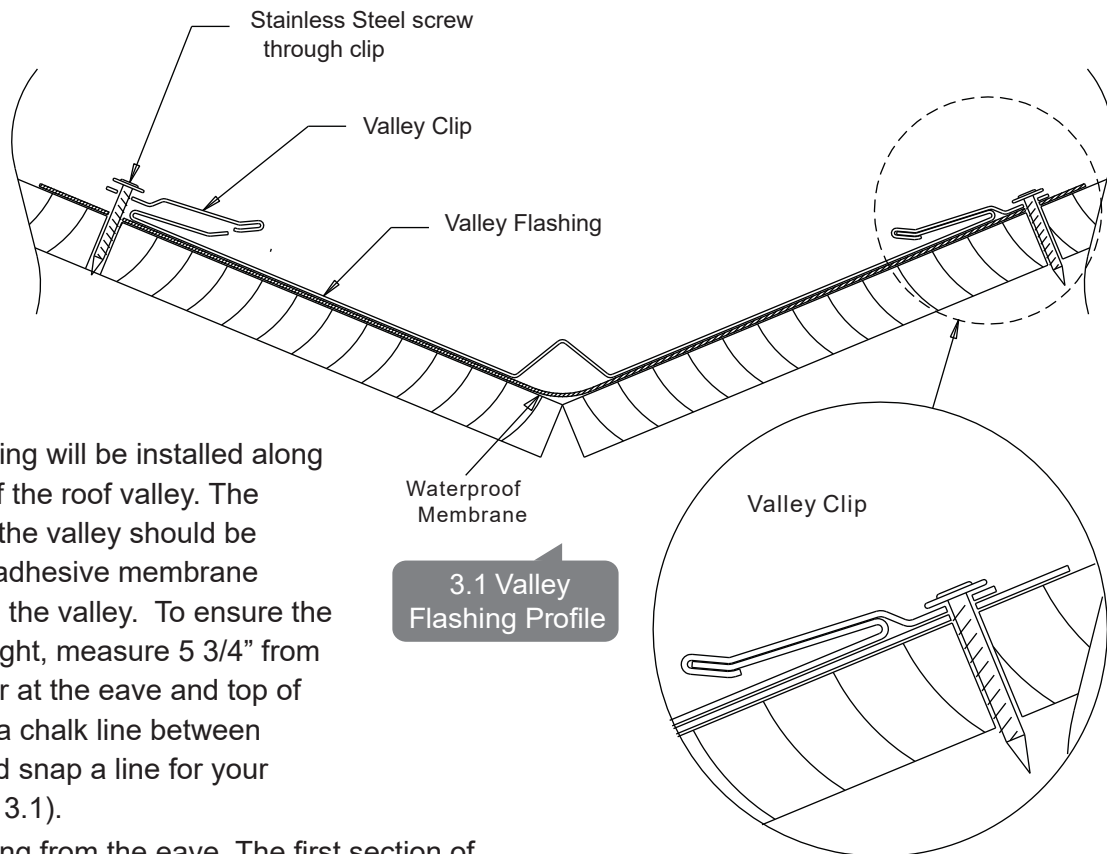
NOTE fasteners should not be inserted at the joint. Start at least 2" away from the joint. No need to apply caulking.

## Option - Use Eave Trim on gable



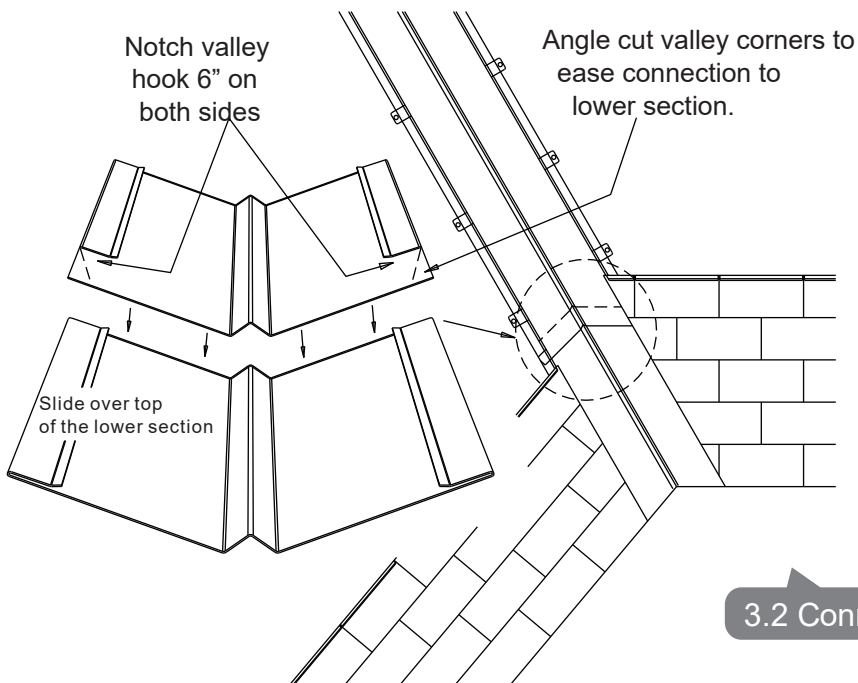
An alternative method for rake trim is to use the eaves starter on gables. Fasten the eaves starter on top of the underlayment with stainless steel screws every 16". Each shingle at the gable will need to be folded approximately 3/4" down and over the eaves starter.

### Step 3. Valley Flashing



The valley flashing will be installed along the centerline of the roof valley. The entire length of the valley should be covered in self adhesive membrane before installing the valley. To ensure the valley runs straight, measure 5 3/4" from the valley center at the eave and top of the valley. Run a chalk line between these points and snap a line for your guide (Diagram 3.1).

Begin by installing from the eave. The first section of valley flashing will be positioned to overlap the eave starter. Starting 2"- 4" up from the eave fasten clips every 16" along both sides of the valley flashing with stainless steel screws.



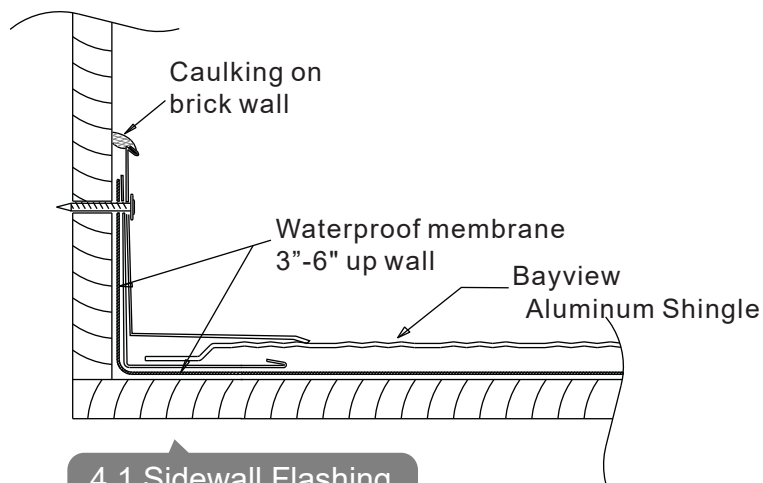
To connect the lower end of the next section of valley flashing notch back the locks on both sides by 6", then cut each corner on a diagonal to the notch. Join the two sections together making sure the upper section overlaps the bottom section (Diagram 3.2).

3.2 Connecting Valley Sections

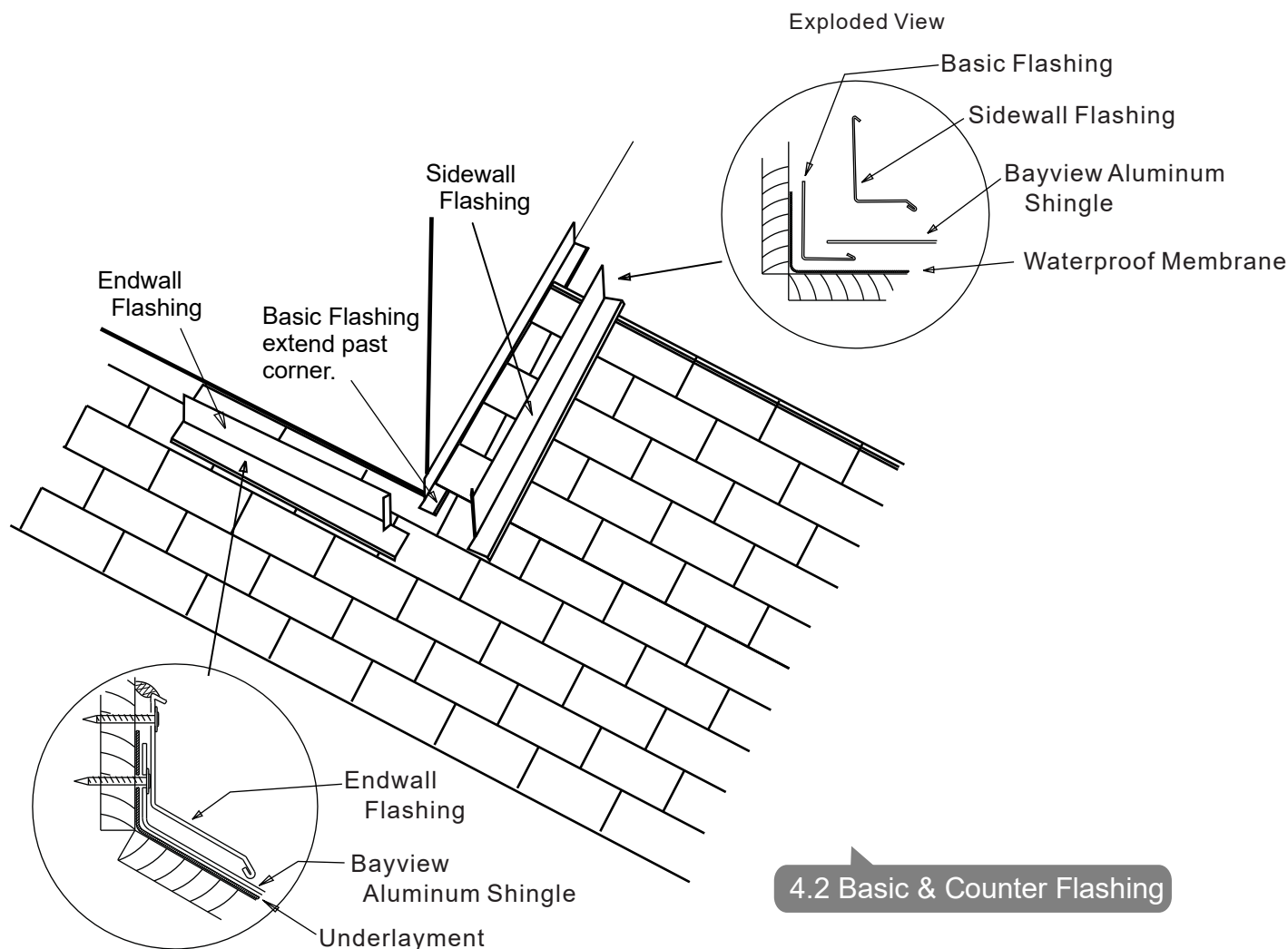


## Step 4. Endwall Flashings

There may be sections where you need to install additional flashing's to provide a waterproof seal where the shingles end and a wall begins.



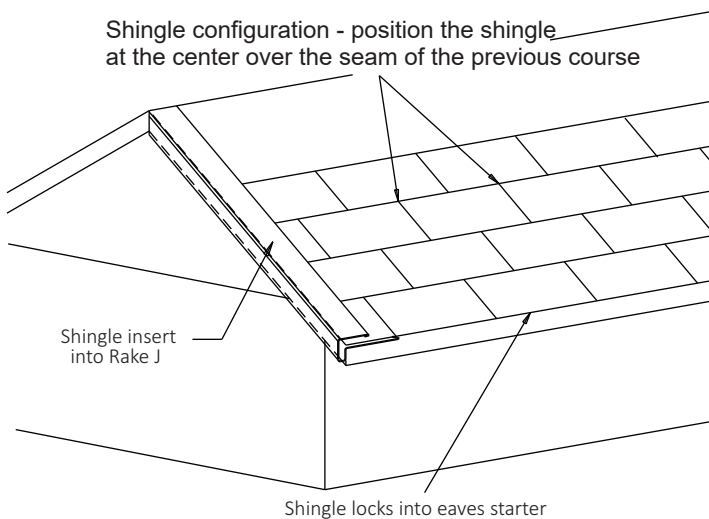
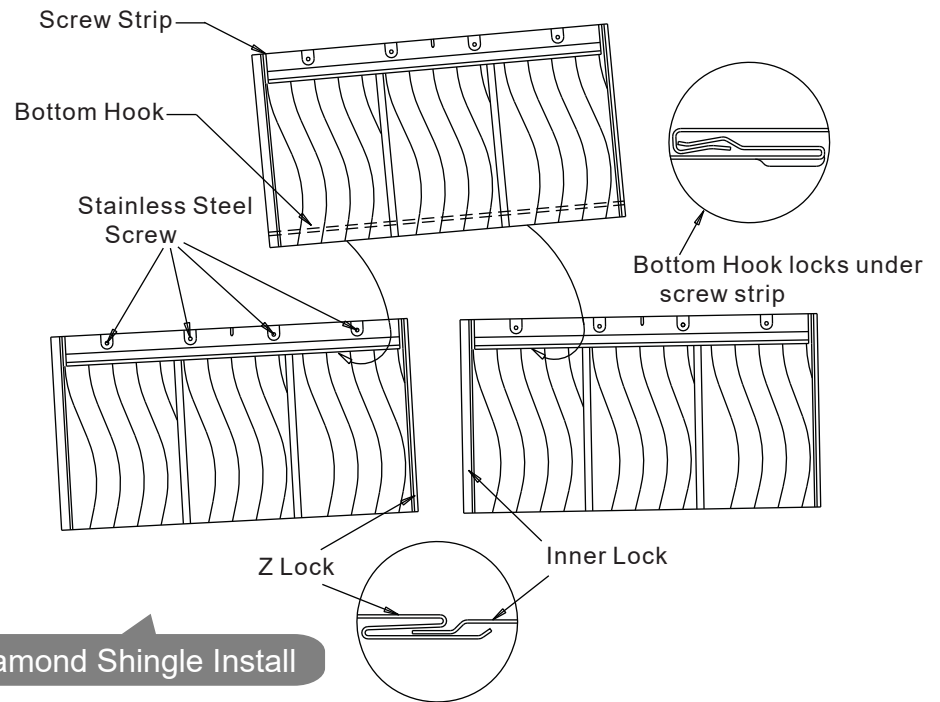
**Sidewall Flashing** (diagram 4.1) The waterproof membrane should run from the roof up the wall 3"-6". The vertical surface of the basic flashing and sidewall flashing is usually behind the wall covering. A fastener is inserted through the vertical section into the wall. The shingle lays on top of the basic flashing where water can be guided off the roof. Where the sidewall flashing is affixed to a brick surface the top of the flashing needs to be caulked. Buchner provides flashing's in 10 ft lengths which minimizes the number of joints. When joining the flashing place the upper section of trim over the lower to allow water to run over the joint.



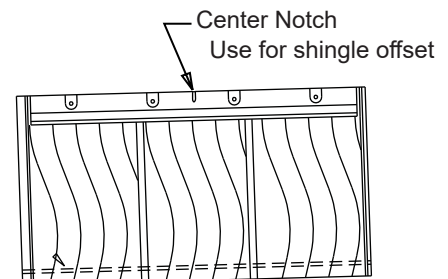


## Step 5. Installing the Shake and Diamond Shingles

We recommend using the Johnny Jack Roof Bracket to support your staging boards as you move up the roof. You can begin installing the shingles from either the right or left. The first course of shingles lock onto the eaves starter. Subsequent courses of shingles lock into place by sliding the bottom hook of each shingle into the screw strip of the previous course. The generous width of the locks on Bayview Shingles allow alignment of the course to ensure symmetry. (Diagram 5.1). Insert fasteners in ALL screw holes. The inner lock of each shingle slides into the Z lock of the adjacent shingle then push the shingle up the roof so the bottom hook snaps into the screw strip.

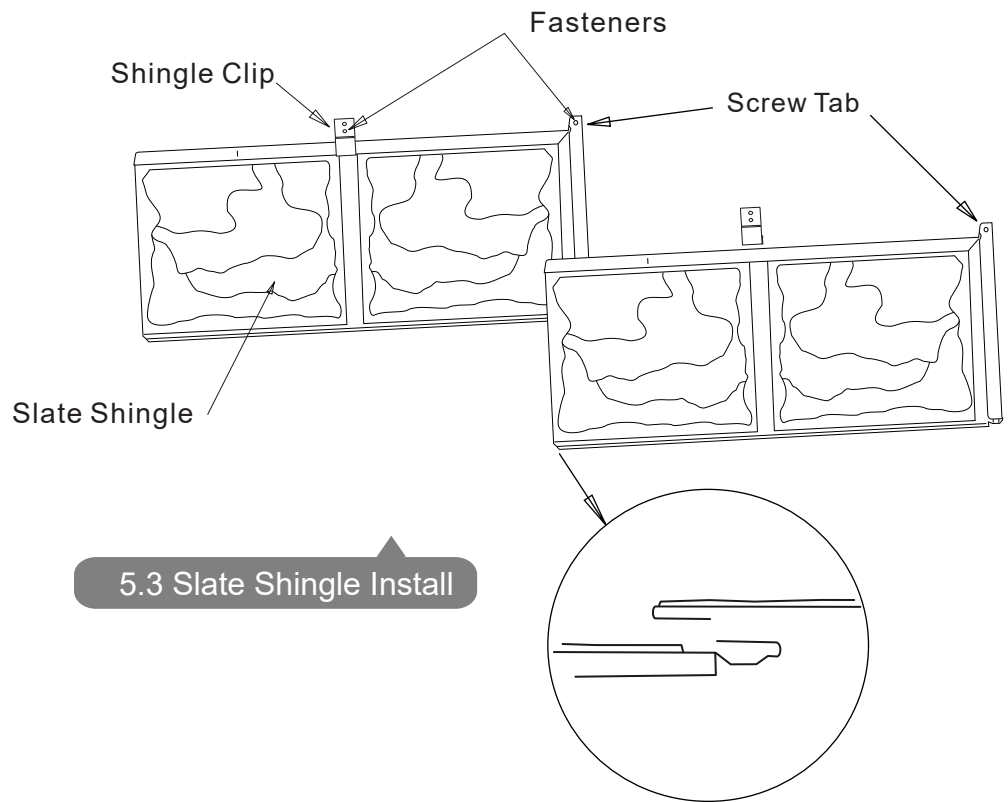


Each course of shingles should be offset from the previous course (diagram 5.2). To ensure visually appealing alignment position one shingle so it is symmetrically offset at the center notch of the screw strip. Other shingles can be snapped in from there. Follow the same pattern for each course of shingles.

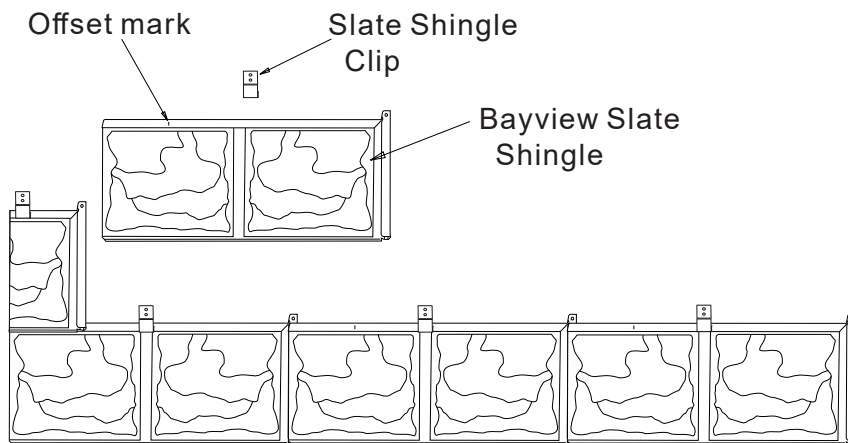


## Step 5. Installing the Slate Shingles

Bayview Slate Shingles are installed from left to right. The first course of shingles lock on to the eaves starter. Subsequent courses of shingles lock into place by sliding the bottom hook of each shingle into the top lock of the previous course. The generous width of the locks on the Slate shingle allow alignment of the course to ensure symmetry. Insert one stainless steel screw in the screw tab on the right end of the shingle and hook one shingle clip in the centre of the panel then fasten with a stainless steel screw. (Diagram 5.3) Install the next shingle by hooking the left side lock onto the right side lock of the previous shingle and then slide the shingle upwards to lock into the previous row.



5.3 Slate Shingle Install



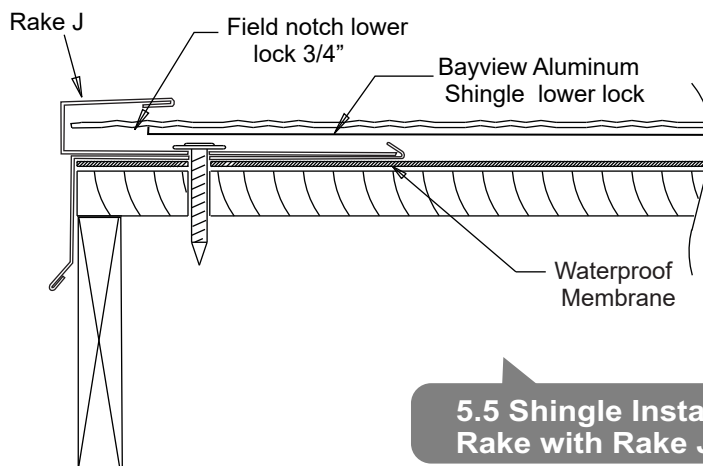
5.4 Shake Shingle Layout

Each course of shingles should be offset from the previous course using the offset mark in the top lock of the shingle. (Diagram 5.4) Other shingles can be locked in from there. Follow the same pattern for each course of shingles.

## Step 5. Installing the Shingles

### Install with Rake Edge and J at gable

When the Rake edge and Rake J are used at a gable end each shingle that is inserted in the J needs to have the lower lock notched back 3/4" from the edge of the shingle. (Diagram 5.5) After you have cut the shingle to length and made the notch insert the shingle in the Rake J and lock the shingle in place. Screw the shingle with Stainless Steel screws in the provided holes.



**5.5 Shingle Install at Rake with Rake J**

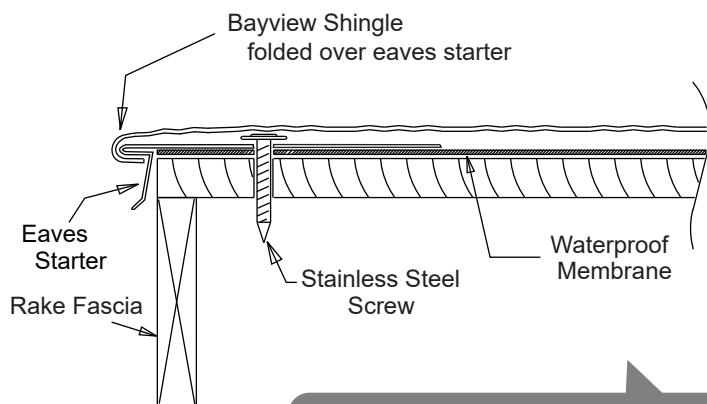
### Install with Eaves Starter at gable

An alternative to using rake edge and rake J is to install eaves starter at the gable. (Diagram 5.6) Each shingle is folded over the eaves starter.

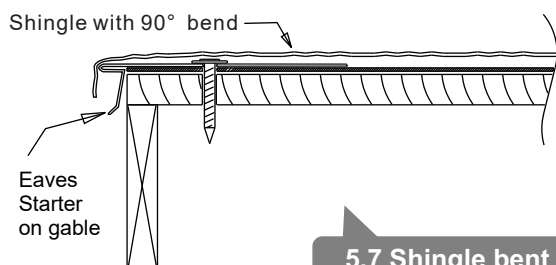
Trim the shingle to the required length adding approx 1" to allow the fold. Cut back the top and bottom lock 1".

(Diagram 5.7) Use a folding tool to fold the 1" tab on the shingle down 90°. Place the shingle to hook the starter trim at the side and slide the shingle up to lock the lower lock on the previous row. You may need to gently tap the shingle to fully lock on both edges. Fasten with Stainless Steel screws.

(Diagram 5.8) Folding the tab over and around the starter trim can be completed by hand.

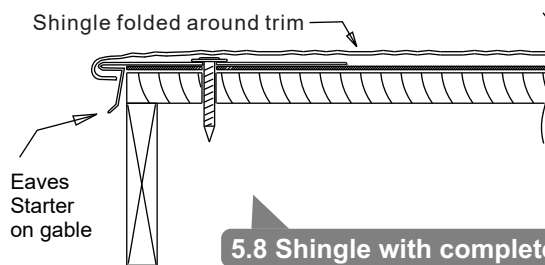


**5.6 Shingle Install at Rake with Eaves Starter**



**5.7 Shingle bent 90°**

Bend the shingle tab 90°. Install the shingle and fasten it in place.



**5.8 Shingle with completed fold.**

After the shingle is fastened complete the bend around the trim by hand.

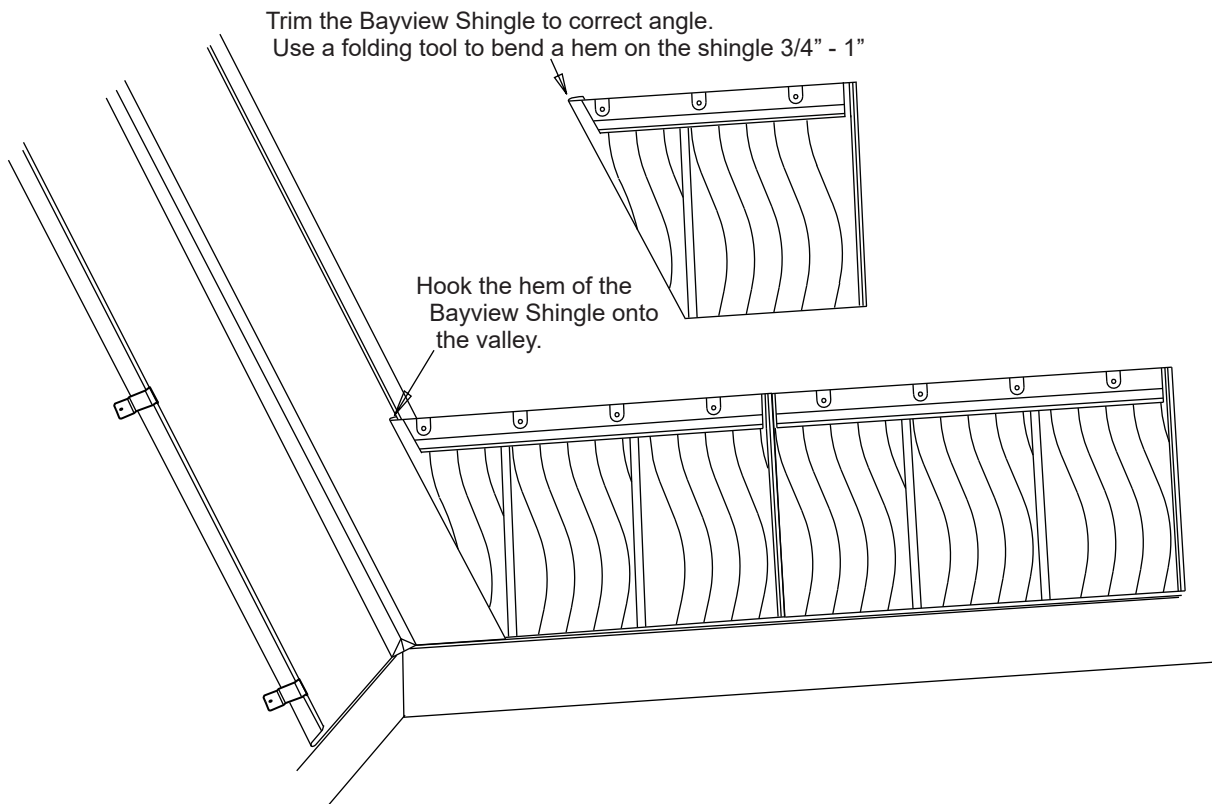
## Step 5. Installing the Shingles

### Install shingles at valley

Where there is a valley we recommend starting from the valley moving towards the rake edge when installing the Shake or Diamond Shingle. Position a full shingle on the next course and offset to match the existing pattern. (Diagram 5.7) Now place a shingle over the valley to determine the angle of the cut. Leave 3/4" - 1" to fold under which allows you to lock into the valley clip. If you find the shingle section that is to be locked into the valley is too narrow you can pop rivet the shorter pc to the adjacent shingle, then install as one unit. Be sure the shingle at the valley is fully locked onto the previous row to keep the row of shingles straight.

**NOTE** - When installing the Slate shingles they are installed left to right only.

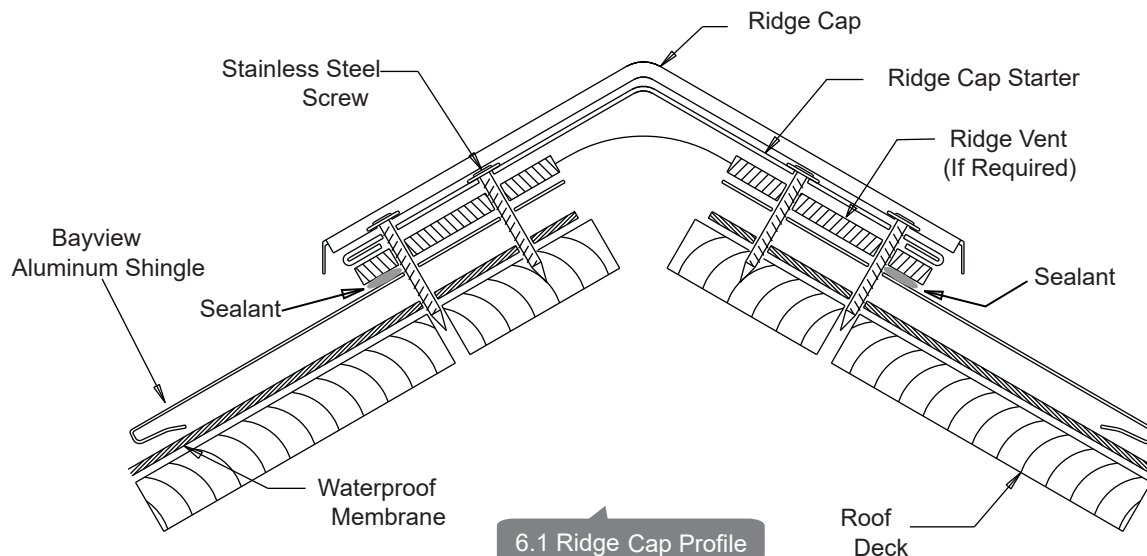
**Helpful Tip** Before fastening the shingle at the valley, lock in the shingle next to it to align the vertical joint and fasten the two shingles after they are straight. The shingle at the valley may need to be gently tapped upwards to fully lock the shingle in place.



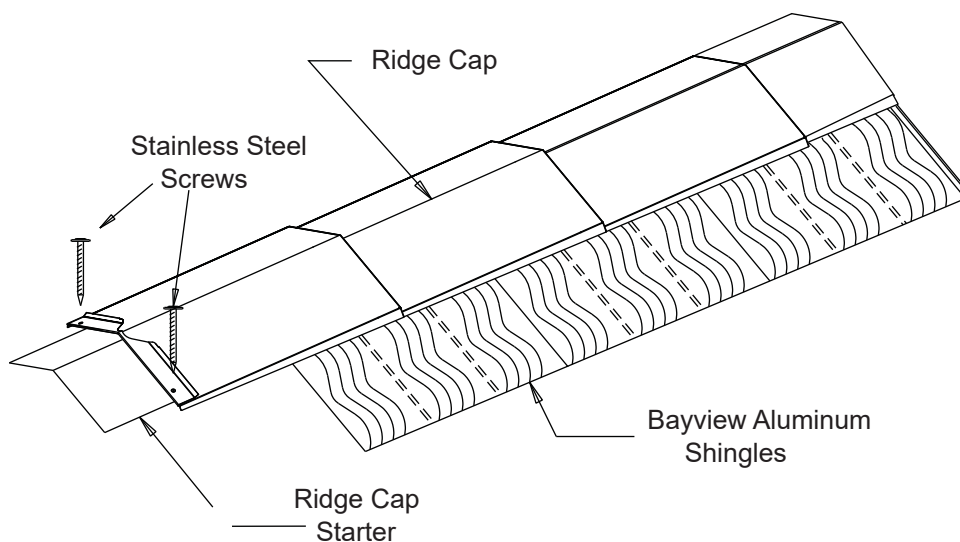
5.7 Shingle Install at Valley

## Step 6. Hip and Ridge Installation

A Ridge Cap is needed when you reach the roof ridge. Buchner supplies Ridge Cap Starter in 10 ft lengths or you can bend one from Buchner flatstock if you have a brake. Ridge Cap starter is recommended to aid in keeping the line of ridge cap straight and provide additional water protection. If venting is required Buchner recommends QUARRIX Ridge Roll<sup>4</sup>. Sealant should be used under the ridge vent and fasten ridge caps with screws long enough to penetrate the wood structure. (Diagram 6.1)



Shingles will be installed up to the roof ridge. Trim back the shingle as required. Lay down the QUARRIX Ridge Roll<sup>4</sup> with sealant, then the ridge cap starter. The ridge cap is placed over top and two stainless steel fasteners are inserted into the two screw holes provided (diagram 6.2). The next ridge cap simply locks into the previous cap. The Ridge Cap are interlocked moving in the direction of prevailing wind.

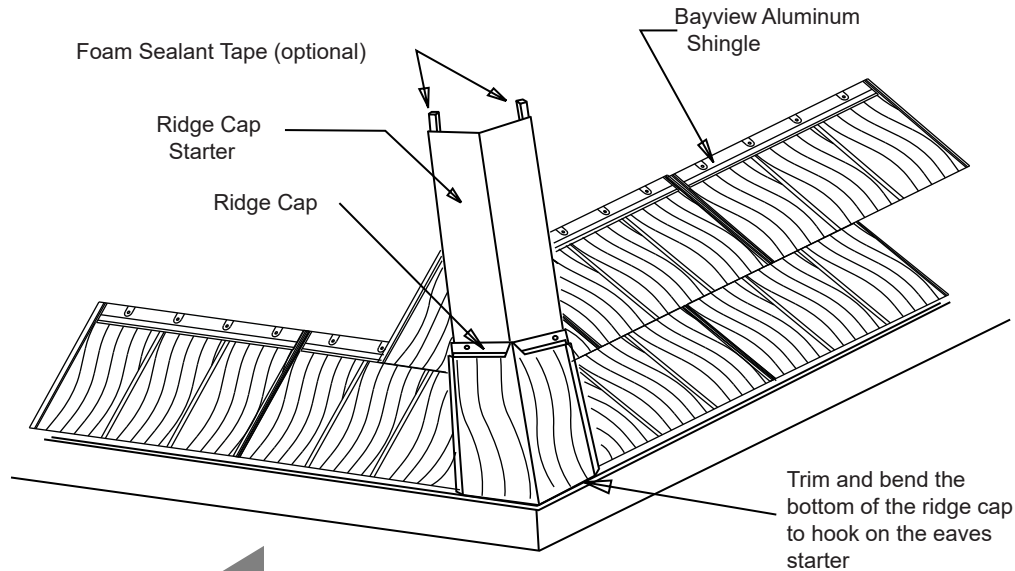


<sup>4</sup> Go to [www.quarrix.com](http://www.quarrix.com) for more information

## Step 6. Hip and Ridge Installation

To install the ridge cap on a hip start by fastening the ridge cap starter over the Bayview Shingles with stainless steel screws. (Diagram 6.3) Use a chalk line to keep the starter straight. A 1/2"x1" foam tape can be adhered to the underside of the ridge cap starter to provide additional seal at the hip.

Start at the eaves with the first ridge cap and cut the bottom of it to match the eaves starter leaving 3/4" to fold over the eave starter. Hook the ridge cap over the eaves starter and align the center of the cap with the ridge cap starter. Fasten with 2 stainless screws long enough to penetrate the wood sheathing. The next ridge cap will hook onto the previous cap and be fastened with 2 stainless steel screws.

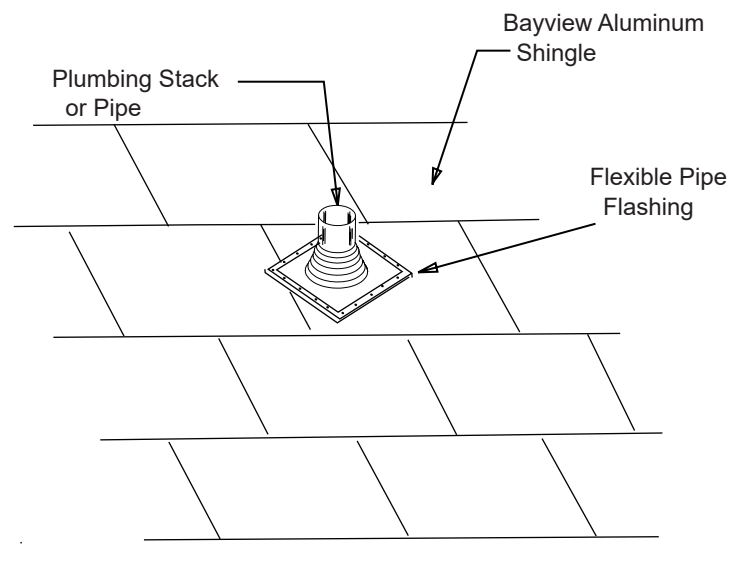


6.3 Ridge Cap at Hip

## Step 7. Flashings and Accessories

### Flexible Pipe Flashings

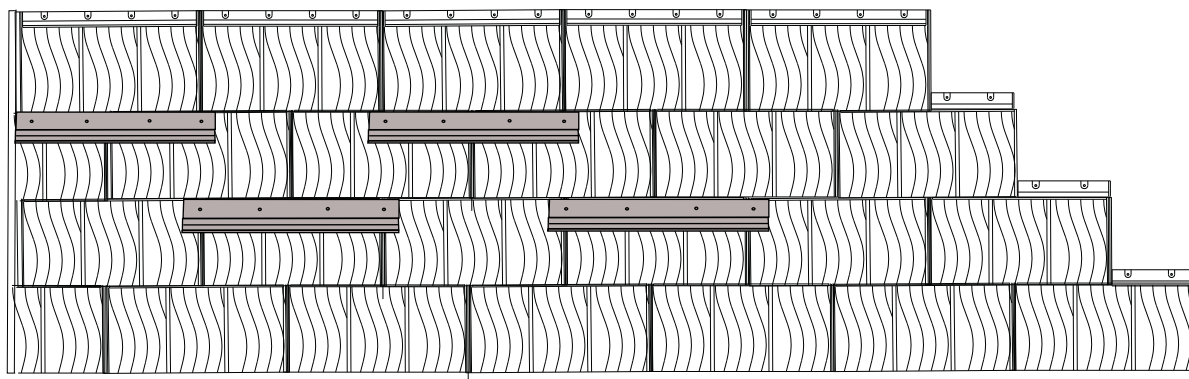
If there is a plumbing stack or hydro mast protruding through the roof it can be flashed with a flexible flashing. There are different sizes available and a style that can be split can be used on a pipe that won't allow the flashing to be slid down from the top such as a hydro mast. When the split style of flashing is in place use the included clips to rejoin. Cut the shingles as close to the pipe as possible and install the flashing with a sealant as per the manufacturers instructions.



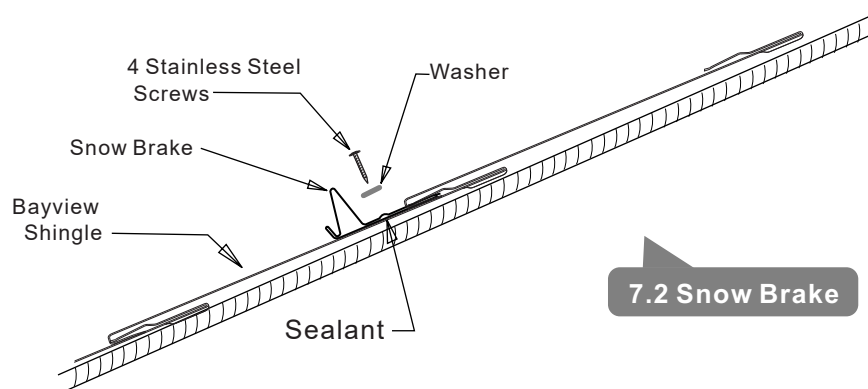
## Step 7. Flashings and Accessories

### Snow Brake on Shake and Diamond Shingles

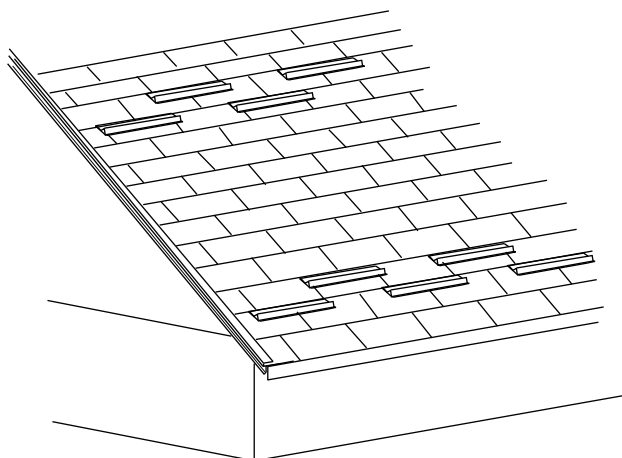
Snow Brakes are to be installed after the Bayview Shingles are installed on the roof. Apply sealant between the Snow Brake and the shingle and place the Snow Brake with even spacing over the side laps of the shingle below. Insert the flange of the Snow Brake under the lower edge of the shingle and slide upwards. (Diagram 7.1) Insert stainless steel screws with rubber washers into the raised dimples and screw into the roof. (Diagram 7.2) Be sure the screws are long enough to penetrate the wood structure below.



7.1 Snow Brake



7.2 Snow Brake

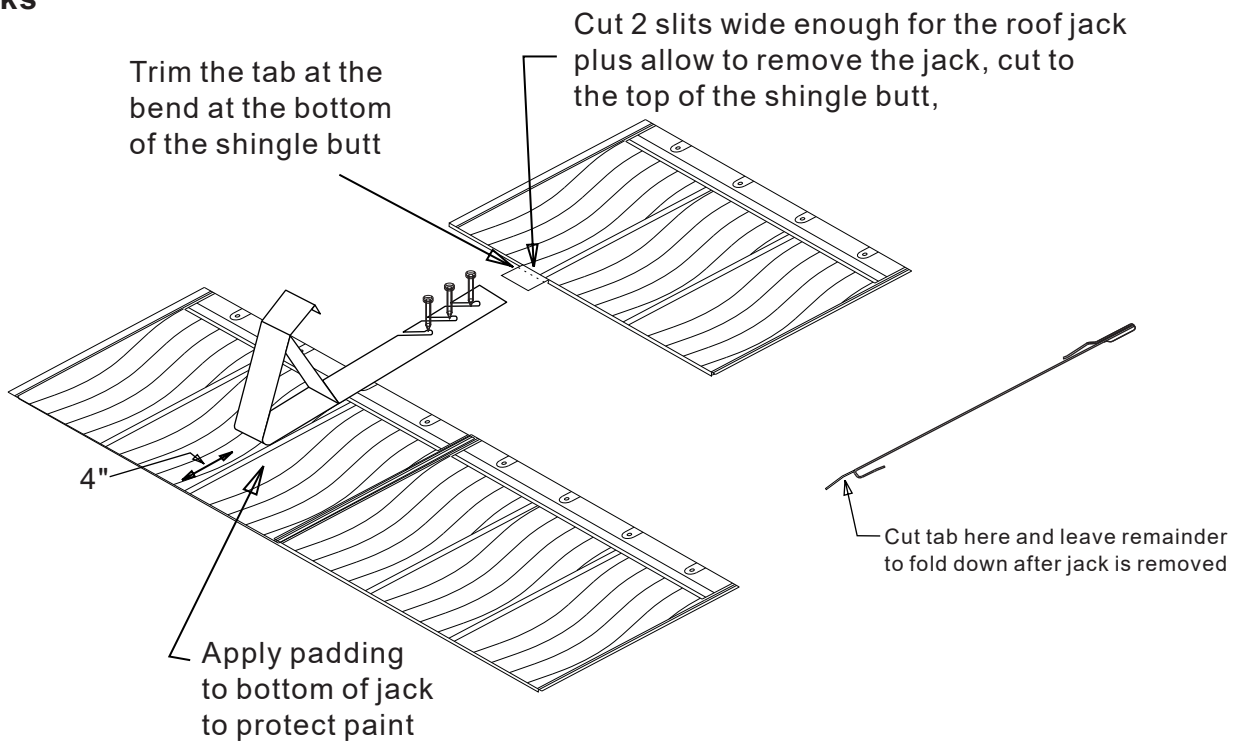


The bottom row of Snow Brakes should be installed above the outside wall of the building or higher on the roof. 2 rows of snow brakes installed in an offset pattern on 2 adjacent rows of shingles as pictured can be used to provide support to the snow pack on the roof. If the amount of snow expected requires more support install additional rows of snow stops with approximately 8-10 ft between the rows.



## Step 7. Flashings and Accessories

### Roof Jacks



#### **Follow Roof Jack manufacturer's instructions to fasten the roof jack.**

These instructions are for modifying the shingle.

- 1 - Fasten the roof jack over installed shingles keeping the jack 4" up from the bottom of the shingle.
- 2 - On the shingle being installed over the jack cut the bottom locking tab to the top of shingle butt and bend the tab up.
- 3 - Trim the tab at the bend of the bottom of the shingle butt.
- 4 - Remove jack when finished and bend the tab down to close the opening.

### Johnny Jacks

The Johnny Jack is designed to have a padded base sit on top of the installed shingles. A seven foot bar connects the walking plank bracket at the bottom to nail slots at the top. There is a 5 1/2" clearance between the bar and the roof deck to allow installation of shingles.

