

METAL ROOFING  
INSTALLATION GUIDE



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# SHAKE AND SLATE

INSTALLATION GUIDE

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# INTRODUCTION

These are the manufacturer's installation instructions for the roofing conditions described. ProVia® LLC assumes no responsibility for leaks or personal injury due to faulty installation. ProVia's metal roofing products are covered by a LIFETIME LIMITED WARRANTY. For a copy of the warranty, visit our website at [provia.com](http://provia.com), or call 800-669-4711.

Due to required certification installation training and specialized tools, ProVia does not consider its roofing system to be a do-it-yourself (DIY) product. It is recommended to consult a ProVia certified dealer for installation.

These installation details are designed to be used in conjunction with ProVia's Certified Installer Training Program.

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## SAFETY FIRST

- Make sure to use appropriate safety and fall restraint equipment as well as wearing soft rubber-soled shoes. Soft rubber-soled shoes will better grip the surface of the panel, as well as protect the painted finish. **USE CAUTION; product may be slippery, especially when wet or dusty.**
- Always follow governmental safety guidelines, including, but not limited to, all Workman's Compensation and OSHA safety guidelines.
- Always be aware of your surroundings. Watch for roof openings such as skylights, roof edges, equipment, electric wires, and other potential safety hazards. Block off the danger zone directly beneath the roof area to prevent people, children or pets from getting too close. A well-organized work area can help prevent accidents.

## DISSIMILAR METALS

- Do not use accessories that contain dissimilar materials such as copper, aluminum or lead with ProVia's metal roof system, as they are incompatible metals and may cause panel failure.

## TESTING

- ProVia's metal roofing has been tested in accordance with local and national building codes. See page 41 for accreditations and testing information.

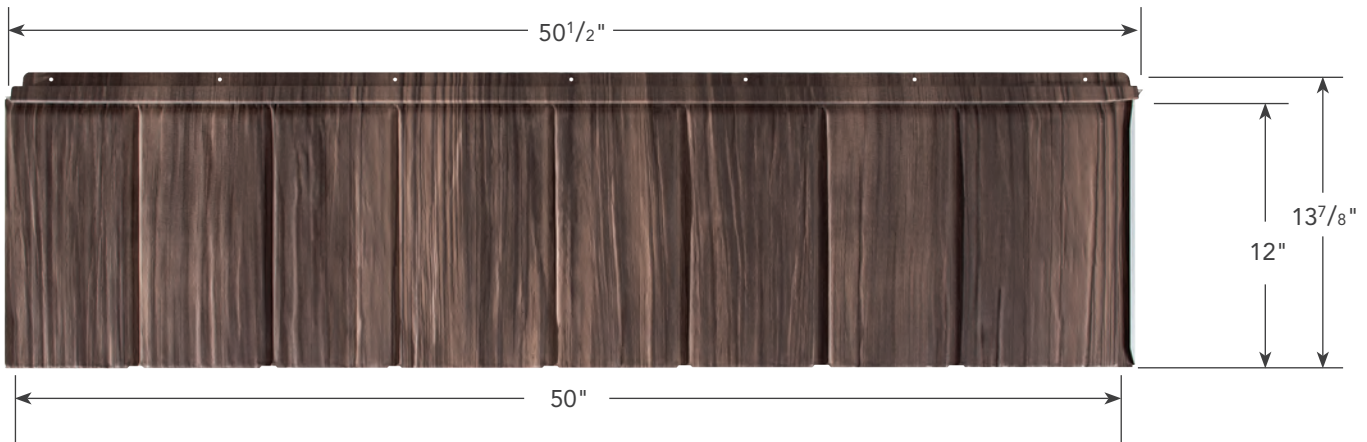
## CODES

- These installation instructions should not be substituted for any local or national building code specifications. Some areas may dictate local construction practices be followed to address unique climatic conditions.

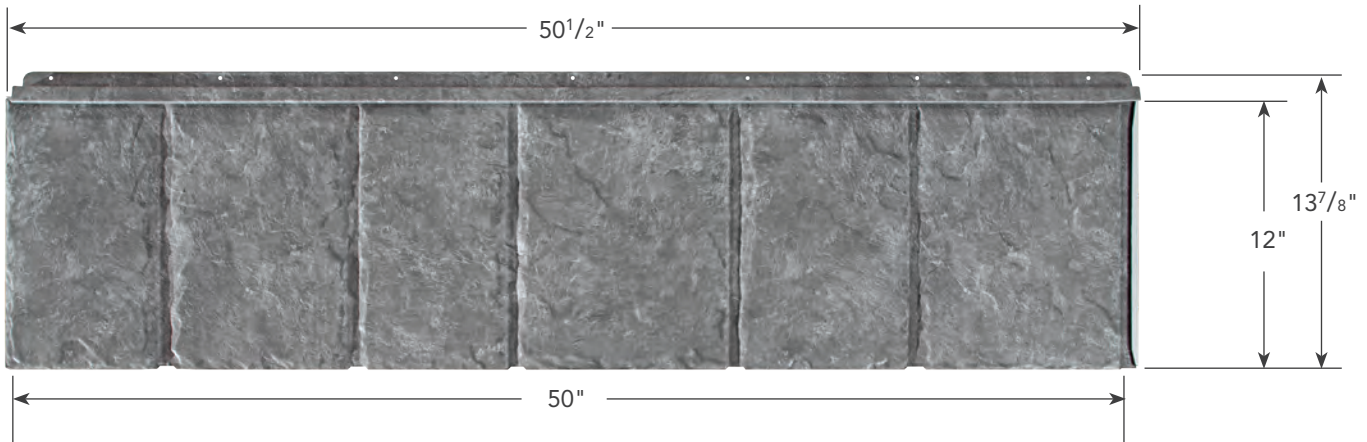
# SECTION 1 | PRE-INSTALLATION

## SHAKE AND SLATE PANEL DIMENSIONS

### SHAKE



### SLATE



### PANEL DETAILS

Overall Dimensions	50 1/2" x 13 7/8"
Exposure Dimensions	50" x 12"
Coverage	24 Shingles per square
Weight Per Panel	4.5 lbs
Weight Per Square	106 lbs

### MATERIAL QUANTITIES

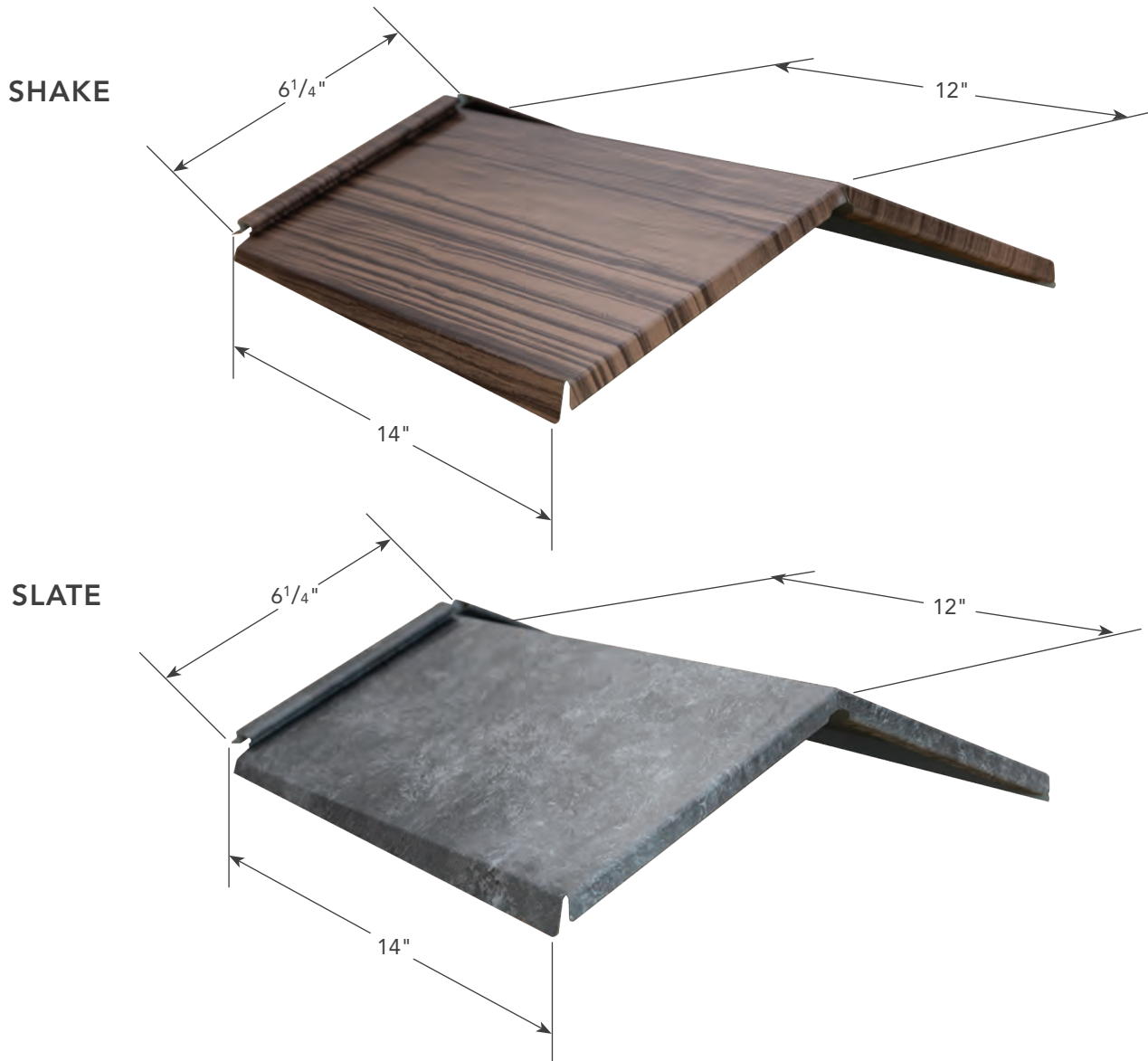
Panels Per Box	12
Boxes Per Square	2
Boxes Per Pallet	30
Weight Per Box	Shake: 56 lbs Slate: 55 lbs

### CAUTION

Care should be taken to store panels under a weatherproof tarp or in a moisture and chemical-free environment.

# SECTION 1 | PRE-INSTALLATION

## SHAKE AND SLATE RIDGE/HIP CAP DIMENSIONS



### RIDGE/HIP CAP DETAILS

Overall Dimensions	14" x 11 <sup>3</sup> / <sub>4</sub> " x 3 <sup>1</sup> / <sub>2</sub> "
Exposure Dimensions	12 <sup>1</sup> / <sub>2</sub> " x 12"
Weight Per Ridge/Hip Cap	1lb

### MATERIAL QUANTITIES

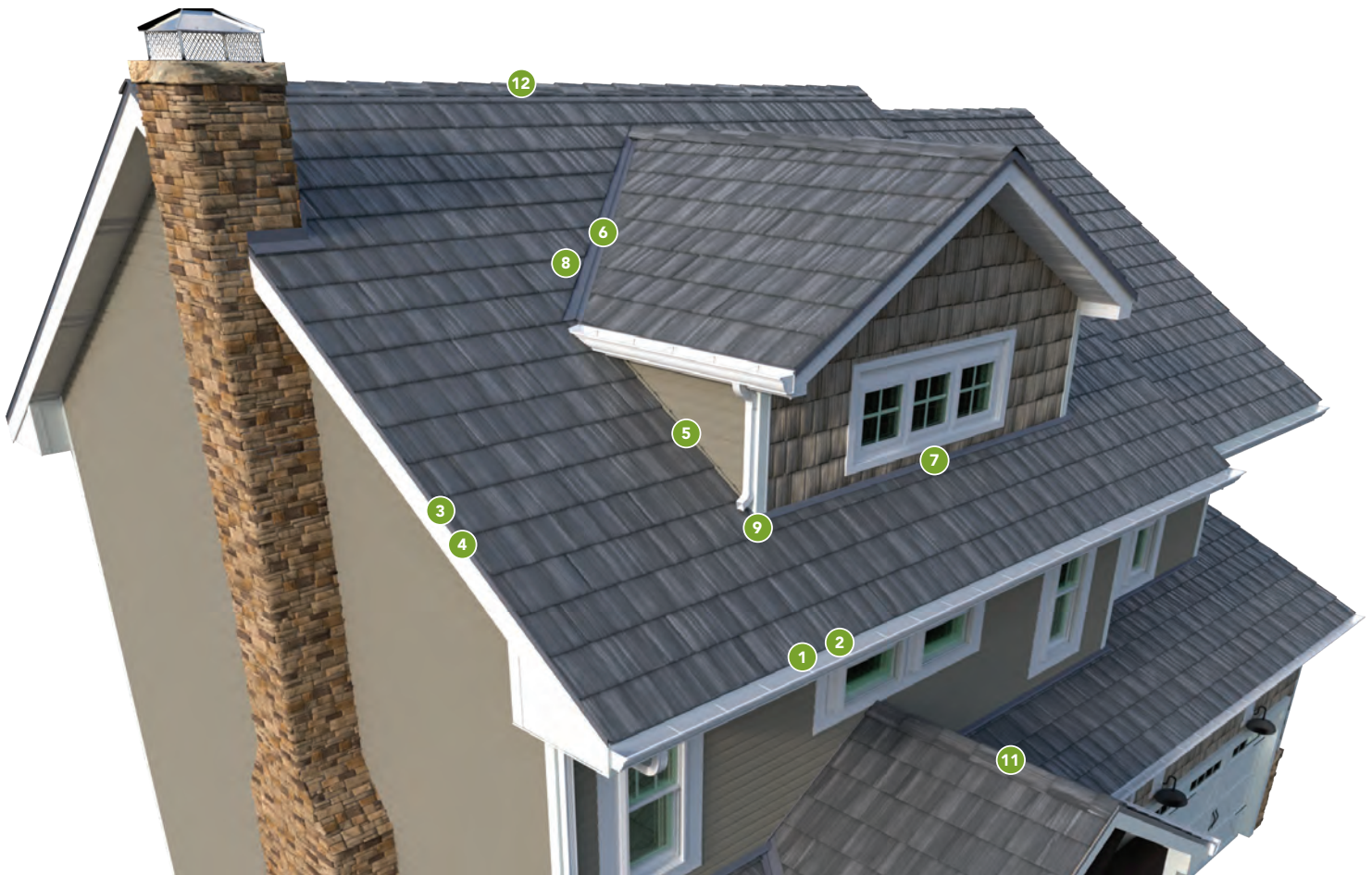
Ridge/Hip Caps Per Box	20
Boxes Per Pallet	40
Weight Per Box	Shake: 25 lbs Slate: 25 lbs

### CAUTION

Care should be taken to store Ridge/Hip Caps under a weatherproof tarp or in a moisture and chemical-free environment.

# SECTION 1 | PRE-INSTALLATION

## SYSTEM COMPONENTS



Eave Starter



RetroFit™ Eave Starter



Rake



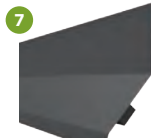
RetroFit™ Rake



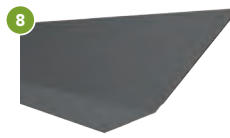
Sidewall



Valley



Apron



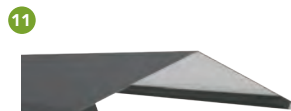
Anchor Cleat



6" Underpan



20" Underpan  
Used for vent pipes, bathroom vents, etc.  
Not shown on illustration.



Ridge/Hip Base  
For Non-Vented Installations

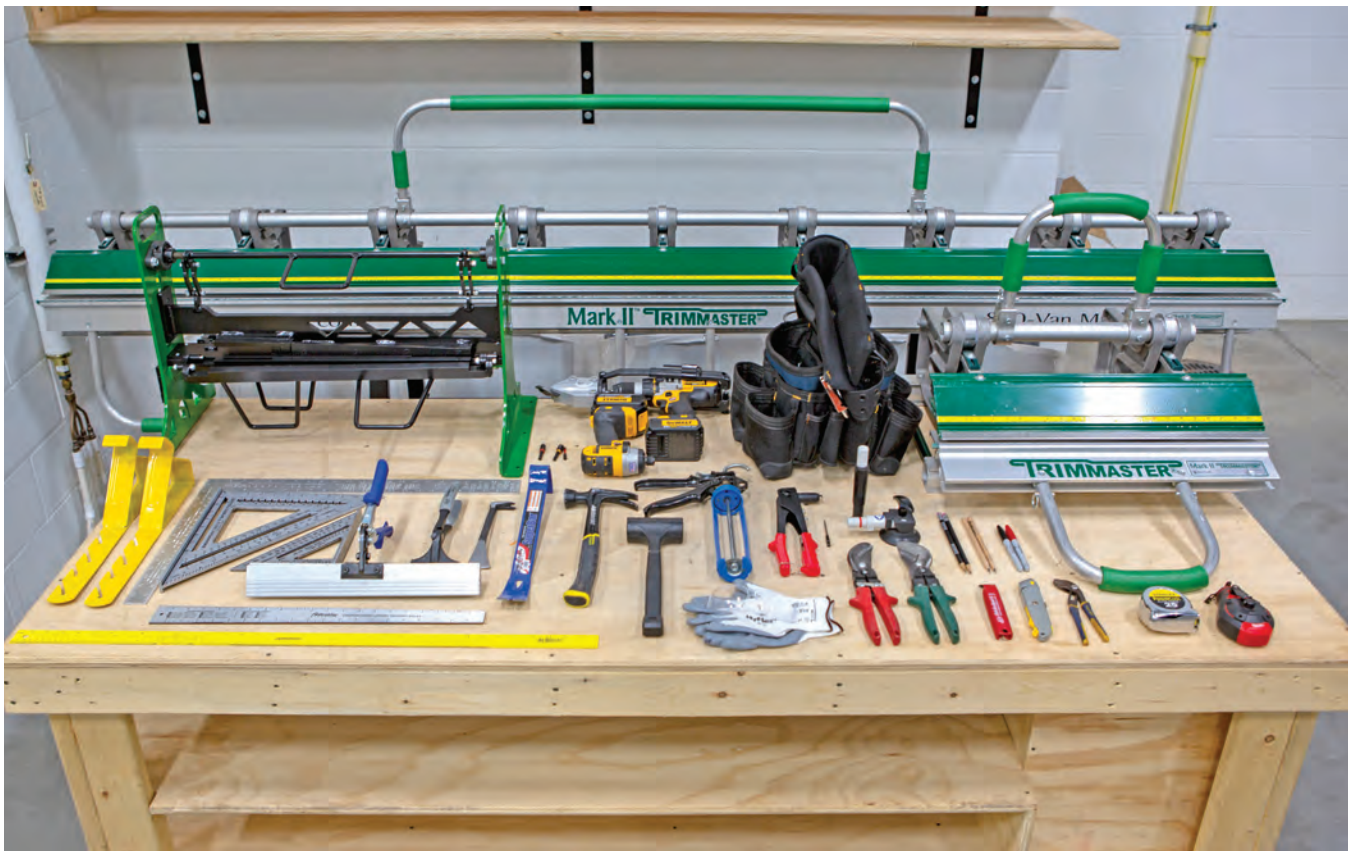




Quarrix Ridge Vent with Ridge Base  
For Vented Installations

# SECTION 1 | PRE-INSTALLATION

## RECOMMENDED TOOLS

Below are some of the tools that may be necessary or helpful for the installation of ProVia's metal roofing system.



- 10' Brake
- 2' Brake
-  Valley Bender Tool
- Roof Jacks
- 2' Square
- 12" Speed Square
- 7" Speed Square
-  Valley Taper Tool
- 3' Straight Edge
- 15" Hand Bender
- 3" Hand Bender
- Small Flat-Bar

- Large Flat-Bar
- Cordless Drill with Turbo Shears
- Impact Driver
- Tool Belt
- Hammer
- Dead Blow Hammer
- Caulk Gun
- Protective Gloves
- Safety Glasses
- Right and Left Offset Aviation Snips
- Pop Riveter
- Suction Tools

- Markers
- Pencil
- Zip Tool
- Utility Knife
- Pliers
- Tape Measure
- Chalk Line

 ProVia Exclusive Tools Available On entryLINK™

# SECTION 1 | PRE-INSTALLATION

## INSTALLATION GUIDELINES

### PITCH RECOMMENDATIONS - Fig 6.1

The minimum recommended slope is 4:12 pitch when installed over Sharkskin® Ultra underlayment. The minimum recommended slope when installed over Sharkskin Ultra SA underlayment is 3:12 pitch.

### WALKING ON THE PROVIA PANEL - Fig 6.2

Always avoid walking on or near the panel side locks. To avoid scratching the paint, always clean the bottom of shoes before stepping on the metal panel.

### INSTALLATION SEQUENCE

**TIP** - Careful attention to flashing details is essential to successful long-term roof performance. It is important to consider water flow and overlap materials in proper sequence.

Install the components of this roofing system in the following order:

1. Eave Starter
2. Sharkskin® Ultra SA (Ice and Water Shield)
3. Sharkskin® Ultra (High-Temp Underlayment)
4. Rake
5. Valley
6. Sidewall
7. Field Panels - Start at the bottom left corner, then work bottom to top
8. Hip Base
9. Ridge Base

Fig. 6.1

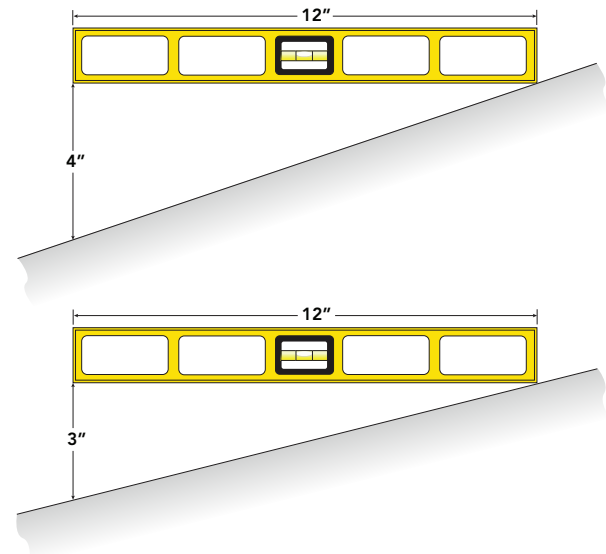
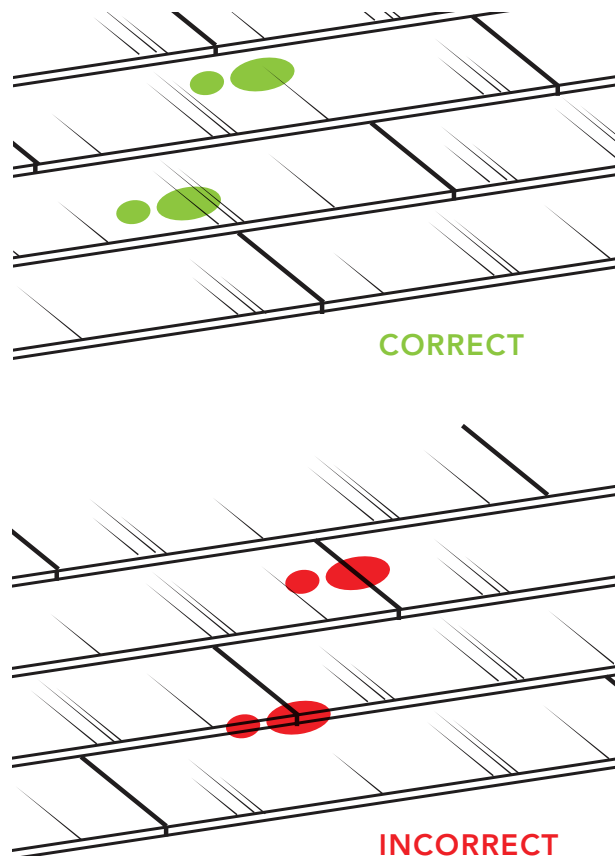


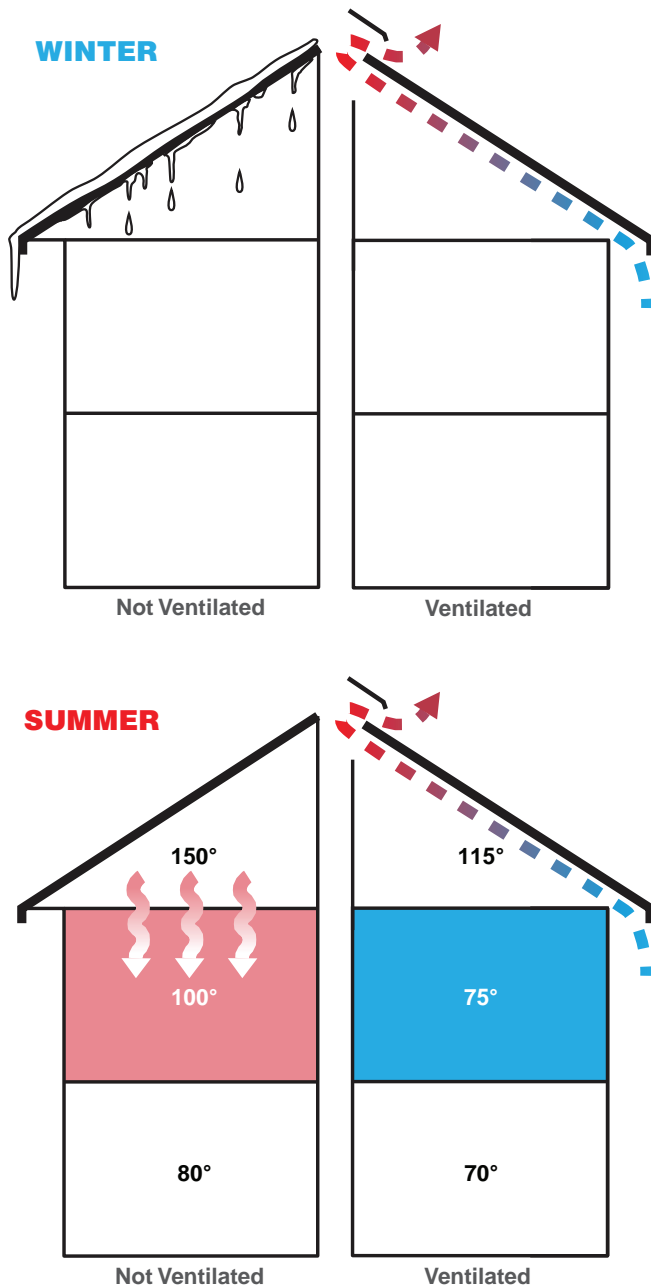
Fig. 6.2





# SECTION 1 | PRE-INSTALLATION INSTALLATION GUIDELINES

Fig. 7.1



## CLASS A FIRE RATING

To achieve a Class A fire rated roof assembly, apply Firestone® CLAD-GARD™ SA-FR or similar code-specified underlayment according to manufacturer's instructions before installing the ProVia Panel.

## VENTILATION CONSIDERATIONS - Fig. 7.1

The primary purpose of ventilation in cold climates is to expel warm, moist air to reduce condensation in the attic, and to maintain a cold roof surface helping to prevent the formation of ice dams from melting snow. In warm climates, proper ventilation will expel hot air from the attic, reducing the cooling load of the structure. Too much condensation in an attic, caused by high levels of humidity and a lack of ventilation, can be mistaken for a leaking roof.

Using the ridge vent system recommended by ProVia in conjunction with soffit intake vents is an excellent method for achieving balanced ventilation. For proper airflow through the attic, the amount of intake at the soffit should be equal to or greater than the exhaust at the ridge. Always refer to local building codes. Always consult with a professional builder if condensation issues occur as this could be an indication of inadequate attic insulation, or improper ventilation.

# SECTION 1 | PRE-INSTALLATION

## ROOF PREPARATION



Fig. 8.1

**TIP** - Before starting a project, check for any pre-existing damage to siding, gutters, fascia, or any other exterior features and take photos to avoid having to take responsibility for previous damage.

### ROOF TEAR-OFF - Fig. 8.1

After tearing off old shingles, clean and prepare roof deck to meet local building codes.



Fig. 8.2

Examine roof sheathing to ensure proper attachment to framing and replace any damaged roof sheathing (Fig. 8.2). Verify deck is clean and smooth, free of any depressions or projections.

Using 1/2" plywood, 15/32" OSB or tightly spaced 3/4" board sheathing is recommended for best performance.



Fig. 8.3

### ROOF-OVER PROCEDURES - Fig. 8.3

Installation over existing asphalt shingle roofing is acceptable, when permitted by local building code. When using the RetroFit trims, it is usually not necessary to remove the old edge trims. Remove all existing hip and ridge caps and flatten all buckled or curled shingles to provide a smooth surface for the metal panels.

To ensure penetration of roof sheathing when installing over existing roofing, use #10 x 1 1/2" screws.

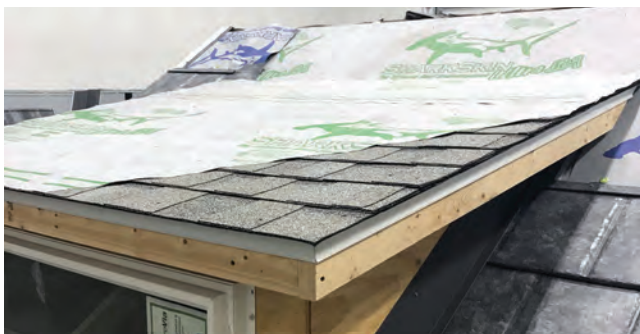


Fig. 8.4

Synthetic underlayment must be installed over the asphalt shingles (Fig. 8.4).

# SECTION 1 | PRE-INSTALLATION

## ROOF JACKS



Fig. 9.1 - Roof jack installed

Install roof jacks securely into structural support using a fastener appropriate to the model of roof jack. Be sure to tape a protective spacer such as carpet, foam, or several layers of cardboard to the bottom of the roof jack to protect the panel top lock and to prevent scuffing. (Fig. 9.1)



Fig. 9.2 - Nose of panel folded out

Cut and fold out the nose and wavelock of the next course of panels to be installed over the roof jack. Be sure to cut the wavelock wide enough to accommodate the side travel movement of the roof jack when removing. (Fig. 9.2 & Fig. 9.3)



Fig. 9.3 - Roof jack removed

The roof jack is ready to be used after the panel is installed. Always be sure to comply with all OSHA safety procedures!

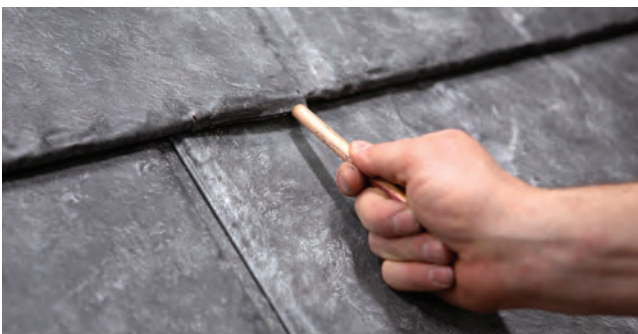


Fig. 9.4 - Nose of panel back in place

After removing the roof jack, cut off the wavelock and **apply sealant behind the tab**. Fold the nose down, tucking in place using a non-marring tool. (Fig. 9.4)

## SECTION 2 | SYSTEM INSTALLATION

### UNDERLAYMENT

It is recommended that Underlayment be installed over Eave Starter. However, always follow local building codes and manufacturer's instructions.

Underlayment is required prior to installing the ProVia metal roof system in both new and roof-over applications. A synthetic underlayment specially designed for metal roofing such as Sharkskin Ultra® will offer the best protection.

Install a high temperature, self-adhering underlayment, such as Sharkskin Ultra SA® at all eaves, valleys, pitch changes and around all flashing points such as vent pipes, dormers, skylights, and chimneys using 1" cap nails.

Sharkskin Ultra SA® underlayment is installed by removing the split-release liner and applying the adhesive side against the roof deck with a 4" horizontal overlap and 12" vertical lap. See manufacturer's installation instructions for details. The underlayment is laid horizontally (parallel) to the eave with the printed slip resistant side up

Cover the rest of the roof deck with synthetic underlayment, such as Sharkskin Ultra®.

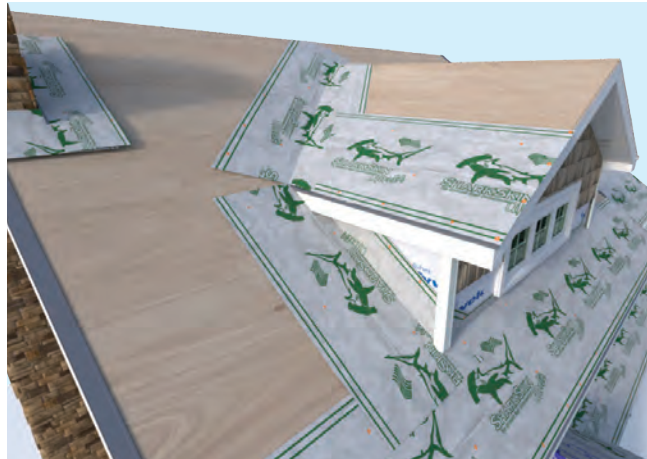


Fig. 10.1 - Ice and water shield (green) on eave and in valleys

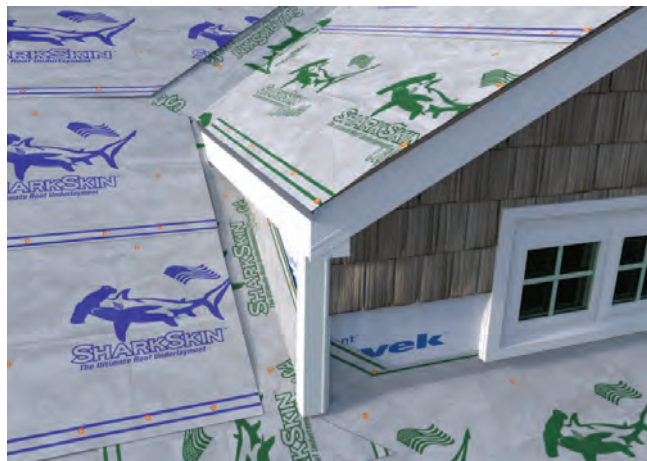


Fig. 10.2 - Ice and water shield (green) around skylight/dormer

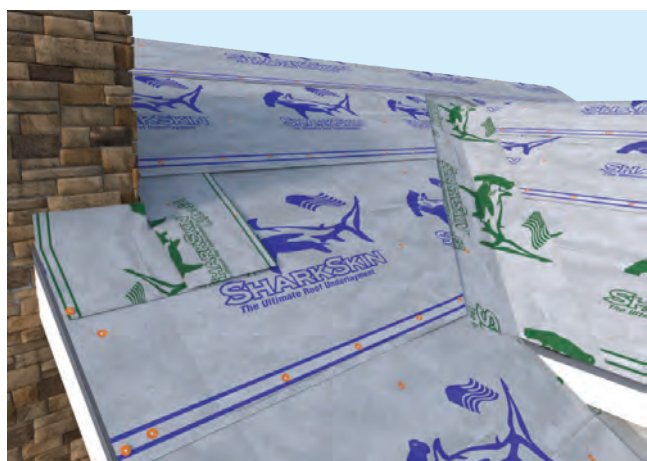


Fig. 10.3 - Underlayment (blue) on field of roof

## SECTION 2 | SYSTEM INSTALLATION

### EAVE STARTER



Fig. 11.1 - Outside corner piece installed



Fig. 11.2 - Overlap pieces cut and ready to install



Fig. 11.3 - Overlap pieces installed

Eave Starter is designed for the first course of panels to lock onto.

**TIP** - It is recommended to snap a chalk line to ensure that the Eave Starter is installed straight and does not follow any wave that may be in the fascia.

#### EAVE TO RAKE

At an eave to rake outside corner, cut the upper leg of the Eave Starter back 1" and fold remaining 1" lower leg around creating a tab that fits the corner tightly. Secure in place using #10 x 1" hex head panel screws every 12" (Fig. 11.1)

#### OVERLAP

For a tight-fitting overlap, cut a 1" angle on the front nose of the underlapping Eave Starter before installing subsequent pieces.

(Fig. 11.2 & Fig. 11.3)

## SECTION 2 | SYSTEM INSTALLATION

### EAVE STARTER (Continued)

#### EAVE TO EAVE INSIDE CORNER

At an eave to eave inside corner, cut the upper leg of the Eave Starter to match the angle of the valley. Leave a 1" tab on lower leg to fold around corner. (Fig 12.1)

Cut the subsequent piece of Eave Starter to fit tightly with the previously installed piece. (Fig 12.2)

#### EAVE TO EAVE OUTSIDE CORNER

At an eave to eave outside corner, cut the upper leg of the Eave Starter to match the angle of the hip. Leave a 1" tab on lower leg to fold around corner. (Fig 12.3)

Cut the subsequent piece of Eave Starter to fit tightly with the previously installed piece. (Fig 12.4)

Install self-adhering underlayment over the Eave Starter per local building codes.



Fig. 12.1 - First inside corner piece ready to install



Fig. 12.2 - Second inside corner piece ready to install



Fig. 12.3 - First outside corner piece installed



Fig. 12.4 - Second outside corner piece installed

## SECTION 2 | SYSTEM INSTALLATION

### RAKE



Fig. 13.1 - Outside corner piece installed

Rake securely anchors the ends of the panels and emphasizes the tapered profile of the panel.

Install Rake on the gable, over the underlayment and flush with the front nose of the Eave Starter. Secure in place using #10 x 1" hex head self-sealing washer screws every 16". (Fig. 13.1)

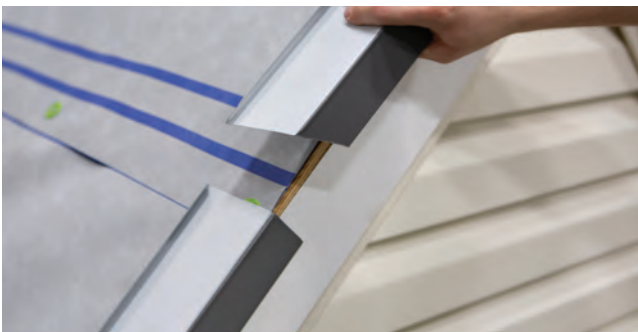


Fig. 13.2 - Overlap piece ready to install

Overlap Rake at least 1". Consider water flow at Rake overlaps and ensure the upslope Rake leg nests tightly into the downslope Rake leg for water tightness. (Fig. 13.2)



Fig. 13.3 - Plumb cut and next piece ready for install

Make a plumb cut on the Rake leg at the peak. Cut off the pan and water stop of the Rake where it meets the plumb cut. (Fig. 13.3)

Cut the leg of the Rake for the opposite side of the roof leaving a 1/2" tab to insert into the Rake that was previously installed (Fig. 13.3). Cut the pan and water stop of the Rake leaving a 2" tab to fold over the peak.



Fig. 13.4 - Second piece at peak installed

Nest the legs of the two Rakes together and secure tab with screw. (Fig. 13.4)

## SECTION 2 | SYSTEM INSTALLATION

### RETROFIT™ EAVE STARTER

RetroFit Eave Starter is designed to be installed over existing asphalt shingle without removing any edge treatment.

**TIP** - It is recommended to snap a chalk line to ensure that the RetroFit Eave Starter is installed straight and does not follow any wave that may be in the fascia.

#### EAVE TO RAKE

At an eave to rake outside corner, cut the upper leg of the RetroFit Eave Starter back 1" and fold the remaining 1" lower leg around creating tabs that fit the corner tightly and match the profile of the RetroFit Rake. Tack the RetroFit Eave Starter in place using #10 x 1 1/2" hex head panel screws at each end. (Fig. 14.1)

For a tight-fitting overlap, make a 1" angled relief cut on the front nose of the underlapping RetroFit Eave Starter before installing subsequent pieces. (Fig. 14.2 and Fig. 14.3)

Secure Anchor Cleat in conjunction with the RetroFit Eave Starter using #10 x 1 1/2" hex head panel screws every 12". This provides an anchor for the first course of panels to lock onto. At a corner, keep Anchor Cleat back 3 1/2" from the rake edge for the RetroFit Rake overlap as shown in Fig. 14.1.

Install self-adhering underlayment over the RetroFit Eave Starter per local building codes.



Fig. 14.1 - Outside corner piece installed



Fig. 14.2- Overlap pieces cut and ready to install

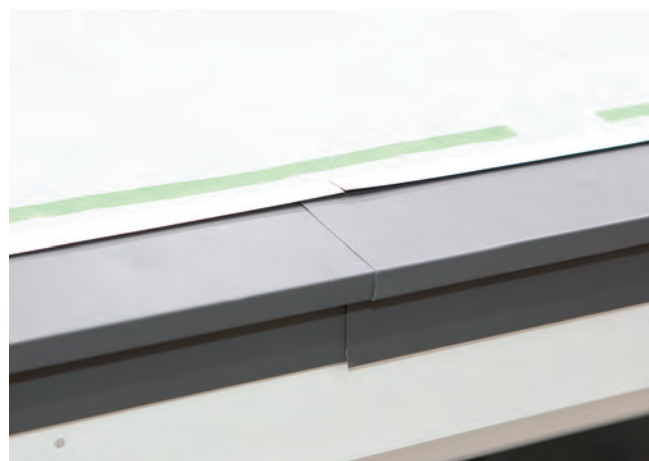


Fig. 14.3- Overlap pieces installed



## SECTION 2 | SYSTEM INSTALLATION

### RETROFIT™ RAKE



Fig. 15.1 - Outside corner piece installed

RetroFit Rake is designed to be installed over existing asphalt shingle without removing any edge treatment.

Install RetroFit Rake on the gable, over the underlayment and flush with the front nose of the RetroFit Eave Starter. Secure in place using #10 x 1 1/2" hex head self-sealing washer screws every 16". (Fig. 15.1)



Fig. 15.2 - Overlap piece ready to install

Overlap RetroFit Rake at least 1". Consider water flow at overlaps and ensure the upslope RetroFit Rake leg nests tightly into the downslope RetroFit Rake leg for water tightness. (Fig. 15.2)



Fig. 15.3 - First piece at peak installed

Make a plumb cut on the RetroFit Rake leg at the peak. Cut off the pan and water stop of the RetroFit Rake where it meets the plumb cut. (Fig. 15.3)

Cut the leg of the RetroFit Rake on the opposite side of the roof leaving a 1/2" tab to insert into the RetroFit Rake that was previously installed. Cut the pan and water stop of the RetroFit Rake leaving a 2" tab to fold over the peak. (Fig. 15.3)



Fig. 15.4 - Second piece at peak installed

Nest the legs of the two rakes together and secure tab with a screw. (Fig. 15.4)

## SECTION 2 | SYSTEM INSTALLATION

### VALLEY

#### SIMPLE VALLEY (EAVE TO EAVE)

Valley flashing is designed to be used with Anchor Cleat to create an open valley that self-cleans and provides a secure fastening system for the panels to lock into.

**TIP** - Snap a chalk line in the center of the valley as a guide to ensure a straight Valley flashing installation.

Position the Valley flashing to extend past the Eave Starter. Mark the underside of the Valley flashing along the front nose of the Eave Starter, this will be the fold line. Cut the Valley flashing  $\frac{3}{4}$ " longer (red line) than the fold line (black line), to create tabs. Fold tabs around using a hand bender to form an open hem to lock onto the Eave Starter. (Fig. 16.1 and Fig. 16.2)

**TIP** - When cutting the center rib at the bottom ends of Valley flashings, leave tabs to be folded together to close the opening.

Position and tack the Valley flashing in place with #10 x 1" hex head panel screws on the outside edges of the water stop as shown in Fig. 16.3. Always push the Valley flashing down into the valley profile before tacking to prevent bridging of the flashing between the roof slopes. Tighten hems at Eave Starter with a hand bender.

Install Anchor Cleat on top of the Valley flashing using #10 x 1" hex head panel screws every 12". Use the water stop of the Valley flashing for a straight installation. (Fig. 16.4)

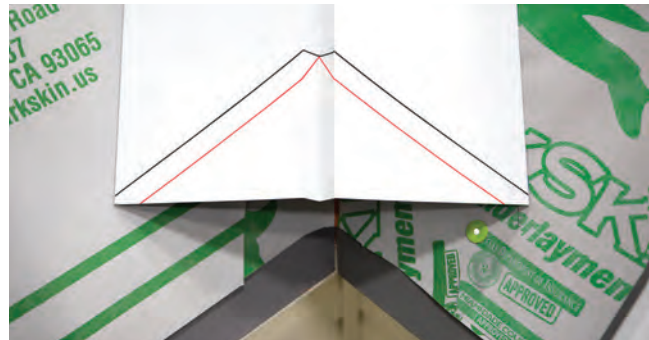


Fig. 16.1 - Valley flashing marked and ready to fold



Fig. 16.2 - Valley flashing ready to install



Fig. 16.3 - Valley flashing installed



Fig. 16.4 - Anchor Cleat installed

## SECTION 2 | SYSTEM INSTALLATION

### VALLEY

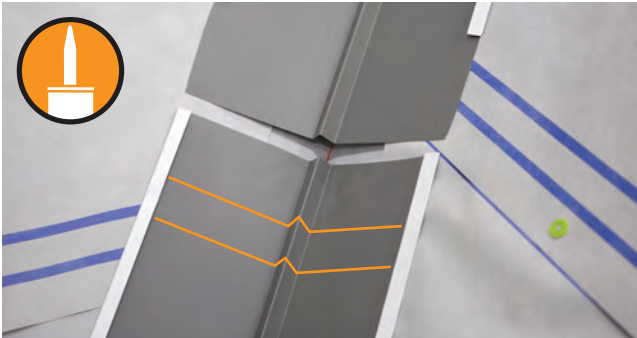


Fig. 17.1 - Overlap piece ready to install

**SIMPLE VALLEY (EAVE TO EAVE) - CONTINUED**  
When two pieces of flashing are required, overlap the second piece of Valley flashing over the first piece at least 6". The water stop on the second piece of flashing will need to be trimmed to nest inside the first piece. **Two rows of sealant are required under the overlap.** (Fig. 17.1)

**OBJECTIVE:** Where two Valley flashings meet at the top of a ridge, ensure the two flashings are carefully fitted together and properly sealed while maintaining a neat appearance.

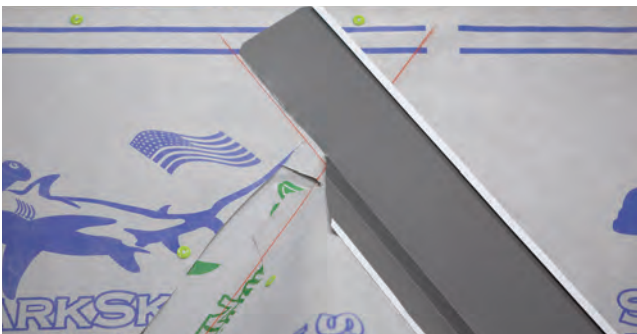


Fig. 17.2 - First piece of Valley flashing installed

Cut the ridge side and center rib of the first Valley flashing at the peak, extending the roof side of the flashing sufficiently to meet the water stop of the Valley flashing on the opposite side of the ridge. (Fig. 17.2)

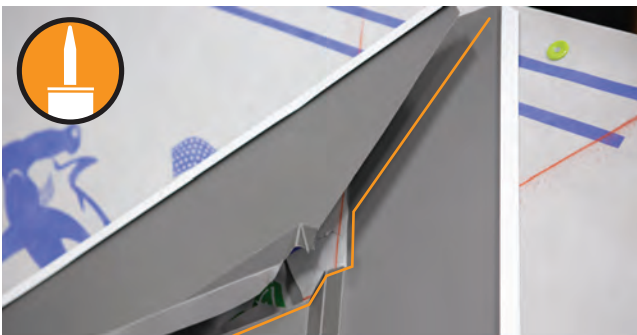


Fig. 17.3 - Second piece of Valley flashing ready to install

Lay the Valley flashing for the opposite side of the ridge into the valley, extending past the previously installed piece of Valley flashing.



Fig. 17.4 - Valley flashings installed at ridge

Trim the Valley flashing so the center ribs and water stops of both flashings meet and fit together tightly. Leave 1" tabs on the ridge side and at the center rib of the Valley flashing to fold over the peak. **Apply sealant under the overlap before securing into place.** (Fig. 17.3 & Fig. 17.4)

## SECTION 2 | SYSTEM INSTALLATION

### VALLEY

#### FLOATING VALLEY

**TIP** - In a floating valley, install courses of panels and a 6" Underpan to just beyond the bottom point of the valley before installing floating Valley flashing.

Position the Valley flashing to extend past the Eave Starter on the dormer. Mark a fold line on the underside of the Valley flashing along the front nose of the Eave Starter, continuing across the center rib to the point where the water stop intersects with the top lock of the last course of panel installed. (Fig. 18.1)

With the Valley flashing still in position, mark a cut line on the panel top lock where it intersects with the Valley flashing. Open the top lock from the cut line to the valley. (Fig. 18.2)

Cut the Valley flashing on the eave side  $\frac{3}{4}$ " longer than the fold line, creating a tab to fold around using a hand bender to form an open hem to lock onto the Eave Starter.

Cut the Valley flashing on the panel side  $\frac{3}{4}$ " longer than the fold line and form a hem to add rigidity. (Fig. 18.3)

**Apply sealant between Valley flashing and panel**, then position and tack the Valley flashing in place using #10 x 1" hex head panel screws. Tighten hem at Eave Starter with a hand bender. (Fig. 18.3 & 18.4)

Install Anchor Cleat on top of the Valley flashing using #10 x 1" hex head panel screws every 12". **Apply sealant between edge of valley and panel top lock.** (Fig. 18.4)

A 2" drain slot will need to be cut in the wavelock of the first panel over the Anchor Cleat to allow the water pan of the Valley flashing to drain properly.

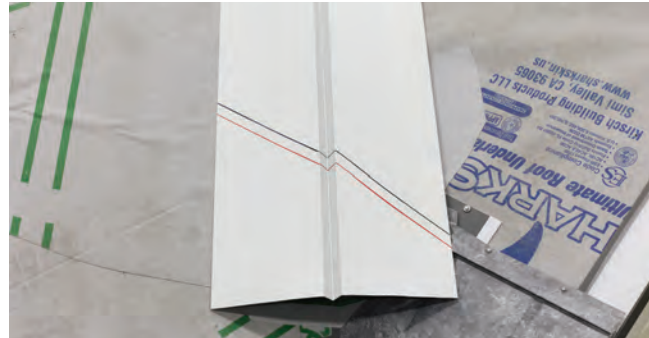


Fig. 18.1 - Valley flashing marked and ready to cut and fold  
Red = Cut / Black = Fold

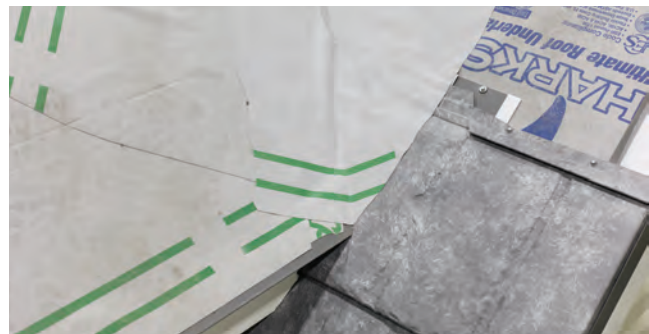


Fig. 18.2 - Top lock on last course of panel opened

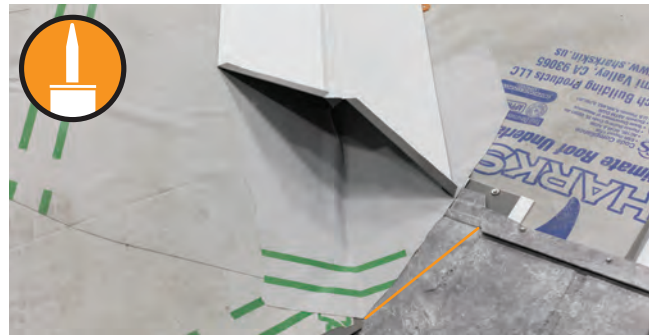


Fig. 18.3 - Valley flashing ready to install



Fig. 18.4 - Valley flashing installed in floating valley

# SECTION 2 | SYSTEM INSTALLATION

## PANEL INSTALLATION



Fig. 19.1 - CUT and BEND marks on screw flange

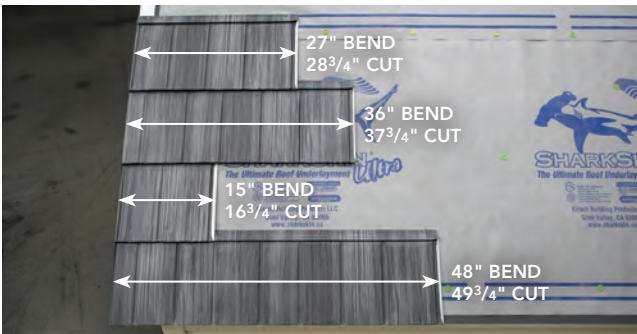


Fig. 19.2 - Shake profile starter pattern

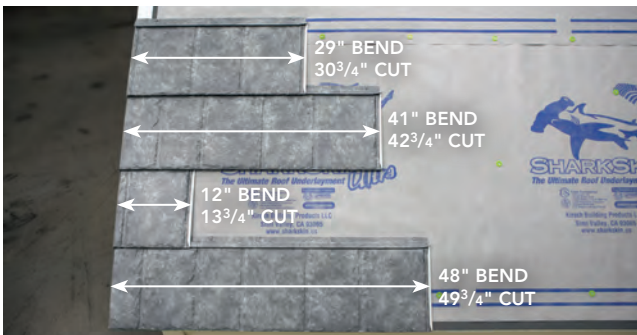


Fig. 19.3 - Slate profile starter pattern



Fig. 19.4 - 2" drain slot in the first piece

### STARTER PANEL LAYOUT

The ProVia panel is always installed from the left to the right, eave to ridge. Always be careful to ensure that all panels are fully interlocked. Attach each panel with #10 x 1" hex head panel screws through the pre-drilled screw flange, ensure screws penetrate a minimum of 1/2" through the sheathing. Use 4 screws per panel to achieve a Class 30 (120mph wind rating), 5 screws per panel to achieve a Class 60 (160mph wind rating), and 7 screws per panel to achieve a Class 90 (180mph wind rating).

For a random appearance, use the standard step pattern shown in Fig. 19.2 or Fig. 19.3, depending on which panel profile you are using. The identifiers "Cut-1, Bend-1", "Cut-2, Bend-2", "Cut-3, Bend-3", and "Cut-4, Bend-4" are printed on the screw flange (Fig. 19.1) and indicate the cut and fold locations of the Starter Panels. Note that the fold locations are slightly different on the Slate Panel compared to the Shake Panel.

The panel must be cut 1 3/4" longer than the fold location to form a tab to fold down 90° to create the side lock that fits into the channel of the Rake leg. A 2" drain slot will need to be cut in the wavelock of the first panel in the first course over the Rake to allow the water pan to drain. (Fig. 19.4)

Begin the first course at the lower left side of the roof with a full panel (folded at Bend-1). Begin the second course with a one-quarter panel (folded at Bend-2), the third course with a three-quarter panel (folded at Bend-3), and the fourth course with a half panel (folded at Bend-4). Repeat this step sequence on subsequent courses.

ProVia's Starter Panels can be used instead of field formed starter panels following the same step sequence.

## SECTION 2 | SYSTEM INSTALLATION

### PANEL INSTALLATION

#### PANELS ENDING AT RAKE

To install panels ending at a Rake, lock a panel into position, extending past the Rake. Mark the panel at the top lock and at the nose where the panel crosses the Rake leg. These marks show the fold line. Next mark a panel cut line  $1\frac{3}{4}$ " past the fold line. (Fig. 20.1)



Fig. 20.1 - Panel cut and ready to fold

Cut the panel at the cut line. Cut and remove the top lock and nose at the fold line. (Fig. 20.1)

Use a wide hand bender to fold the end of the panel down  $90^\circ$ , forming the side lock to fit into the channel of the Rake leg. (Fig. 20.2)

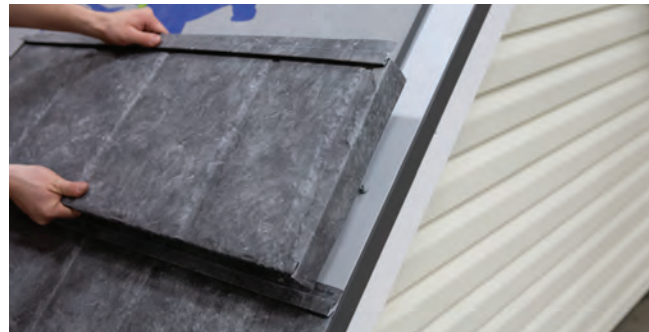


Fig. 20.2 - Panel ready to install

Lock the modified panel into position with the formed side lock properly fit into the channel of the Rake leg. Make sure not to fasten through the Rake itself but within 2" of the Rake edge. (Fig. 20.3)



Fig. 20.3 - Panel installed into Rake Trim

A 2" drain slot will need to be cut in the wavelock of the first panel over the Rake to allow the water pan to drain. (Fig. 20.4)



Fig. 20.4 - 2" drain slot

## SECTION 2 | SYSTEM INSTALLATION

### PANEL INSTALLATION



Fig. 21.1 - 1" to 1/2" tapered end profile

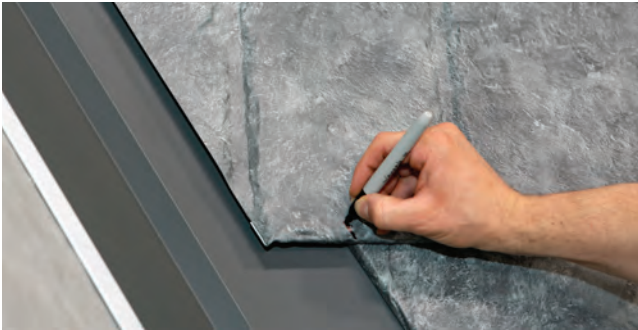


Fig. 21.2 - Panel positioned and ready to mark



Fig. 21.3 - Panel marked and ready to fold

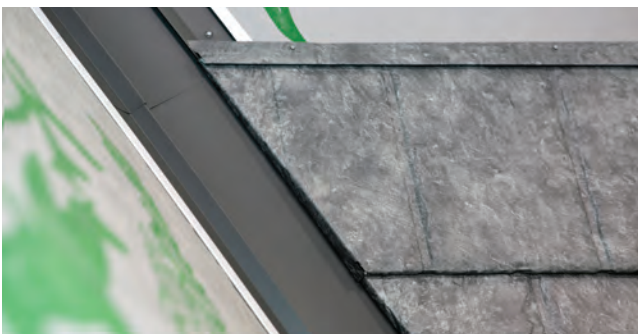


Fig. 21.4 - Panel installed into Valley

#### PANELS INTO/OUT OF VALLEY

**TIP** - Snap chalk lines every three or four courses when installing panels into and out of valleys, to ensure that courses remain straight and the top locks of the panels meet at the top of joined roof planes.

**OBJECTIVE:** Fold a side lock into the end of the panel where it crosses the Anchor Cleat, tapering from 1" at the nose to 1/2" at the top lock. Keep in mind that the first course of panels into the Valley will not have a taper but will be 1/2" along the entire edge from the nose to the top lock. (Fig. 21.1)

Position and lock the panel in place, mark a fold line at the top lock and the nose where it crosses the Anchor Cleat. (Fig. 21.2)

Mark a cut line that is 1 3/4" out from the fold line at the nose and 1 1/4" out from the top lock. Cut the top lock and the nose at both lines and bend open. Cut panel at cut line and remove tab at top lock.

On the back of the panel, draw a fold line at the first marks. Draw a second fold line that is 1" out from the first line at the nose, and 1/2" out at the top lock, this will form the tapered end profile of the panel. (Fig. 21.3)

Use a portable brake to fold the panel 90° at the two lines to complete the tapered side lock to lock onto the Anchor Cleat. (Fig. 21.4)

# SECTION 2 | SYSTEM INSTALLATION

## PANEL INSTALLATION

### PANELS INTO/OUT OF VALLEY - CONTINUED

**TIP** - Using a ProVia Valley Bender will improve precision of tapered panel end bending and greatly increase the speed of installation. (Fig. 22.1)



Fig. 22.1 - ProVia Valley Bender

Use the offset dimensions and pattern shown when starting panels out of valleys (right side of valley). Take care to maintain proper starter step pattern to ensure random appearance. (Fig. 22.2 and Fig 22.3)

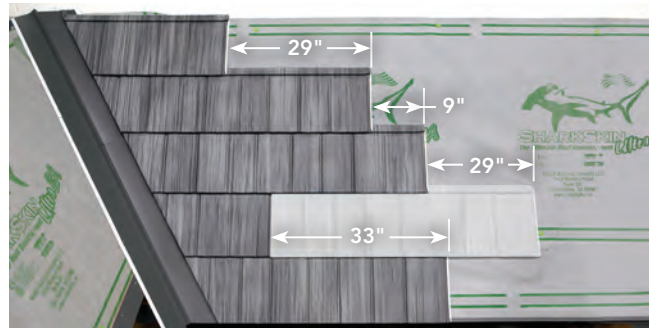


Fig. 22.2 - Shake valley starter pattern

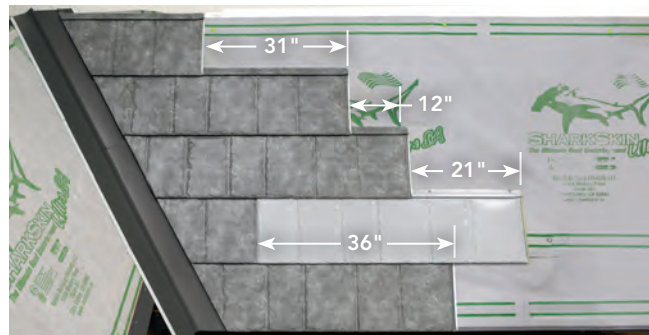


Fig. 22.3 - Slate valley starter pattern

A 2" drain slot will need to be cut in the wavelock of the first panel in a valley to allow the water pan of the valley to drain. (Fig. 22.4)



Fig. 22.4 - 2" drain slot in first panel



## SECTION 2 | SYSTEM INSTALLATION

### PANEL INSTALLATION



Fig. 23.1 - ProVia Valley Bender

#### USING THE VALLEY BENDER

**NOTE:** The first course of panels installed in the valley will not have tapered side locks. The side locks will have a ½" face along entire edge, from nose to top lock of panel.

The Valley Bender is designed to bend ProVia roofing panels with a consistent tapered side lock, allowing panel to lock onto the Anchor Cleat of a valley. (Fig. 23.1)



Fig. 23.2 - Rail removed

The Valley Bender is designed with dual operational sides to allow formation of both right and left tapered side locks. (Fig. 23.2)

**TIP -** Be sure to remove the rail from the inactive side during the bending process to avoid crushing the top lock of roofing panel.



Fig. 23.3 - Shims in place (shim storage on the side)

The Valley Bender is equipped with removable shims. The shims will give the capability for length adjustment of die to match length of the side lock desired. (Fig. 23.3)

**TIP -** An excess number of shims could crush the wavelock of the panel.



Fig. 23.4 - Safety pin

The Valley Bender includes steel safety pins to lock tool into a clamped position, allowing for ease of transportation. (Fig. 23.4)

## SECTION 2 | SYSTEM INSTALLATION

### PANEL INSTALLATION

**USING THE VALLEY BENDER - CONTINUED**  
Position and lock the panel in place. Mark a fold line on the top lock and on the nose of the panel, at the point where each cross the Anchor Cleat. (Fig. 24.1)

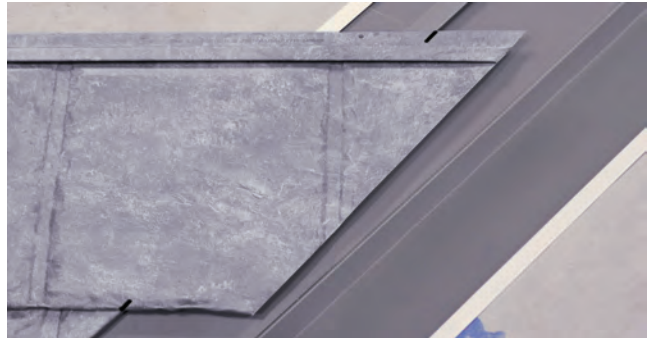


Fig. 24.1 - Marked fold lines

Use the Valley Taper Tool to mark a cut line on the panel,  $1\frac{1}{4}$ " from the fold line at the top lock and  $1\frac{3}{4}$ " from the fold line at the nose. (Fig. 24.2)



Fig. 24.2 - Mark cut line

Cut panel along the marked cut line. Cut and remove the top lock at the fold line. Trim the bottom corner of the tab perpendicular to the fold line. (Fig. 24.3)



Fig. 24.3 - Cut panel

Insert the panel into the Valley Bender facedown. Be sure the top lock of the panel nests into the notched portion of the base and rests against the notch tip, as shown. (Fig. 24.4)



Fig. 24.4 - Panel inserted

## SECTION 2 | SYSTEM INSTALLATION

### PANEL INSTALLATION

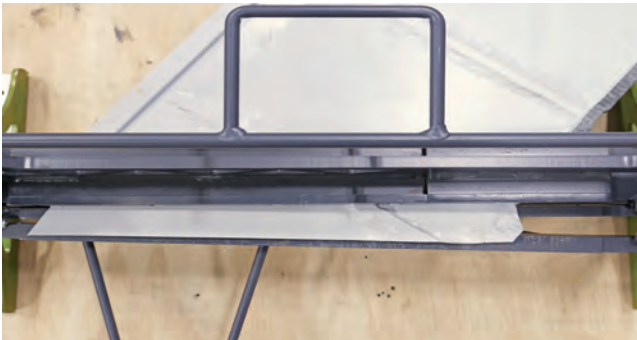


Fig. 25.1 - Clamp die

#### USING THE VALLEY BENDER - CONTINUED

After the panel is placed in the proper position, use the top handle to clamp the die down tight. (Fig. 25.1)



Fig. 25.2 - First side lock bend

Grasp the first handle on the rail, located in an outward facing position. Push handle up, creating the first bend of the tapered side lock. (Fig. 25.2)



Fig. 25.3 - Final side lock bend

Grasp the second handle on the rail, now located in the outward facing position. Push handle up, creating the final bend of the tapered side lock. (Fig. 25.3)



Fig. 25.4 - Finished tapered side lock

Unlock the panel from the Valley Bender. The panel is now ready to install in the valley. (Fig. 25.4)

# SECTION 2 | SYSTEM INSTALLATION

## PANEL INSTALLATION

### PITCH CHANGE TRANSITION

At a pitch change, a transition trim will need to be field-formed from Trim Coil.

There are two methods to fold the transition trim depending on the layout of the panels. If the top lock of the top course of panels falls within 3" to 6" of the pitch change point, use Method #1, otherwise cut-off the top course of panels at the pitch change point and use Method #2.

#### Method #1

Fold a  $\frac{3}{4}$ " open hem on the bottom of the transition trim to lock into the top lock of the top course of panels. Fold the trim at the correct distance and angle to fit the profile of the pitch change. (Fig. 26.1)

#### Method #2

Install an Anchor Cleat approximately 5" to 6" down from the pitch change point. Fold a  $\frac{3}{4}$ " open hem on the bottom of the transition trim to lock into the Anchor Cleat. Fold the trim at the correct distance and angle to fit the profile of the pitch change. (Fig. 26.2)

Both Methods 1 & 2: Fold the ends of the transition trim down  $1\frac{3}{4}$ " to form a side lock to fit into the channel of the Rake leg. (Fig. 26.1 & 26.2)

Open the portion of top lock on the panels that the transition trim overlaps. **Apply sealant between panel and transition trim before installing.** (Fig. 26.3)

Snap a chalk line on the transition trim between the top locks of the top course of panels on either side of the pitch change. Install an Anchor Cleat along this line, providing a lock for the next course of panels. **Apply sealant where Anchor Cleat meets top lock.** (Fig. 26.4)



Fig. 26.1 - Method #1

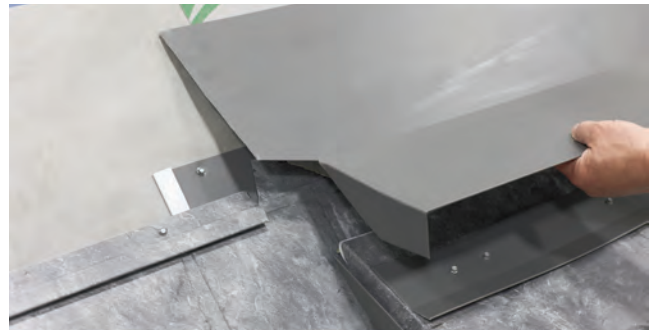


Fig. 26.2 - Method #2

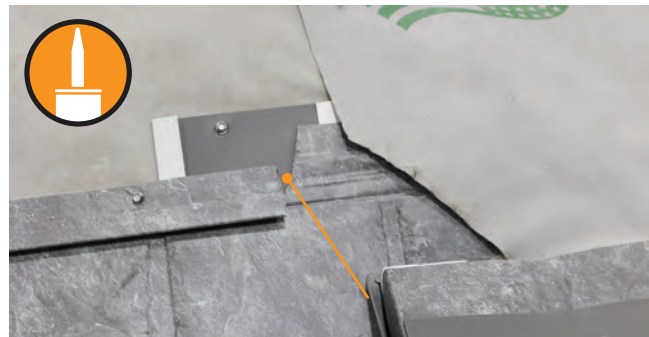


Fig. 26.3 - Top lock opened

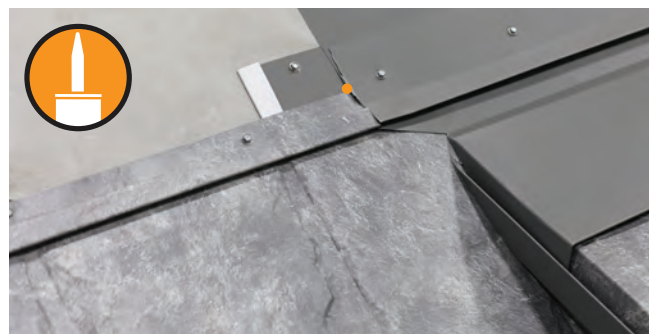


Fig. 26.4 - Transition trim installed

## SECTION 2 | SYSTEM INSTALLATION

### PANEL INSTALLATION



Fig. 27.1 - Eave Starter and Rake Trims installed



Fig. 27.2 - First course of panels and Anchor Cleat installed



Fig. 27.3 - Panels installed to Eave Starter



Fig. 27.4 - Installed short course

#### SHORT COURSE

A short course is necessary where the top locks on panels will not align, such as a roof with a bump out, and an adjustment needs to be made to the first course of panels on the lower section.

Install Eave Starter and Rake trim at the short course location. Make sure to overlap the two trims where they meet, as shown. (Fig. 27.1)

Install the first course of panels on the lower section. This is where you will want to create a short course as it will be less noticeable than in the middle of a roof plane.

Position an Anchor Cleat on the first course of panels so that the top locks of the following courses will line up with the upper Eave Starter. Apply a heavy bead of sealant under the Anchor Cleat. Securely fasten the Anchor Cleat in place using #10 x 1" hex head screws every 12". (Fig. 27.2)

Install the next courses of panels as standard until the upper Eave Starter is reached. (Fig. 27.3)

Cut a small notch in the panel wavelock where it makes the transition from Eave Starter to top lock, allowing the panel to install properly. Continue installation of panels as standard. (Fig. 27.4)

**TIP** - Always make up the difference on the first course of panels at the lower eave and avoid short courses in the middle of a roof plane.

## SECTION 2 | SYSTEM INSTALLATION

### PENETRATION POINTS

#### UNDERPANS AT CORNERS

Underpans provide a secondary source of protection and act as weep trims to protect vulnerable flashing points.

**TIP** - Careful attention to flashing details is important to successful long-term roof performance. Always consider water flow and apply sealant generously where needed.

Install courses of panels until there is less than 12" remaining between the penetration and the course of panels below.

Make a relief cut in the Underpan where the corner of the penetration will be and fold 1 1/2" tabs up at 90°. Install the Underpan ensuring a tight fit to the penetration. (Fig. 28.1 and Fig. 28.2)

Fold the corner shield and trim to the pitch of the roof. **Apply sealant to the corner of the Underpan** and install the corner shield behind the side leg and over the front leg of the Underpan.

Continue with panel installation after Underpan is properly installed. (Fig. 28.4)

A 2" drain slot will need to be cut in the wavelock of the panel over the Underpan to allow the water to drain properly.



Fig. 28.1 - Underpan marked



Fig. 28.2 - Underpan installed



Fig. 28.3 - Underpan and corner shield installed

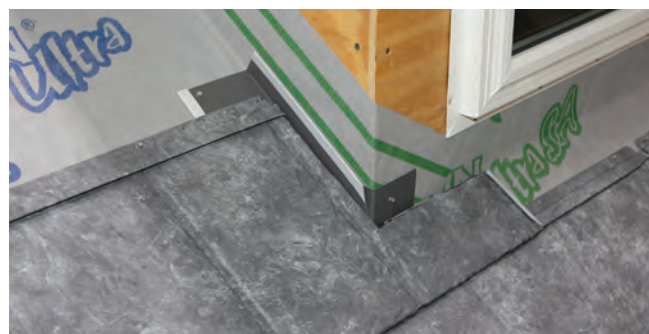


Fig. 28.4 - Panel installed over the Underpan

## SECTION 2 | SYSTEM INSTALLATION

### PENETRATION POINTS



Fig. 29.1 - 6" Underpan installed at the top of a chimney



#### UNDERPANS IN OTHER AREAS

Anytime a top lock is cut and bent open, a 6" Underpan needs to be installed under that cut. Shown are a few examples of this occurring.

At the top of a chimney or skylight, the top lock of a panel needs to be cut open to allow the backflash to install properly. A 6" Underpan should be installed under these locations as shown. (Fig. 29.1 and 29.2)



Fig. 29.2 - 6" Underpan installed at the top of a skylight



At a dormer pitch change, the top lock of a panel needs to be cut open to allow the transition trim to install properly. A 6" Underpan should be installed under this location as shown. (Fig. 29.3)

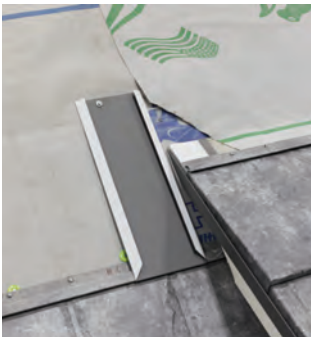
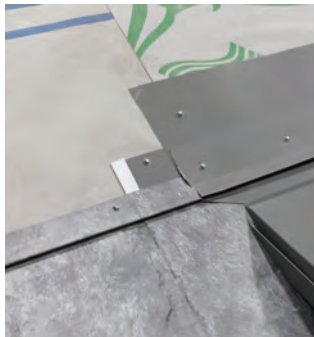


Fig. 29.3 - 6" Underpan installed at a dormer pitch change



At the bottom of some valley scenarios, such as an eave to rake valley, the top lock of a panel needs to be cut open to allow the valley flashing to install properly. A 6" Underpan should be installed under this location as shown. (Fig. 29.4)



Fig. 29.4 - 6" Underpan installed at an eave to rake valley



This serves as a short guide covering a few of the many possible scenarios a 6" Underpan can be used in. Please pay special attention when installing custom details, as the use of an Underpan could very well benefit the water tightness of the roof.

## SECTION 2 | SYSTEM INSTALLATION

### PENETRATION POINTS

#### VENT PIPE FLASHING

Install courses of panels until there is less than 12" between the vent pipe and the course of panels below it.

Install a 20" Underpan, fitting tightly around the vent pipe while locking onto the top lock of the last course of panels below the vent pipe. (Fig. 30.1)

A 2" drain slot will need to be cut in the wavelock of the panel over the Underpan to allow the Underpan to drain properly.

Fit the next course of panels around the vent pipe and then *apply sealant around the pipe* before installing the pipe flashing. (Fig. 30.1 & Fig. 30.2)

To install the pipe flashing, position it over the vent pipe and mark the panel on the outside edges of the flashing. Cut and open the portion of the top lock that is overlapped by the pipe flashing. (Fig. 30.2)

*Apply sealant on the panel where the pipe flashing overlaps the panels* before installing the flashing. (Fig. 30.2)

Cut and fit the next course of panels around the pipe flashing and *apply a generous bead of sealant between the panel and the pipe flashing*. (Fig. 30.3 & 30.4)

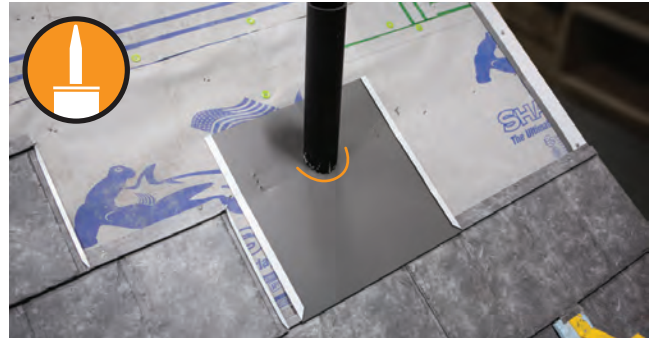


Fig. 30.1 - Underpan installed around vent pipe



Fig. 30.2 - Panels installed around vent pipe



Fig. 30.3 - Pipe flashing installed over panels



Fig. 30.4 - Panels installed around pipe flashing



## SECTION 2 | SYSTEM INSTALLATION

### PENETRATION POINTS



Fig. 31.1 - Chimney cut for Sidewall and Apron



Fig. 31.2 - Underpan installed at chimney

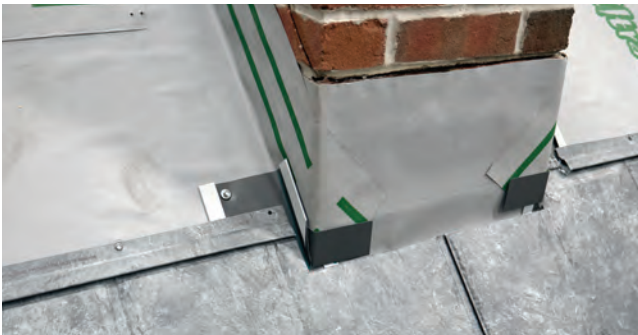


Fig. 31.3 - Panels installed over Underpan



Fig. 31.4 - Apron flashing installed

#### CHIMNEY FLASHING

**NOTE:** These illustrations are for a masonry chimney, different types of chimneys may require slight variations in method.

**TIP -** Careful attention to flashing details is important to successful long-term roof performance, always consider water flow and apply sealant generously where needed.

Cut a 1" deep kerf into the chimney approximately 6 $\frac{1}{2}$ " above the roof deck. If the kerf needs to be higher than the height of the Sidewall, counterflashing will need to be field formed to overlap the Sidewall. (Fig. 31.1)

A 2" drain slot will need to be cut in the wavelock of the panel over the Underpan to allow the Underpan to drain properly.

Install courses of panels until there is less than 12" remaining between the chimney and the course of panels below it. Install a 6" Underpan (See page 28) at the bottom corner of the chimney. (Fig. 31.2)

Cut and fit the next course of panels installing over the Underpan flashing. (Fig. 31.3)

Field form an Apron flashing that fits into the kerf on the front of chimney and extends down to the roof deck and a minimum of 4" onto the panels, ending with a downturned hem. Position Apron in place and mark chimney corner location. Cut the Apron flashing 2 $\frac{1}{2}$ " wider than the chimney sides. Make a relief cut on the Apron and fold a 1" tab forward at the corner of the chimney for the Side-wall to lock onto. (Fig. 31.4)

## SECTION 2 | SYSTEM INSTALLATION

### PENETRATION POINTS

#### CHIMNEY FLASHING - CONTINUED

*Fill kerf with sealant* before installing any flashings and *apply a second bead of sealant after the flashings are securely installed.*

Sidewall will be installed along the sides of the chimney. The Sidewall must extend from the bottom of the Apron flashing to at least 3" past the top of the chimney. Open the portion of the top lock on the panels that the Sidewall overlaps. (Fig. 32.1)

Bend a minimum  $\frac{3}{4}$ " return at the top of the Sidewall leg to fit into the kerf.

Position the Sidewall against the side of the chimney and mark fold lines at the top and bottom corners. Cut the Sidewall, allowing for 1" tabs to wrap around the Apron tab and the top corner of the chimney. Remove the water stop on the portion of Sidewall that overlaps the panel. Using a hand bender, fold a  $\frac{5}{8}$ " angled downturn on the cut edges of the Sidewall water pan. (Fig. 32.2)

**TIP** - For a tight fit create an open hem at the bottom end of Sidewall water pan to lock onto Apron downturn. (Fig. 35.4 on Pg. 35)

Install Sidewall using *a generous bead of sealant between* the Sidewall water pan and the panel. (Fig. 32.1, Fig. 32.3 & Fig. 32.4)

Verify that all joints are properly sealed to assure water tightness.

A 2" drain slot will need to be cut in the wavelock of the first panel over the Sidewall to allow the water pan to drain.



Fig. 32.1 - Top lock cut and bent open



Fig. 32.2 - Sidewall ready to install



Fig. 32.3 - Sidewall installed at chimney

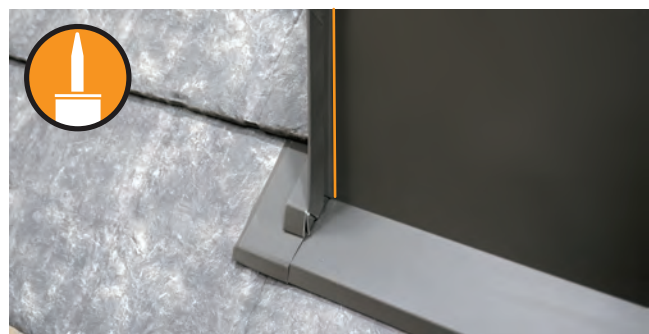


Fig. 32.4 - Bottom of sidewall

## SECTION 2 | SYSTEM INSTALLATION

### PENETRATION POINTS



Fig. 33.1 - Panels installed beyond top of chimney

#### CHIMNEY FLASHING - CONTINUED

Install and fit the next courses of panels and 6" underpan until the top lock is past the back of the chimney. (Fig. 33.1)

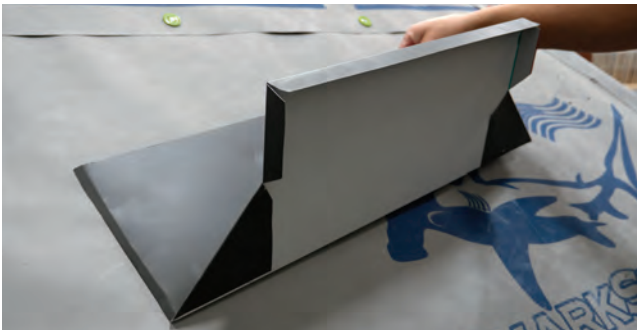


Fig. 33.2 - Backflash ready to be installed

Field form a backflash that extends from at least 3" beyond the top lock of the last course of panels, down to the chimney, up the back of the chimney, and into the kerf. Cut the backflash 4" wider than the corner of the chimney and form a diverter to guide water around the chimney. (Fig. 33.2)



Fig. 33.3 - Top lock opened

Open the portion of top lock on the panels that the backflash overlaps. Install the backflash, **using a generous amount of sealant between the flashing and the panels** to ensure water tightness. (Fig. 33.3)



Fig. 33.4 - Backflash and Anchor Cleat installed

Using #10 x 1" hex head screws, install Anchor Cleat on the backflash, aligning with the top lock on the last course of panels. This will be the lock for the next course of panels installed above the chimney. **Apply sealant where the Anchor Cleat meets the top lock.** (Fig. 33.4)

## SECTION 2 | SYSTEM INSTALLATION

### PENETRATION POINTS

#### SKYLIGHT FLASHING

NOTE: These illustrations are for a deck mount skylight, this method also applies to dormers but may require slight variations.

**TIP** - Careful attention to flashing details is important to successful long-term roof performance. Always consider water flow and apply sealant generously where needed.

Install courses of panels until there is less than 12" remaining between the skylight and the course of panels below it. Install 6" Underpans (see page 28) at the bottom corners of the skylight. (Fig. 34.1)

A 2" drain slot will need to be cut in the wavelock of the panel over the Underpan to allow the Underpan to drain properly.

Cut and fit the next course of panels installing over the Underpan. (Fig. 34.2)

Position Apron in place and mark skylight corner locations. Cut the Apron flashing 2 1/2" wider than the skylight sides. Make a relief cut and fold around the leg of the Apron on each end to fit the skylight. (Fig. 34.3)

Install the Apron **using sealant at the skylight corners** to ensure water tightness. (Fig. 34.4)

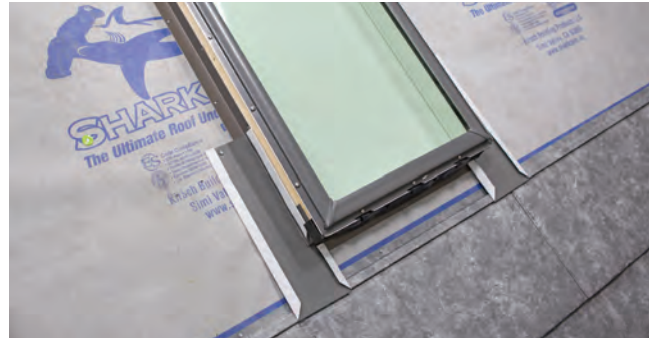


Fig. 34.1 - Underpan installed at skylight

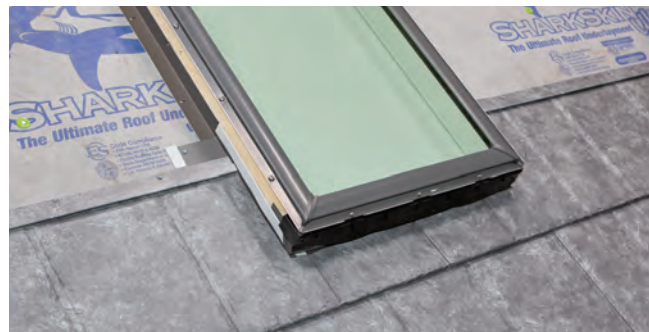


Fig. 34.2 - Panels installed around skylight

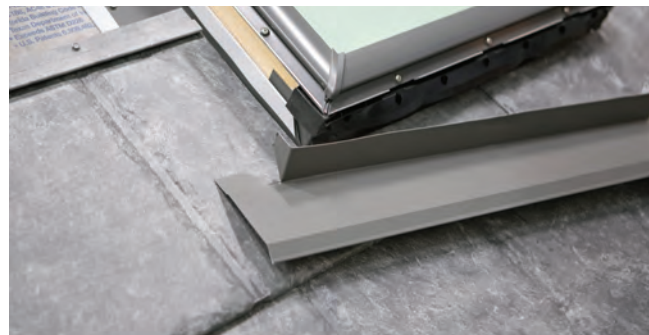


Fig. 34.3 - Apron flashing ready to install

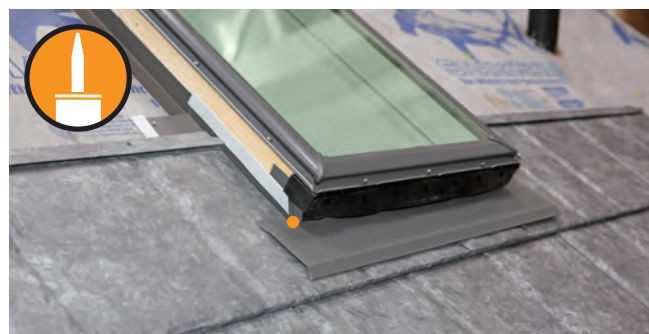


Fig. 34.4 - Apron flashing installed

## SECTION 2 | SYSTEM INSTALLATION

### PENETRATION POINTS

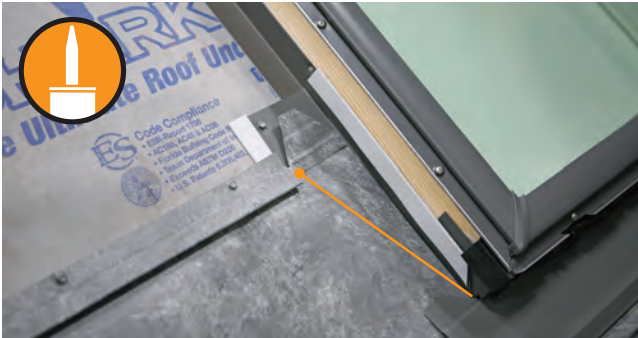


Fig. 35.1 - Top lock opened

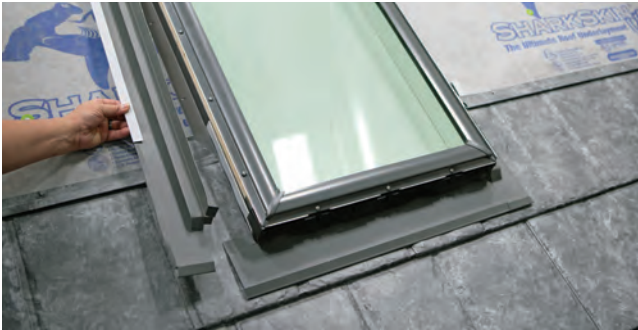


Fig. 35.2 - Sidewall ready to install

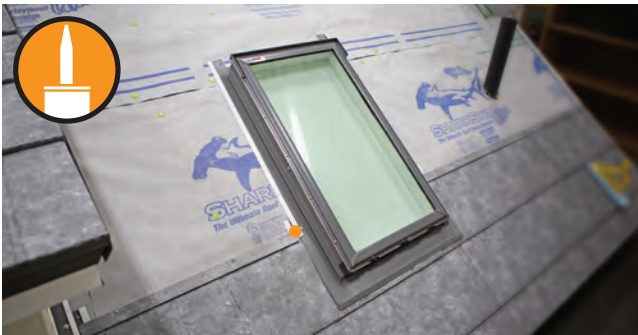


Fig. 35.3 - Sidewall installed at skylight



Fig. 35.4 - Open hem at bottom of sidewall

#### SKYLIGHT FLASHING - CONTINUED

Sidewall will be installed along the sides of the skylight. Sidewall must extend from the bottom of the Apron flashing to at least 3" past the top of the skylight. Open the portion of the top lock on the panels that the Sidewall overlaps. (Fig. 35.1)

Position the Sidewall against the side of the skylight and mark the top and bottom fold lines. Cut the Sidewall, allowing for 1" tabs to wrap around the corner of the skylight. Remove the water stop on the portion of Sidewall that overlaps the panel and fold a  $\frac{5}{8}$ " angled downturn on the cut edges of the Sidewall water pan using a hand bender. (Fig. 35.2 & Fig. 35.3)

**TIP** - For a tight fit create an open hem at the bottom end of Sidewall water pan to lock onto Apron downturn. (Fig. 35.4)

Using #10 x 1" hex head self-sealing washer screws, install Sidewall **using a generous bead of sealant between the Sidewall water pan and the panel.** (Fig. 35.1 & 35.3)

Verify that all joints are properly sealed to assure water tightness.

A 2" drain slot will need to be cut in the wavelock of the first panel over the Sidewall to allow the water pan to drain.

## SECTION 2 | SYSTEM INSTALLATION

### PENETRATION POINTS

#### SKYLIGHT FLASHING - CONTINUED

Install and fit the next courses of panels and a 6" underpan until the top lock is beyond the back of the skylight. (Fig. 36.1)

Field form a backflash trim to fit the back of the skylight that extends to at least 3" higher than the top lock of the last course of panels. Cut the backflash at least 2" wider than the corners of the skylight and form diverters to guide water around the skylight. (Fig. 36.2)

Open the portion of top lock on the panels that the backflash trim overlaps. Install the flashing, **using a generous amount of sealant between the backflash and the panels** to ensure water tightness. (Fig. 36.2 & Fig. 36.3)

Install Anchor Cleat on the backflash, aligning with the top lock of the last course of panels. This will be the lock for the next course of panels installed above the skylight. **Apply sealant where the Anchor Cleat meets the top lock.** (Fig. 36.4)

Field form a counter flash at the top of the skylight. (Fig. 36.4)



Fig. 36.1 - Panels installed and top lock opened

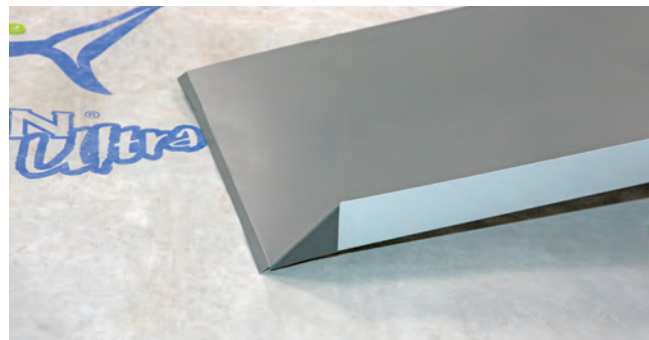


Fig. 36.2 - Backflash ready to be installed

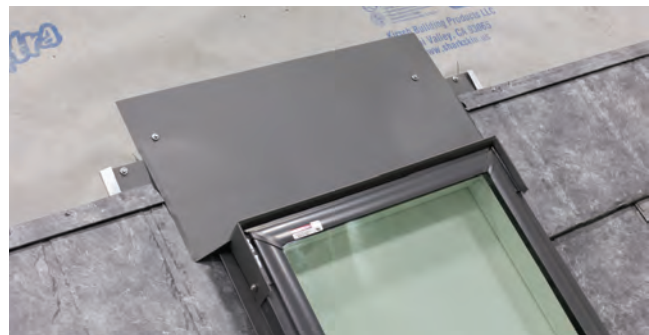


Fig. 36.3 - Backflash installed

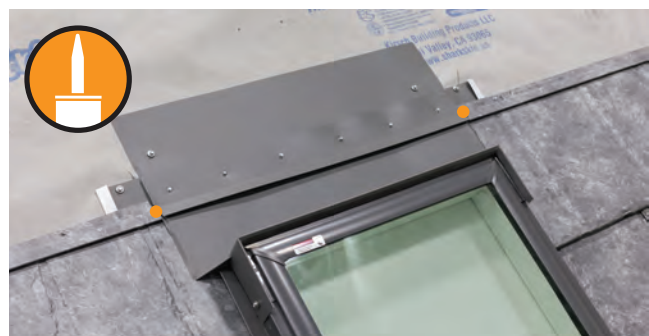


Fig. 36.4 - Backflash and Anchor Cleat installed

## SECTION 2 | SYSTEM INSTALLATION

### HIP DETAILS

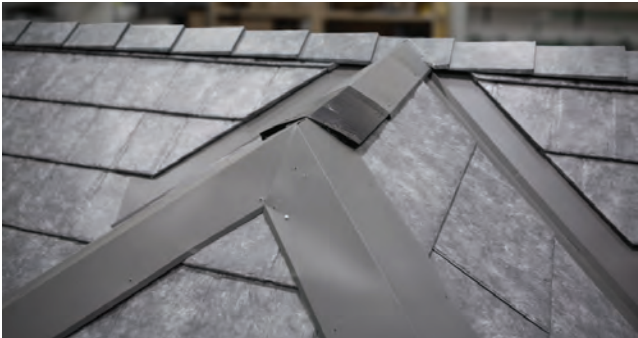


Fig. 37.1 - Ridge/Hip Base installed

**TIP** - Always cut panels and install as close as possible to the hip line.

Using a portable brake, bend the Ridge/Hip Base to the correct roof pitch. Install Ridge/Hip Base centered on the hip line, overlapping sections approximately 6". Secure using #10 x 2" hex head ridge/hip screws. (Fig. 37.1)

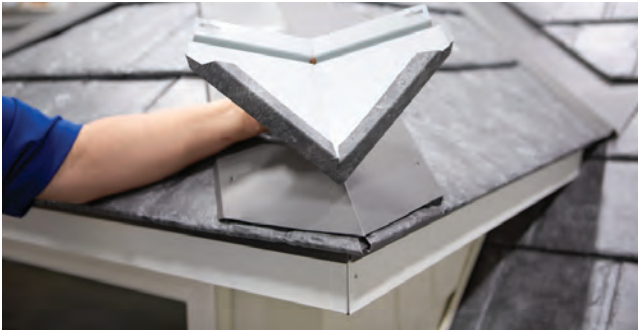


Fig. 37.2 - First Ridge/Hip Cap modified and ready to install

The first Ridge/Hip Cap will need to be modified to form a bottom lock to securely fasten onto the Eave Starter.

Place a Ridge/Hip Cap on the Ridge/Hip Base at the eave and mark the underside along the nose of the Panels. Mark lines out 1" and 2" from the first line. Cut the Ridge/Hip Cap along the third line and fold the first two lines around at 90°. (Fig. 37.2)



Fig. 37.3 - First Ridge/Hip Cap installed

Securely lock modified Ridge/Hip Cap onto the Eave Starter using #10 x 2" hex head ridge/hip screws. (Fig. 37.3)



Fig. 37.4 - Ridge/Hip Cap installed

Install the Ridge/Hip Caps over the Ridge/Hip Base with two (2) #10 x 2" hex head ridge/hip screws per Ridge/Hip Cap. (Fig. 37.4)

# SECTION 2 | SYSTEM INSTALLATION

## RIDGE DETAILS

### VENTED RIDGE

Cut an approximately 2" wide venting slot in the roof sheathing at the ridge keeping the slot back at least 6" from the gable end walls. Cut the last course of panels and install to the ridge opening.

Bend the Ridge Base in a portable brake to the correct roof pitch. Install the Quarrix Ridge Vent and the Ridge Base centered on the ridge using #10 x 2" hex head ridge/hip screws. Be sure to keep the Ridge Base centered on the ridgeline. (Fig. 38.1)

When starting the Ridge/Hip Cap installation, the nose of the first Ridge/Hip Cap will need to be modified. Remove the nose of the Ridge/Hip Cap and fold 3" tabs down 90°, forming a lock to fit into the Rake leg. Fasten the lock to the Rake leg using two (2) pop rivets. (Fig. 38.2, Fig. 38.3 & 38.4)

### NON-VENTED RIDGE

For a non-vented ridge, bend Ridge/Hip Base with foam to the correct roof pitch and install, centered on the ridgeline. Install Ridge/Hip Caps using the same methods as the vented ridge.

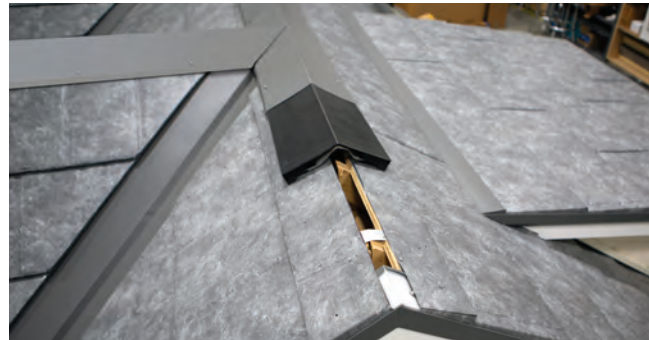


Fig. 38.1 - Ridge Base installed



Fig. 38.2 - First Ridge Cap ready to install



Fig. 38.3 - First Ridge Cap installed



Fig. 38.4 - Ridge Cap installed



## SECTION 2 | SYSTEM INSTALLATION

### SNOW DIVERTERS

Snow Diverters are used to minimize the amount of snow to slide off the roof, consequently the use of these accessories will contribute to the buildup of snow and ice on the roof.

Be aware that snow and ice can build up and release unexpectedly so ensure that the release area is free from pedestrian traffic and other property during the winter months to avoid injury to people and damage to property. Areas such as walkways, landscaping, entrance doors, AC units, etc. may be protected using snow diverters.

ProGrip™ Snow Diverters are installed in conjunction with the panels. Standard Snow Diverters are installed after the installation of the panels is completed.

To install the ProGrip Snow Diverter, **apply a bead of sealant to the back of the diverter**, then lock the diverter tab over the top lock of the panel. Secure in place using two (2) #10 x 1" hex head panel screws, then continue installation of the panels. (Fig. 39.1 & 39.2)

To install a Standard Snow Diverter, **apply a bead of sealant to the back of the diverter**, then position in place directly below the wavelock of the panels. Fasten the Standard Snow Diverter with two (2) #10 x 1" Pancake screws through the diverter tab and face of the panel. **Apply additional sealant over the heads of the screws**, then slide the diverter sleeve up over the screw heads and under the panel wavelock. (Fig. 39.3)

The snow diverters should be installed and spaced according to manufacturer's recommendations.



Fig. 39.1 - ProGrip diverter installed



Fig. 39.2 - Panels installed over ProGrip diverter



Fig. 39.3 - Standard diverter installed



Fig. 39.4 - Standard diverter sleeve slid over screws

## SECTION 3 | POST-INSTALLATION MAINTENANCE AND CLEANING

The factory-applied paint finish on your new metal roof has a surface coating specially designed to resist the accumulation of common environmental residues, such as airborne dirt and industrial pollutants. In most areas, a typical rainfall will adequately wash away these particles and maintain a clean appearance.

As general guidance to this low-maintenance benefit, ProVia® promotes paying simple attention to your roof's appearance to further protect its beauty and prolong coating life.

It is good practice to periodically scan your roof for fallen debris from nearby trees. Remove any leaves, twigs, pine needles or other elements that may cause moisture retention, improper drainage or blocked sunlight, as this can lead to formations of algae, moss or mildew. Fluids from these organisms can encourage rust and an unsightly appearance on your roof panels over time.

### Safety Precautions

A metal roof is slippery and attempting roof maintenance can be extremely dangerous. To avoid risk of injury resulting from falls from ladders or roofs, ProVia recommends hiring a skilled professional when accessing or traversing the roof is required.

### Routine Cleaning

In most cases, clean water from a garden hose will remove most dirt and accumulated deposits. When heavier stubborn dirt or contaminants such as tree sap are present, follow the additional cleaning methods suggested below.

### Preparations

1. Protect shrubs or trees from direct contact with cleaning agents.
2. Use proper personal protection and follow precautionary instructions for product usage located on container labels.
3. Prepare needed solution according to soil levels listed below.
4. Test a small inconspicuous area with the cleaning solution before proceeding to entire roof.
5. Always use a cloth or soft brush for application. Never use a wire brush, scouring pad or harsh solvents.

### Hot or Cold Detergent Solutions

A 5% solution in water of commonly used commercial (non-industrial) detergents will not have any deleterious effect on a paint surface. These solutions should be followed by an adequate rinse of water. Use a cloth or a soft brush for application.

To prevent streaking, work from top to bottom of panels with well-soaked soft cloth, sponge or brush. Flush thoroughly with fresh water during and after cleaning to ensure no residue is left on the surface.

### Spot Cleaning

#### Mildew

In areas subjected to high humidity levels, dirt and spore deposits can permit mildew growth to occur. The following solution is recommended to remove mildew when necessary.

- ½ cup dry powdered laundry detergent (ex. Tide™)
- 1 qt. sodium hypochlorite 5% solution (ex. Clorox™)
- 3 qts water

Dip cloth or soft brush in solution, scrub areas with mold or mildew, repeat this process until area becomes free from contaminants. Rinse area thoroughly with water to remove all traces of solution.

### Warnings

Non-pressure cleaning methods are always recommended. When using a garden hose, take extra care to prevent water being forced under panels or vents and an experienced roof cleaner is suggested.

### Warranty

Misuse of the cleaning agents above will result in a voided surface warranty.

# SECTION 4 | STANDARDS AND CERTIFICATIONS

## ACCREDITATION AND TESTING

ProVia's metal roofing products are voluntarily third-party tested and certified, and meet or exceed stringent industry standards.

### EVALUATION

#### Shake and Slate Panels

TEST TYPE	STANDARD		RATING
Wind Uplift	TAS 125	7 Fasteners - 180mph	Class 90
	TAS 125-03	5 Fasteners - 160mph	Class 60
	UL 580	4 Fasteners - 120mph	Class 30
Impact Resistance	UL 2218		Class 4
Corrosion Resistance	ASTM B117		Pass
Weather Resistance	ASTM G-154		Pass
Wind-Driven Rain	TAS 100-95		Pass
Foot Traffic Resistance	ANSI-FM4470 (2016)		Pass
Tensile Strength	ASTM E8/E8M-16a		Pass
Florida-HVHZ (Shake)	FL# 37381		Pass
Florida-HVHZ (Slate)	FL# 37870		Pass



Each of ProVia's metal roofing panel colors have been rated for solar reflectance, and these values are listed by the Cool Roof Rating Council (CRRC) at coolroofs.org.

The CRRC was created in 1998 to develop accurate and credible methods for evaluating and labeling the solar reflectance and thermal emittance (radiative properties) for roofing products, to support research, and serve as an educational resource for information on roofing.



At ProVia, we manufacture energy efficient products and exercise environmental stewardship by recycling, reducing pollution emissions and much more. In fact, our company has received repeated awards from the Environmental Protection Agency such as Partner of the Year - Sustained Excellence for outstanding efforts in energy savings.



ProVia is a proud member of the Metal Roofing Alliance (MRA), which is the leading voice for companies and professionals involved in the residential metal roofing industry. An affiliate organization of the Metal Construction Association, the MRA is dedicated to helping homeowners make educated roofing decisions and connecting them with expert metal roofing professionals. As such, we support advocacy in building code and standards arenas, quality materials, installation and design using metal roofing.

### PEACE-OF-MIND

## LIFETIME LIMITED WARRANTY

ProVia's metal roofing products are backed by an **industry-leading Lifetime Limited Warranty**. Visit [provia.com/warranty](http://provia.com/warranty) for more details.

\*For additional information and helpful videos, visit our Homepage for Installers by scanning the QR Code shown on the right.





“To serve, by caring for details in ways others won’t.” It’s not just our mission, but a way of letting our light shine every day at ProVia®. We continually strive to put these words into action by providing unmatched quality and service. The P-icon symbolizes each employee’s commitment to devoting the utmost care, pride and quality into each building product we manufacture...**it’s The Professional Way.**



DOORS | WINDOWS  
SIDING | STONE | ROOFING  
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