BEST BUY METALS
Roofing That Lasts

5V-Crimp, 2.5” Corrugated, 1.25” Corrugated
Install Guide

800-728-4010
bestbuymetals.com

IMPORTANT NOTICE

This manual contains suggestions and guidelines on how to install panels and trim details. The contents of this manual include the guidelines that were in effect at the time this publication was originally printed. In an effort to keep pace with the ever-changing code environment, we retain the right to change specifications and / or designs at any time without incurring any obligations. To insure you have the latest information available, please inquire or visit our web site. Application and design details are for illustrative purposes only and may not be appropriate for all environmental conditions and/or building designs. Projects should be engineered and installed to conform to applicable building codes, regulations, and accepted industry practices.

BEST BUY METALS
Roofing That Lasts

TABLE OF CONTENTS

Introduction, Design, & Testing 4

Panel Installation 5-8

Accessories 9

Trim Dimensions 10

Trim Assemblies

- Fascia 11
- Mini Eave 12
- Eave Trim 13
- Rake 14
- Preformed Valley 15
- Transition 16
- Gambrel 17
- Hip 18
- Ridge 19
- Vented Ridge 20
- High Side Peak 21
- Side Wall 22
- End Wall 23

Valley Lapping 24

Valley Cutting 25

Pipe Flashing 26

Curb Detail 27-29

Panel Endlap Detail 30

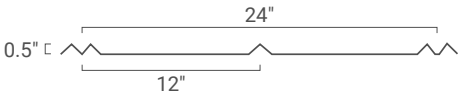
BEST BUY METALS
Roofing That Lasts

Introduction

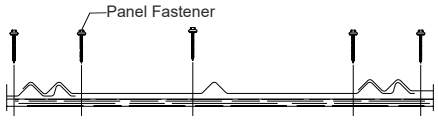
5V-Crimp, 2.5" Corrugated, and 1.25" Corrugated are through fastened roof and wall systems designed for ease of installation, strength, and longevity. All are available in a range of paint colors in both 26 and 29 gauge steel. They are also available in unpainted Galvalume® and galvanized. Our paint system carries a 40 year warranty and Galvalume® a 25 year warranty.

5V-Crimp

PROFILE

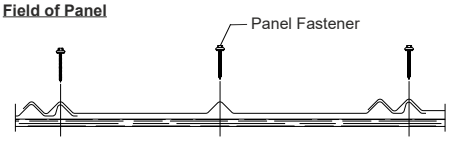


FASTENING PATTERN

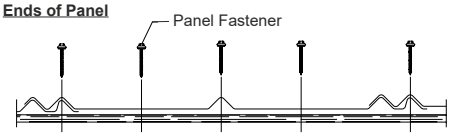


ALTERNATE FASTENING PATTERN

Field of Panel



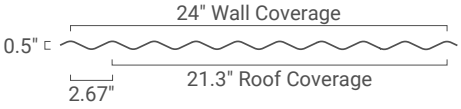
Ends of Panel



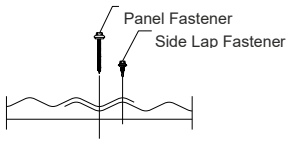
**Pjm Dboojoh (xbwjoftt po gmbu qbo) jt b obuvsbm pddvssfodf jo gmbu qbo n fubm qbofmt boe jt opu b dbvtf gps qbofm sfkfdujpo/

2.5" Corrugated

PROFILE

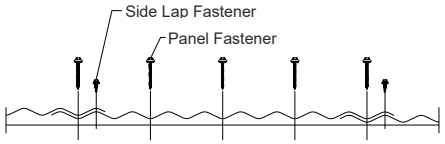


ROOF - ATTACHMENT DETAILS

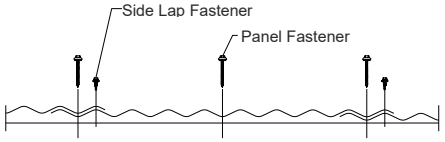


ROOF - FASTENING PATTERN

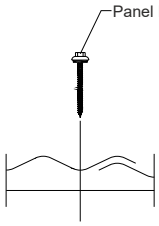
Ends of Panel



Field of Panel

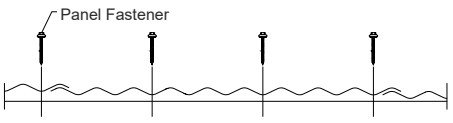


WALL - ATTACHMENT DETAILS



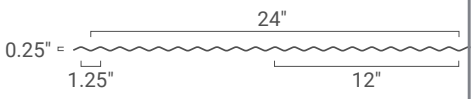
WALL - FASTENING PATTERN

Ends and Field of Panel

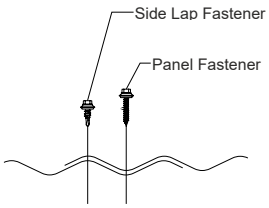


1.25" Corrugated

PROFILE

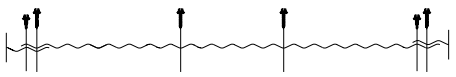


ATTACHMENT DETAIL



FASTENING PATTERN

Typical Screw Fastening Pattern



Panel Installation Guide

Storage

If metal is not to be installed immediately, store inside in a well ventilated, dry location. Condensation or other moisture can form between the sheets during storage causing water stains or white rust which detracts from the appearance of the product and may affect the product's useful life. Trapped moisture between sheets of painted metal can cause white rust to form underneath the paint. This can cause the paint to flake off the panel immediately or several years later. To prevent white rust and staining, break the shipping bands on the material. Store the material on end or on an incline of at least 8" with a supporting board underneath to prevent sagging. Fan the sheets slightly at the bottom to allow for air circulation. Keep the sheets off of the ground with an insulator such as wood. Any outdoor storage is at the customer's own risk. If outdoor storage cannot be avoided, protect the metal using a canvas cover or waterproof paper. Never cover the metal with plastic as this will cause condensation to form.

General Installation Information

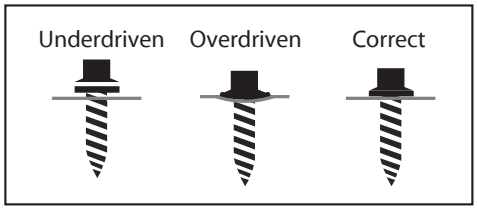
Insure that the structure is square and true before beginning panel installation. If the structure is not square, the panels will not properly seal at the side laps. Green or damp lumber is not recommended. Moisture released from the damp lumber may damage the metal panels. Remove any loose metal shavings left on roof surface immediately to prevent corrosion. Keep roof free of debris that could trap moisture on the metal,causing corrosion. The minimum pitch for roofing applications is 3:12.

Safety Precautions

Always wear heavy gloves when working with steel panels to avoid cuts from sharp edges. When power cutting or drilling steel panels, always wear safety glasses to prevent eye injury from flying metal fragments. If you must walk on a metal roof, take great care. Metal panels can become slippery, so always wear shoes with non-slip soles. Avoid working on metal roofs during wet conditions when the panels can become extremely slippery. Walking or standing on a metal roof which does not have a plywood or other deck beneath it is not recommended. However, if you must do so, always walk on the purlins, never between.

Fastening

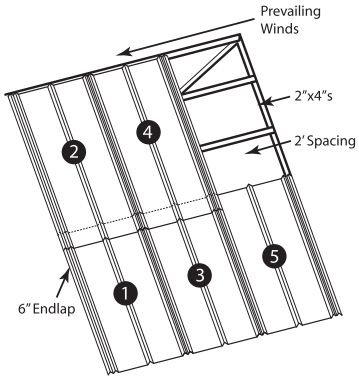
If you wish to pre-drill fastener holes, use a cover sheet to prevent hot metal shavings from sticking to panels. It is recommended that you cut panels upside down using a nibbler. For best results, use #14 x 7/8" Lap Screws at panel overlaps. For installation into a steel frame, use #12 x 1" (minimum) Self-Drilling Screws. For installation into a wood frame, use #10 x 1" (minimum) Wood Screws.



BEST BUY METALS
Roofing That Lasts

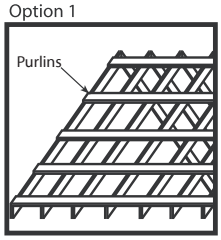
Pattern

Sheet Installation Pattern



Installation Options

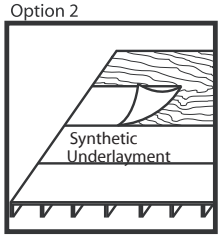
Option 1



Install Metal Directly to Wood Frame
- Use Maximum 2' Purlin Spacing
- Install Metal

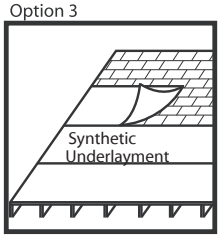
*DO NOT USE THIS OPTION FOR HEATED SPACES
*OIL CANNING/RIPPLING MORE COMMON OVER OPEN FRAME

Option 2



Install Metal on Solid Deck
- Lay Plywood Deck
- Apply Synthetic Underlayment or other Moisture Barrier Protection
- Install Metal

Option 3



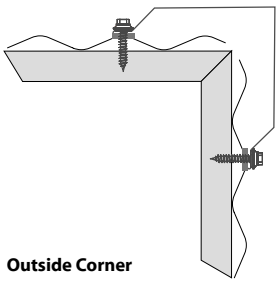
Install Metal Over Existing Shingles
- Apply Synthetic Underlayment or other Moisture Barrier Protection
- Install Metal

Allow an overhang of 2" at the eave to provide for a drip edge. Use closure at eave to prevent insect or bird infestation at openings. To protect against uplifting winds and to provide a finished appearance, apply rake trim or other standard gable trim. Apply fasteners every 6"-10". Seal off ridge and panel using closure strip. Use of tube or tape sealant is recommended at side laps, especially for more shallow roofs. Apply the tube or tape sealant as shown in Figure 2 (front) at all lap ribs.

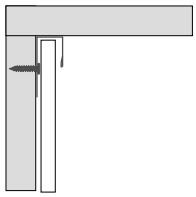
Roofing & Siding

For best results, start siding at door, window, or other opening in the wall. Use corner trim or other standard trim for strong, neat edges. Slopes of less than 3" on 12" are not recommended. For slopes under 4" on 12", field applied seam sealant is recommended. For slopes of 3" on 12" or greater, end lap panels 6". Do not put fasteners in the lap if panels are over 35' long. Side laps should face away from the prevailing direction of driving rain. Lay the first sheet along the eave at the down-wind side of the roof. Install sheets in the sequence shown above, always end lapping the upper panel on the top of the lower panel.

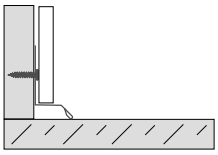
Siding Trim Details



Outside Corner

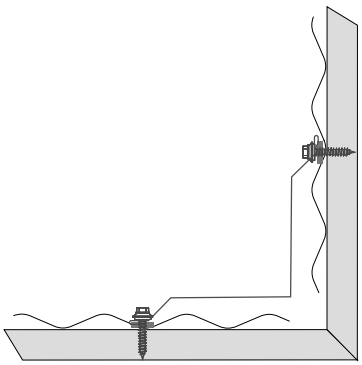


Top of Wall

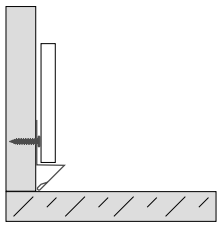


Bottom of Wall - Drip Cap

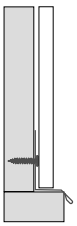
Side of Window or Door



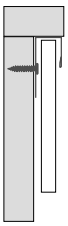
Inside Corner



Bottom of Wall - Rat Guard



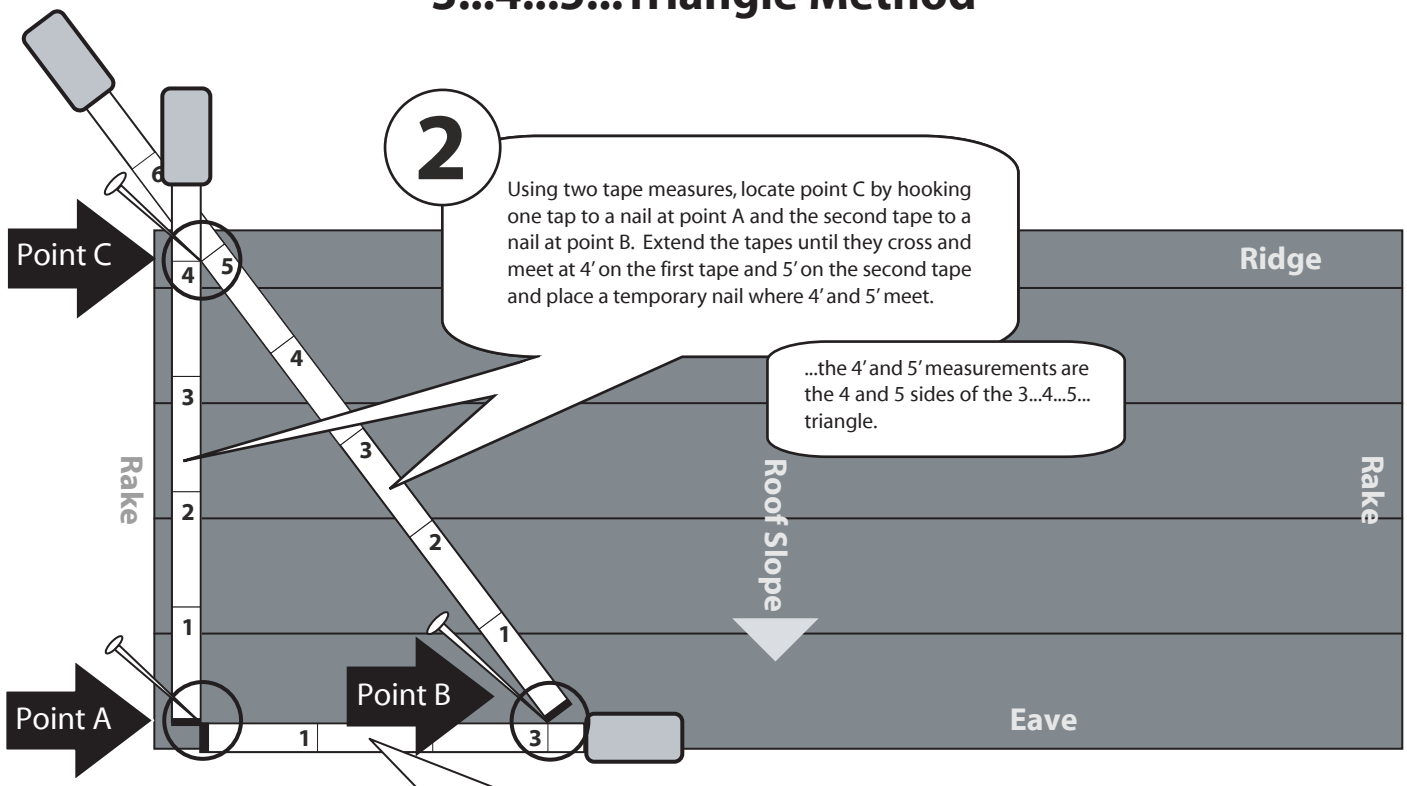
Top of Window or Door



Bottom of Window

BEST BUY METALS
Roofing That Lasts

3...4...5...Triangle Method



2

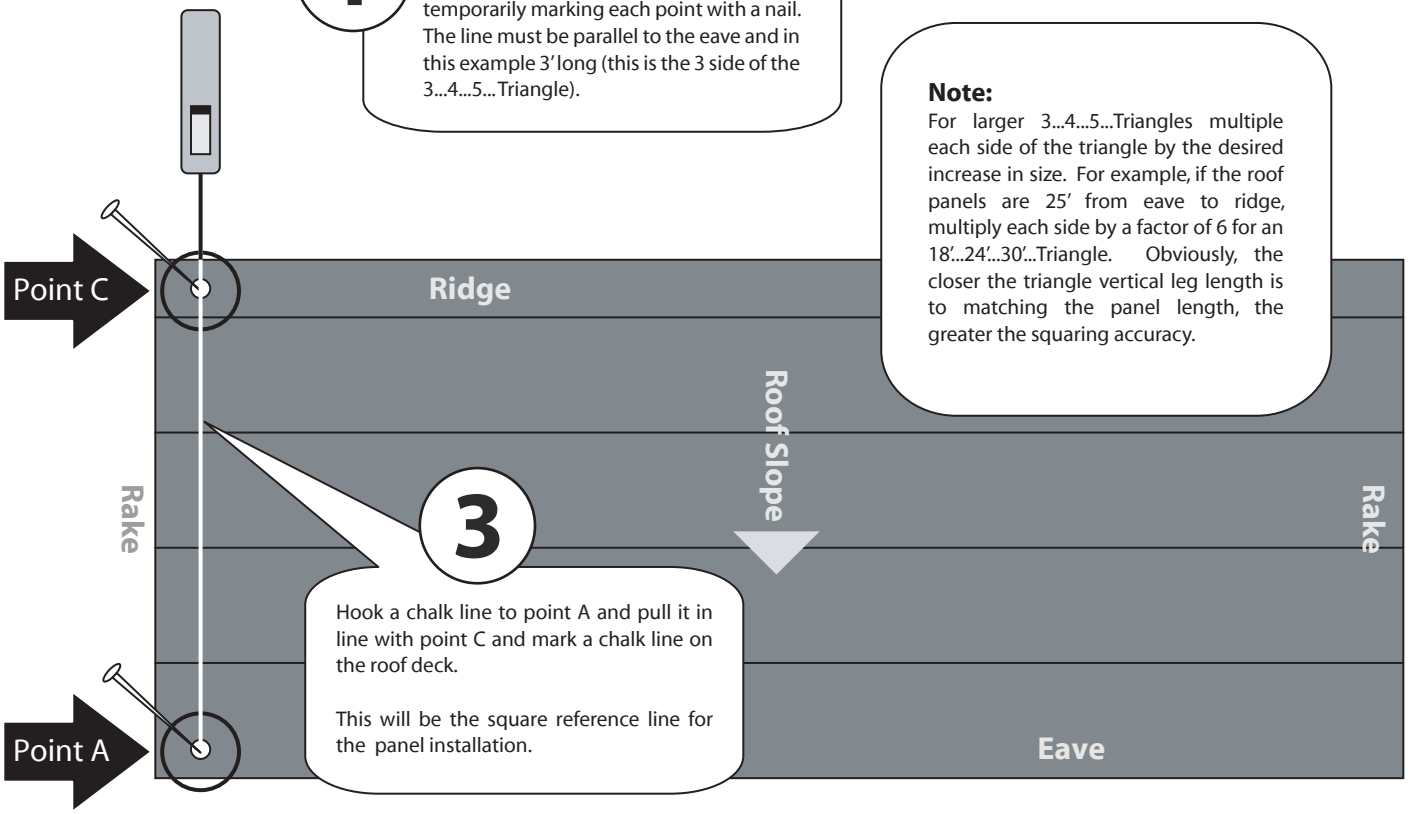
Using two tape measures, locate point C by hooking one tap to a nail at point A and the second tape to a nail at point B. Extend the tapes until they cross and meet at 4' on the first tape and 5' on the second tape and place a temporary nail where 4' and 5' meet.

...the 4' and 5' measurements are the 4 and 5 sides of the 3...4...5... triangle.

1

Establish a line from point A to point B by temporarily marking each point with a nail. The line must be parallel to the eave and in this example 3' long (this is the 3 side of the 3...4...5...Triangle).

Note:
For larger 3...4...5...Triangles multiple each side of the triangle by the desired increase in size. For example, if the roof panels are 25' from eave to ridge, multiply each side by a factor of 6 for an 18'...24'...30'...Triangle. Obviously, the closer the triangle vertical leg length is to matching the panel length, the greater the squaring accuracy.

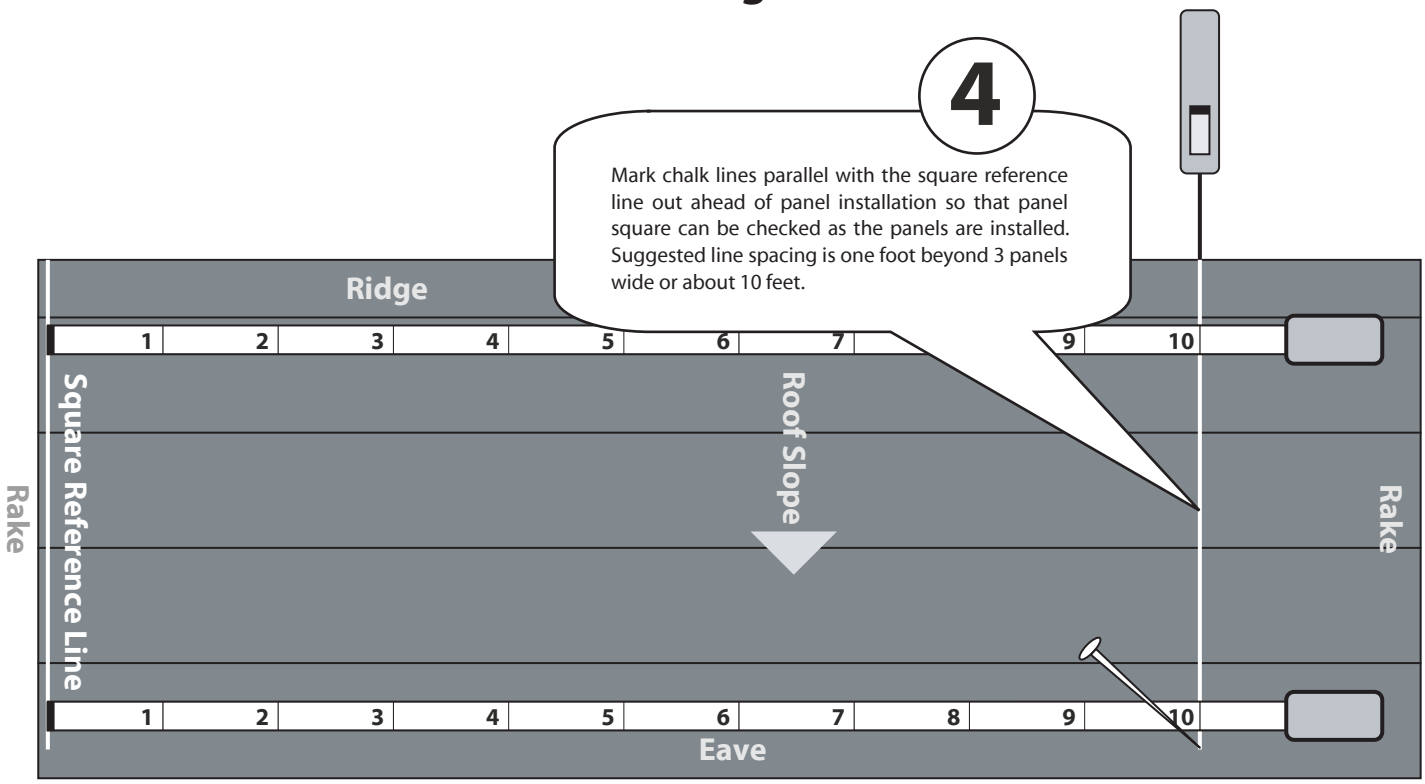


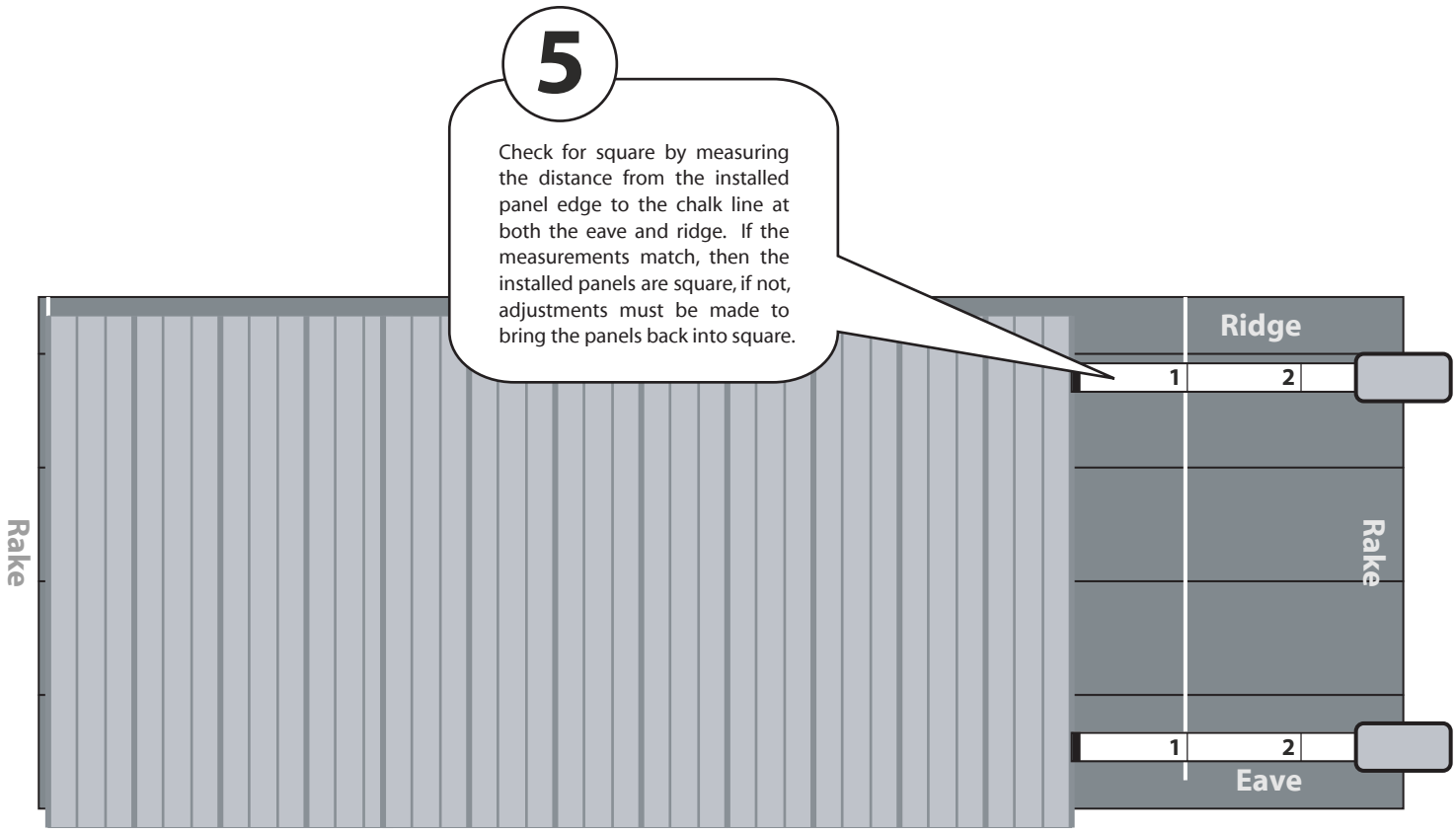
3

Hook a chalk line to point A and pull it in line with point C and mark a chalk line on the roof deck.

This will be the square reference line for the panel installation.

3...4...5...Triangle Method

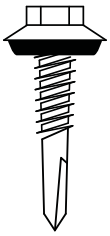




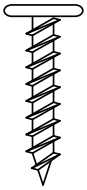
BEST BUY METALS
Roofing That Lasts

Accessories

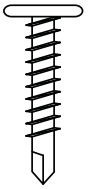
1", 1-½" , 2", 2-½"
Hex Head Wood Screw
Metal-to-Wood



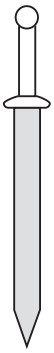
1", 1.25", 1.5"
Hex Head Self Driller
Metal-to-Metal



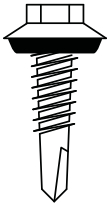
1" , 1.5", 2"
Pancake Head
Wood Screw



1" , 1.5", 2"
Pancake Head
Self Driller



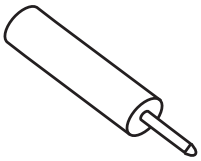
Pop Rivet (Stainless)
(1/8" x 3/16")



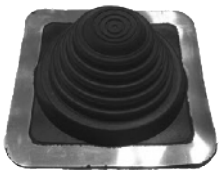
#7/8" Hex Head
Lap Stitch Screw
Metal-to-Metal

Profile Vent Ridge Vent
Depth varies x 3" x 25' (not available for 1.25" Corrugated)

Flex-O-Vent Ridge Vent Material
1.5" x 3" x 10'



Tube Sealant



Pipe Boot
(Various sizes, heat treated & retro fit also available)

Corrugated Closure Strip
Works for inside/outside

Butyl Tape
(3/8" x 3/32" x 45')

Double Bead Butyl Tape
(7/8" x 3/16" x 40' or 25' depending on plant)

Touch Up Paint

5V-Crimp Outside Closure Strip

5V-Crimp Inside Closure Strip

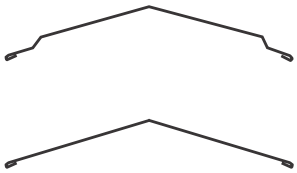
Emseal Expanding Hip/Valley Closure
1" x 1" x 19' 8"

Synthetic Roof Underlayment

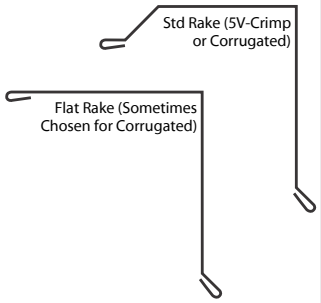
BEST BUY METALS
Roofing That Lasts

Typical Trim Profiles (size/design vary by plant)

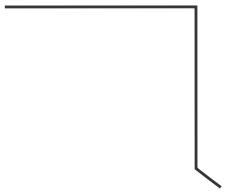
Ridge



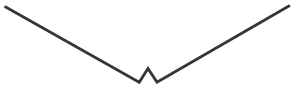
Rake



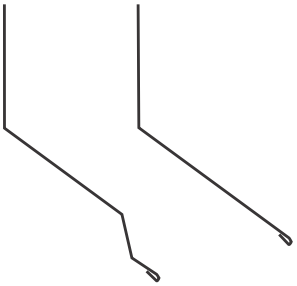
Eave



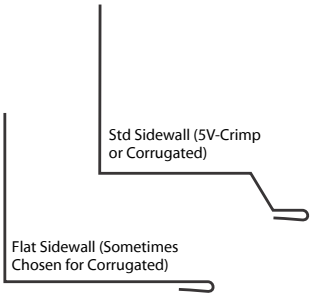
Valley



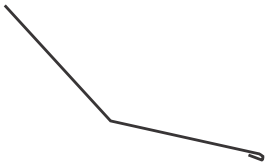
Endwall



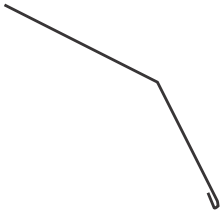
Sidewall



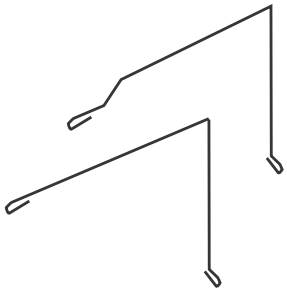
Pitch Break



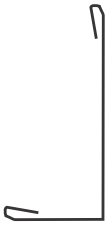
Gambrel



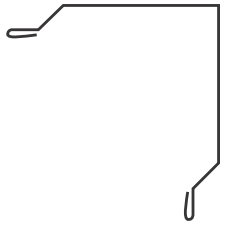
High Side Peak



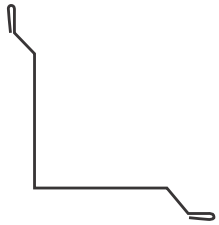
Fascia / Angle



Outside Corner

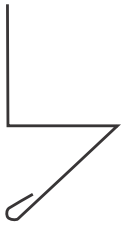


Inside Corner

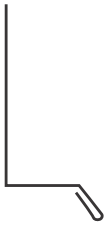


J-Channel

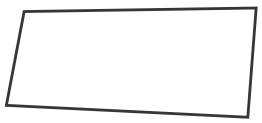
Rat Guard



Drip Cap

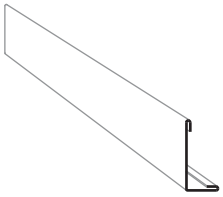


Flat Sheet



Fascia

Numbers indicate suggested trim assembly sequence.



Roof Substrate — 1

Install the roof substrate according to local building code requirements.

Moisture Barrier — 2

Install moisture barrier according to the manufacture's recommended procedure and in compliance with local building code requirements.

Fascia Trim — 3

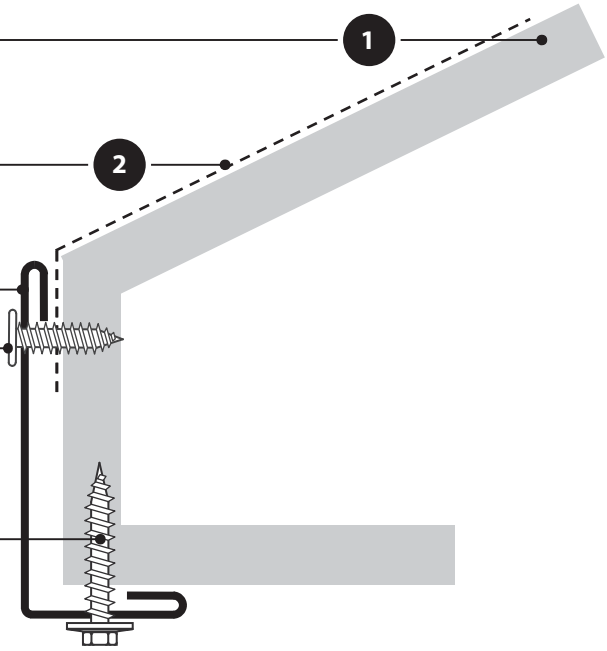
Install the Fascia trim and butt ends.

Trim Pancake Screw — 4

Fasten trim with Pancake Screws 2' apart along the length of the trim.

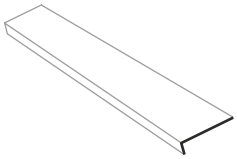
Trim Wood Screw — 5

Fasten trim with Wood Screws spaced 2' apart along the length of the trim.



Mini Eave

Numbers indicate suggested trim assembly sequence.



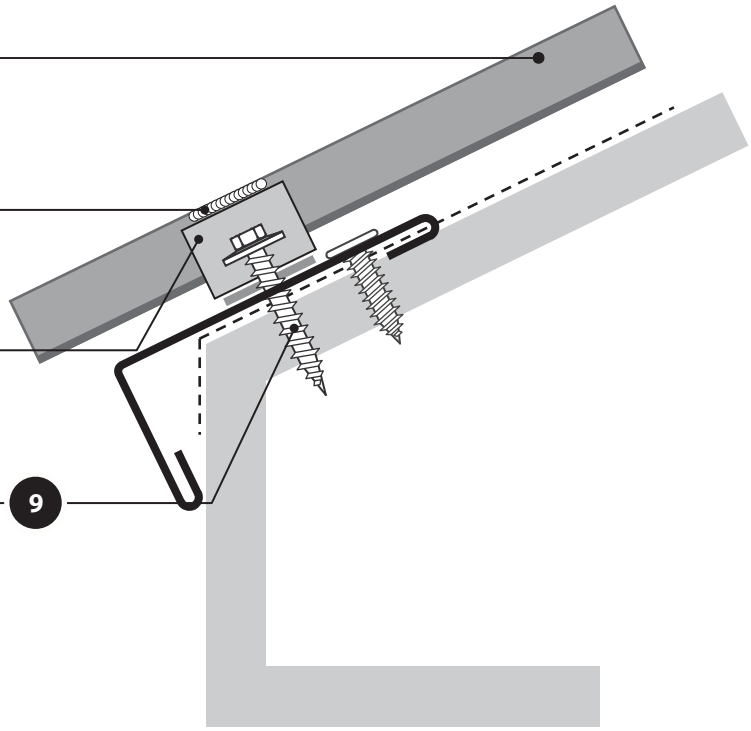
Moisture Barrier — 2
Install moisture barrier according to the manufacturer's recommended procedure and in compliance with local building code requirements.

Trim Pancake Screw — 4
Fasten trim with Pancake Screws spaced 12" apart along the length of the trim.

Optional Butyl Tape — 5
Install continuous along Eave at 1" up from face.

Mini Trim — 3
Install the Mini Eave and lap ends.

Roof Substrate — 1
Install the roof substrate according to local building code requirements.



Panel — 8
Install the panel and overhang the panel a minimum of 1" beyond the Mini Eave edge. See panel squaring method in this manual.

Optional Tube Sealant — 7
Apply optional Tube Sealant to the top side of the Inside Closure.

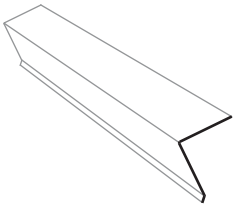
Inside Closure — 6
Place the Inside Closure over the top of the optional Butyl Tape.

Panel Wood Screw — 9
Fasten wood screw at the Inside Closure on each side of major ribs.

BEST BUY METALS
Roofing That Lasts

Eave Edge

Numbers indicate suggested trim assembly sequence.



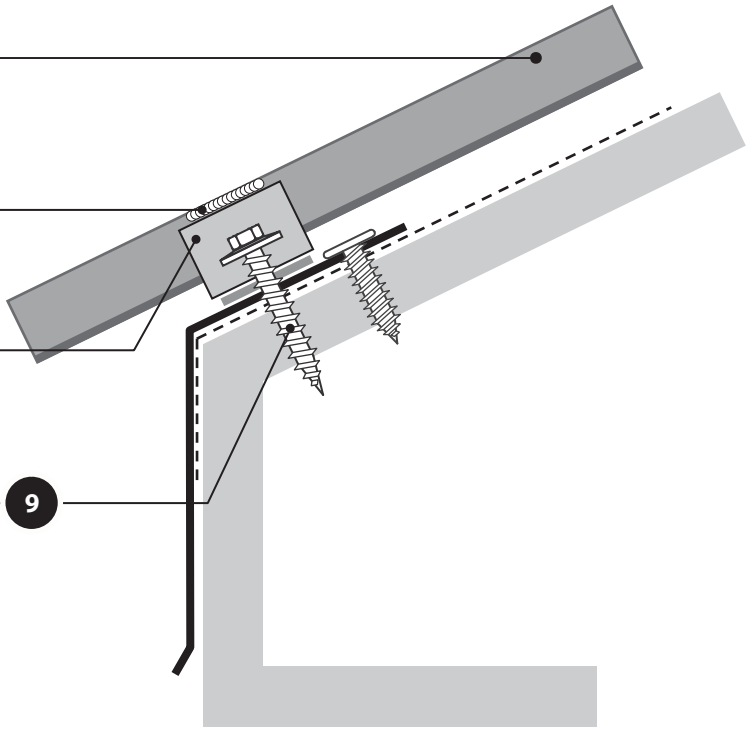
Moisture Barrier — 2
Install moisture barrier according to the manufacturer's recommended procedure and in compliance with local building code requirements.

Trim Pancake Screw — 4
Fasten trim with Pancake Screws spaced 12" apart along the length of the trim.

Optional Butyl Tape — 5
Install continuous along eave at 1" up from face.

Eave Trim — 3
Install the Eave Trim and lap ends.

Roof Substrate — 1
Install the roof substrate according to local building code requirements.



Panel — 8
Install the panel and overhang the panel a minimum of 1" beyond the Eave Trim edge. See panel squaring method in this manual.

Optional Tube Sealant — 7
Apply optional Tube Sealant to the top side of the Inside Closure.

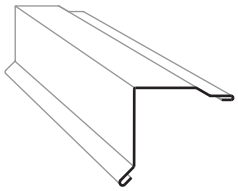
Inside Closure — 6
Place the Inside Closure over the top of the optional Butyl Tape.

Panel Wood Screw — 9
Fasten wood screw at the Inside Closure on each side of major ribs.

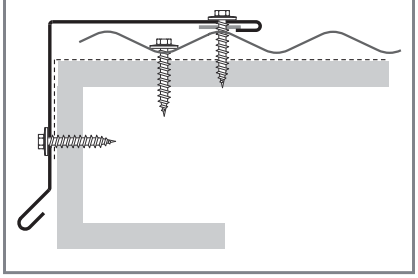
BEST BUY METALS
Roofing That Lasts

Rake

Numbers indicate suggested trim assembly sequence.



Corrugated - Flat Rake Option



Butyl Tape
Apply Butyl Tape along the length of the panel.

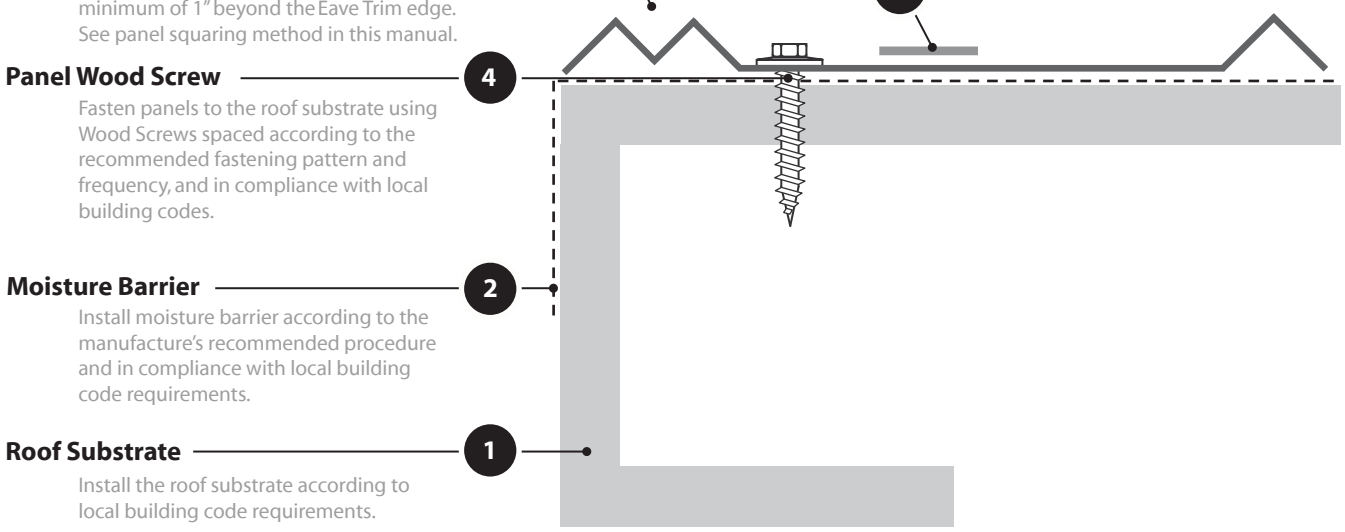
Panel — 3
Install the panel and overhang the panel a minimum of 1" beyond the Eave Trim edge. See panel squaring method in this manual.

Panel Wood Screw — 4
Fasten panels to the roof substrate using Wood Screws spaced according to the recommended fastening pattern and frequency, and in compliance with local building codes.

Moisture Barrier — 2
Install moisture barrier according to the manufacture's recommended procedure and in compliance with local building code requirements.

Roof Substrate — 1
Install the roof substrate according to local building code requirements.

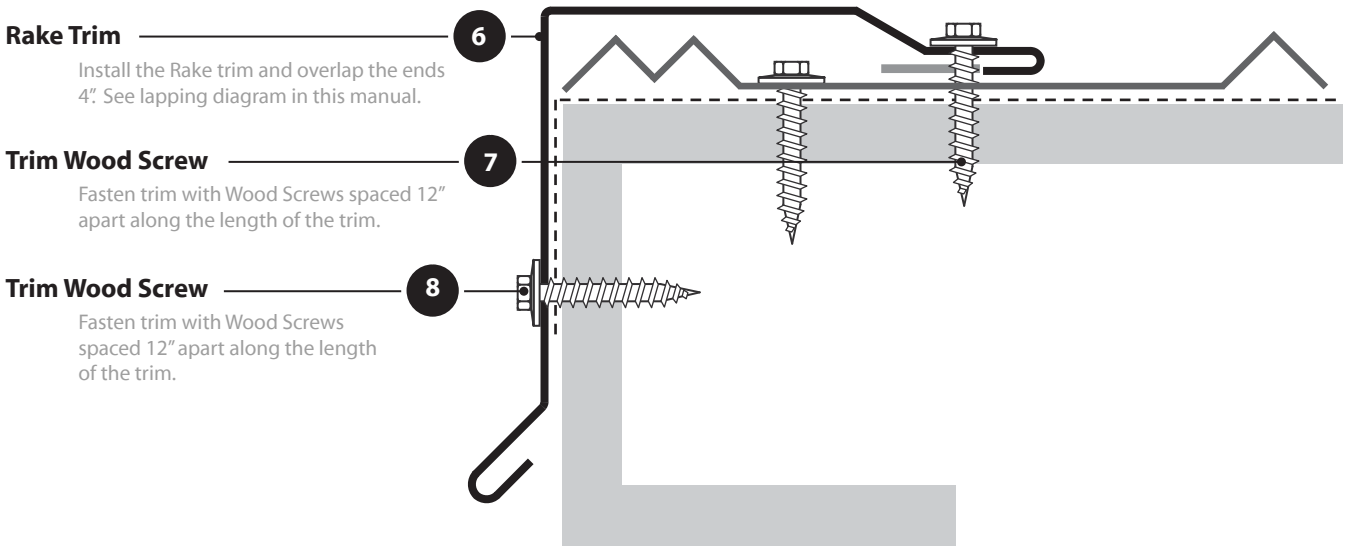
5



Rake Trim — 6
Install the Rake trim and overlap the ends 4". See lapping diagram in this manual.

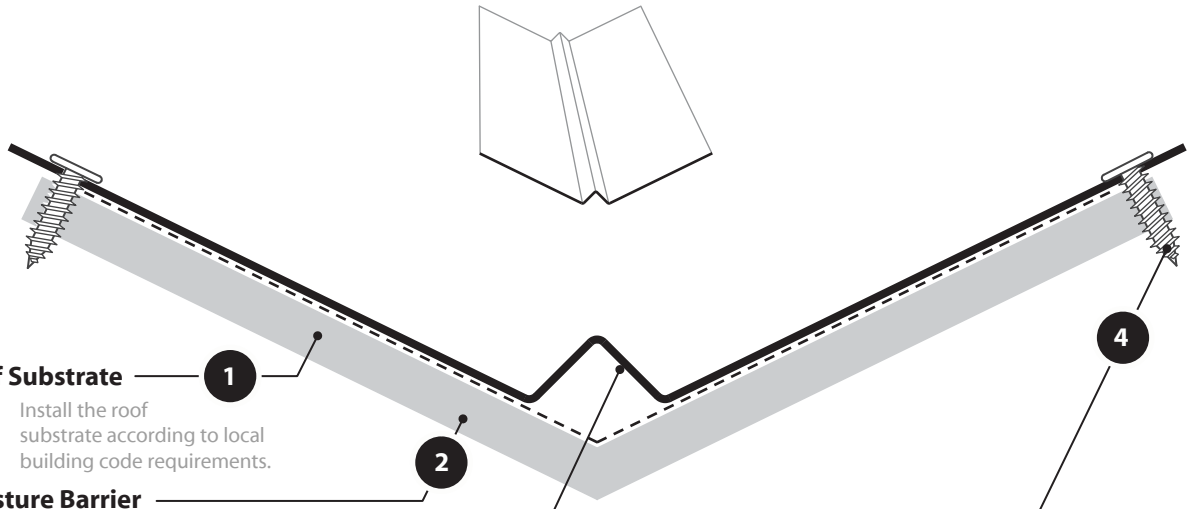
Trim Wood Screw — 7
Fasten trim with Wood Screws spaced 12" apart along the length of the trim.

Trim Wood Screw — 8
Fasten trim with Wood Screws spaced 12" apart along the length of the trim.



Preformed Valley

Numbers indicate suggested trim assembly sequence.



Roof Substrate — 1

Install the roof substrate according to local building code requirements.

Moisture Barrier — 2

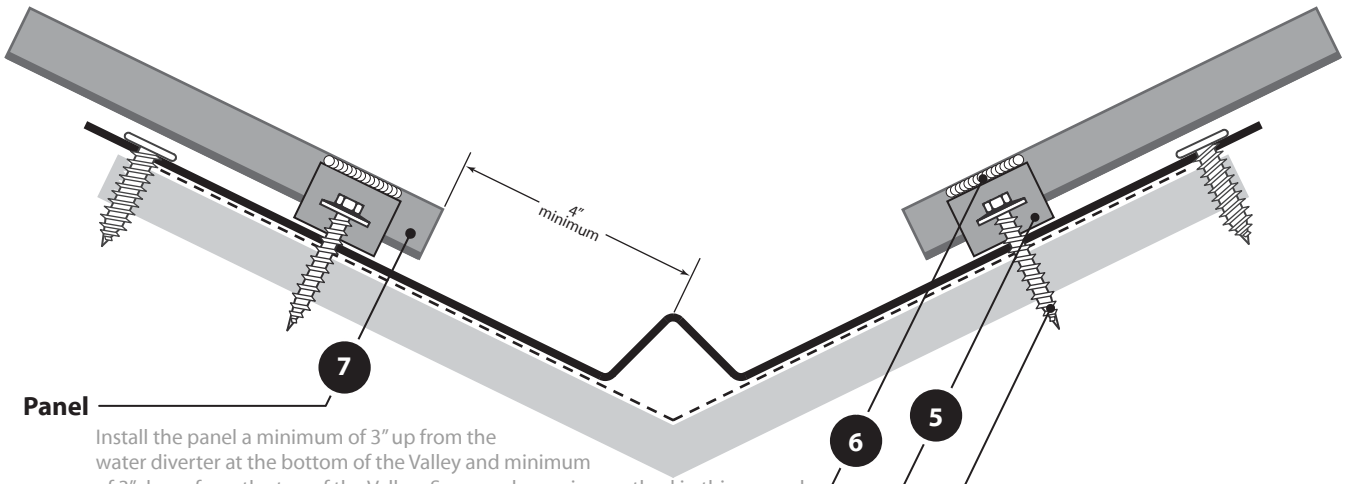
Install moisture barrier according to the manufacture's recommended procedure and in compliance with local building code requirements.

Preformed Valley Trim — 3

Install the Valley trim and overlap the ends 4". See lapping diagram in this manual.

Trim Pancake Screw — 4

Fasten trim with Pancake Screws spaced 12" apart along the length of the trim. See lapping diagram fastener pattern in this manual.



Panel — 7

Install the panel a minimum of 3" up from the water diverter at the bottom of the Valley and minimum of 3" down from the top of the Valley. See panel squaring method in this manual.

Tube Sealant — 6

Apply Optional Tube Sealant to the top side of the Closure.

Expanding Closure — 5

Place Expanding Closure, parallel to each side of the Valley center water diverter. Closure should be up from the panel end about 1". See panel minimum set back above.

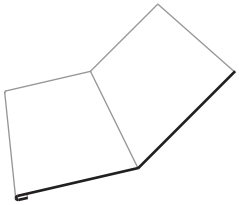
Panel Wood Screw — 8

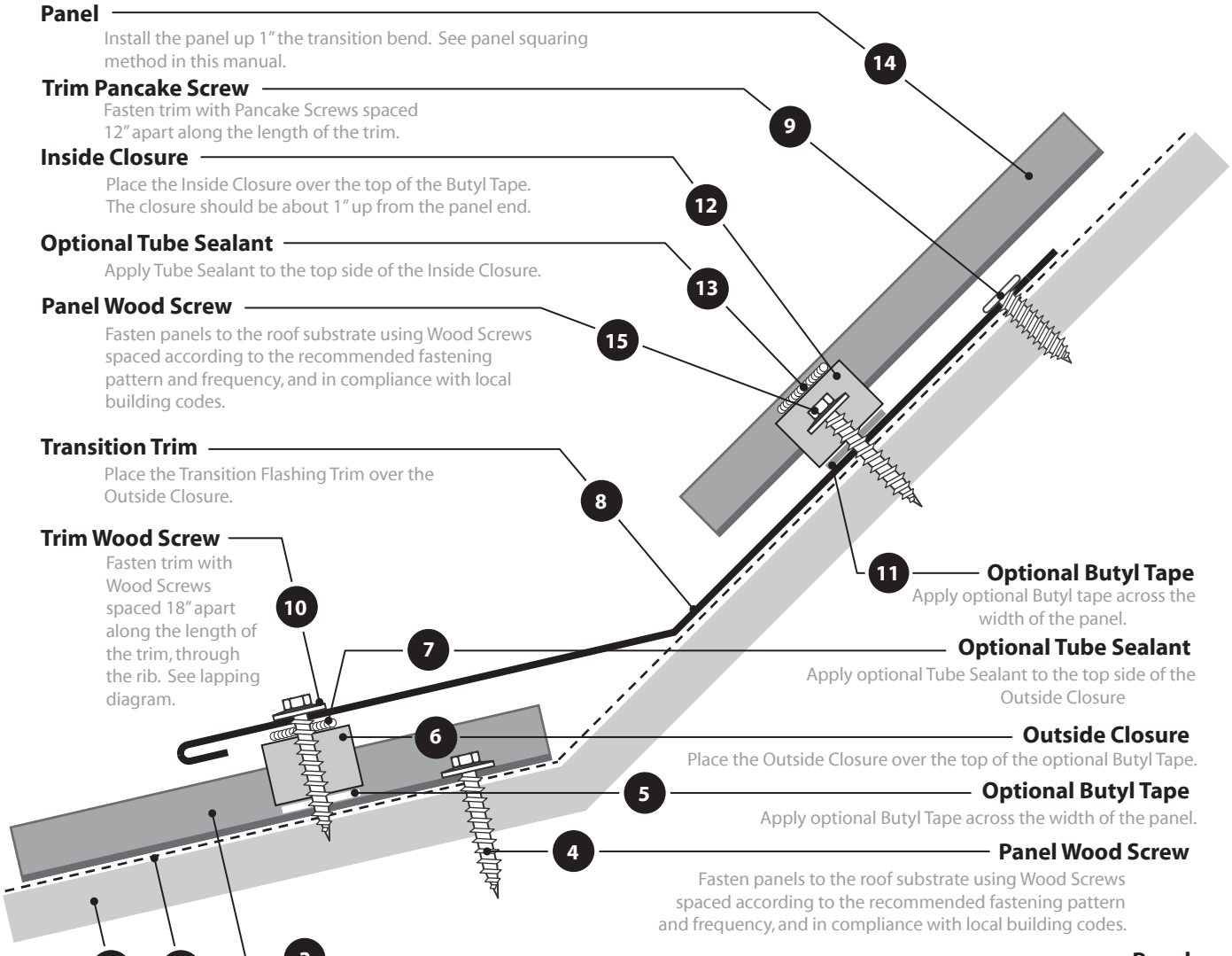
Notes:

1. See Valley Lapping - Page 25
2. See Valley Cutting - Page 26

Transition

Numbers indicate suggested trim assembly sequence.





Panel
Install the panel up 1" the transition bend. See panel squaring method in this manual.

Trim Pancake Screw
Fasten trim with Pancake Screws spaced 12" apart along the length of the trim.

Inside Closure
Place the Inside Closure over the top of the Butyl Tape. The closure should be about 1" up from the panel end.

Optional Tube Sealant
Apply Tube Sealant to the top side of the Inside Closure.

Panel Wood Screw
Fasten panels to the roof substrate using Wood Screws spaced according to the recommended fastening pattern and frequency, and in compliance with local building codes.

Transition Trim
Place the Transition Flashing Trim over the Outside Closure.

Trim Wood Screw
Fasten trim with Wood Screws spaced 18" apart along the length of the trim, through the rib. See lapping diagram.

Optional Butyl Tape
Apply optional Butyl tape across the width of the panel.

Optional Tube Sealant
Apply optional Tube Sealant to the top side of the Outside Closure

Outside Closure
Place the Outside Closure over the top of the optional Butyl Tape.

Optional Butyl Tape
Apply optional Butyl Tape across the width of the panel.

Panel Wood Screw
Fasten panels to the roof substrate using Wood Screws spaced according to the recommended fastening pattern and frequency, and in compliance with local building codes.

Panel
Install the panel and overhang the panel a minimum of 1" beyond the eave edge. See panel squaring method in this manual.

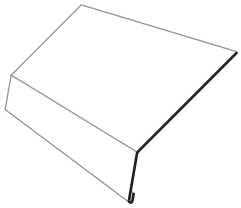
Moisture Barrier
Install moisture barrier according to the manufacture's recommended procedure and in compliance with local building code requirements.

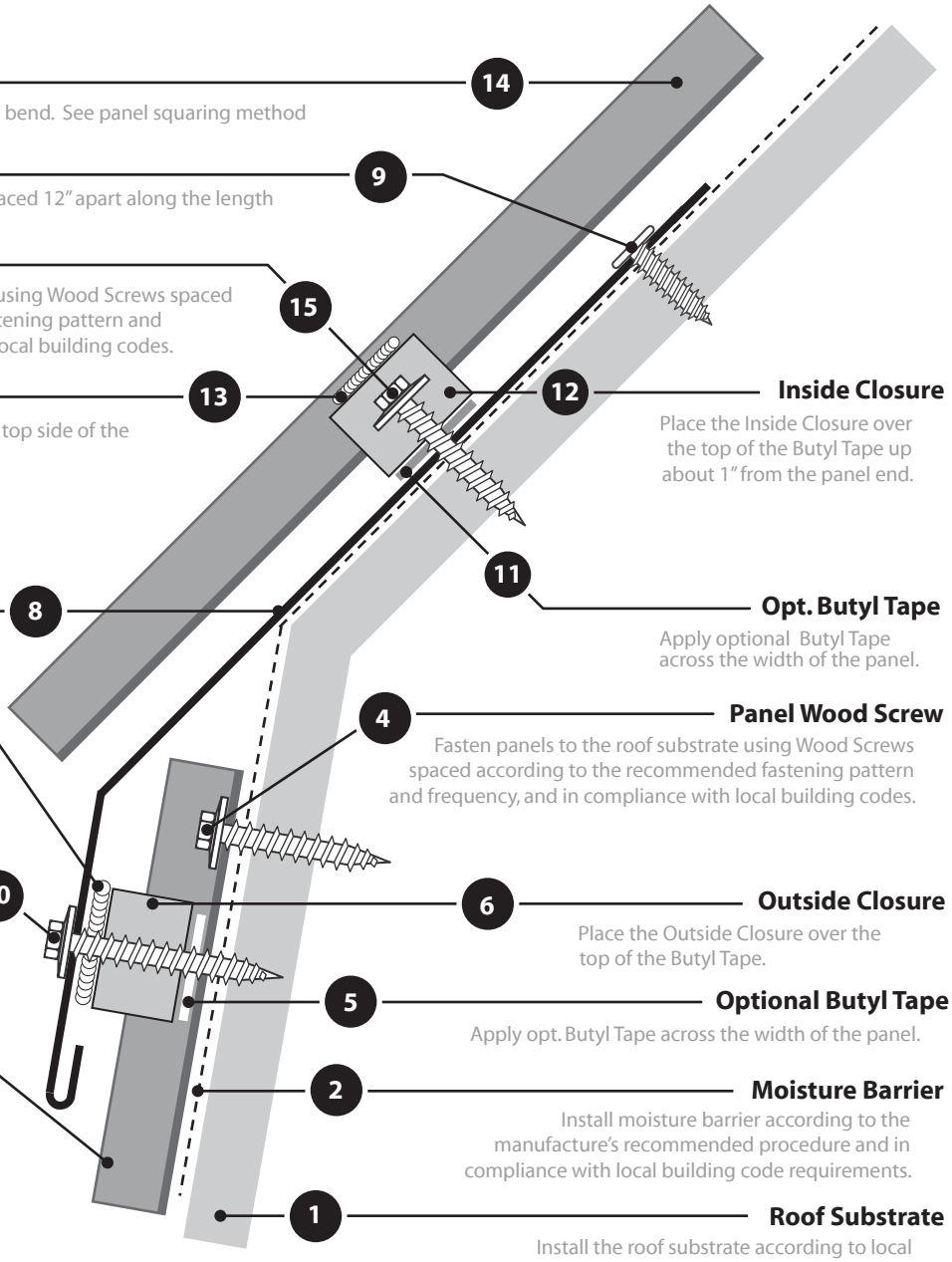
Roof Substrate
Install the roof substrate according to local building code requirements.

BEST BUY METALS
Roofing That Lasts

Gambrel

Numbers indicate suggested trim assembly sequence.





Panel — 14
Install the panel up 1" the transition bend. See panel squaring method in this manual.

Trim Pancake Screw — 9
Fasten trim with Pancake Screws spaced 12" apart along the length of the trim.

Panel Wood Screw — 15
Fasten panels to the roof substrate using Wood Screws spaced according to the recommended fastening pattern and frequency, and in compliance with local building codes.

Optional Tube Sealant — 13
Apply optional Tube Sealant to the top side of the Inside Closure.

Inside Closure — 12
Place the Inside Closure over the top of the Butyl Tape up about 1" from the panel end.

Opt. Butyl Tape — 11
Apply optional Butyl Tape across the width of the panel.

Gambrel Trim — 8
Place the Gambrel Flashing Trim over the Outside Closure.

Opt. Tube Sealant — 7
Apply optional Tube Sealant to the top side of the Inside Closure.

Panel Wood Screw — 4
Fasten panels to the roof substrate using Wood Screws spaced according to the recommended fastening pattern and frequency, and in compliance with local building codes.

Trim Wood Screw — 10
Fasten trim with Wood Screws spaced 18" apart along the length of the trim, through the rib.

Outside Closure — 6
Place the Outside Closure over the top of the Butyl Tape.

Optional Butyl Tape — 5
Apply opt. Butyl Tape across the width of the panel.

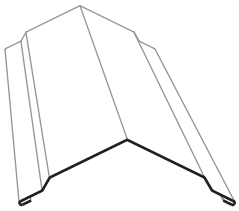
Panel — 3
Install the panel and overhang the panel a minimum of 1" beyond the eave edge.

Moisture Barrier — 2
Install moisture barrier according to the manufacture's recommended procedure and in compliance with local building code requirements.

Roof Substrate — 1
Install the roof substrate according to local building code requirements.

Hip

Numbers indicate suggested trim assembly sequence.



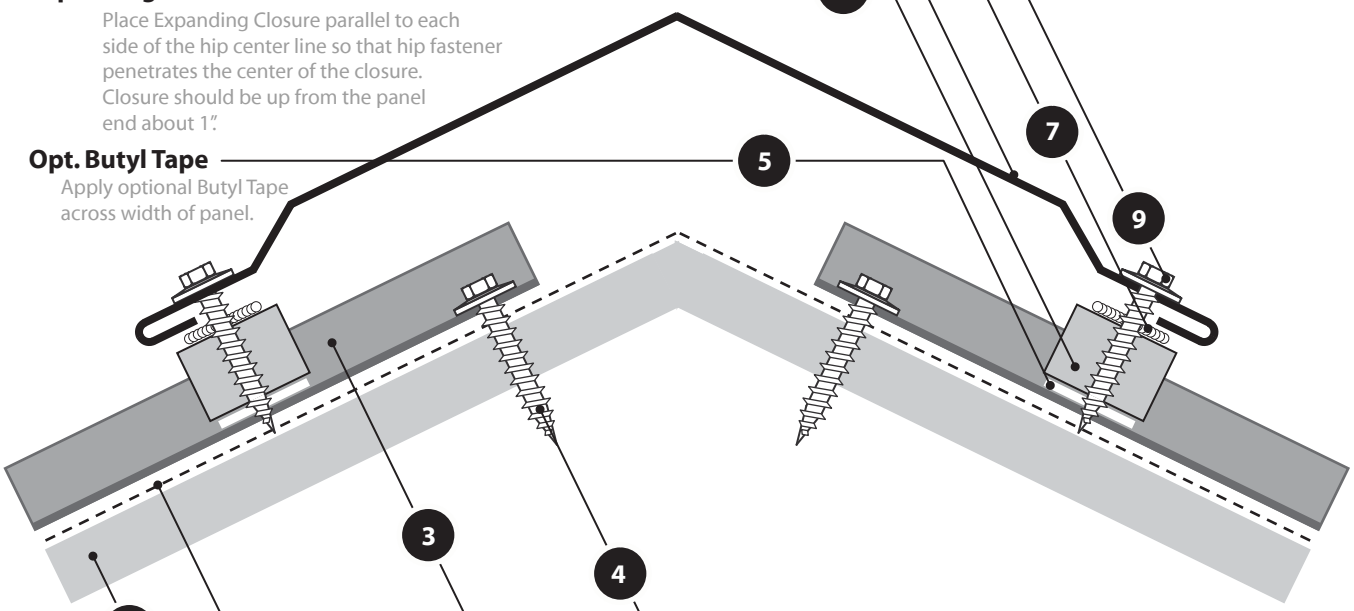
Trim Wood Screw
Fasten trim with Wood Screws spaced 18" apart along the length of the trim, through the rib. See lapping diagram.

Opt. Tube Sealant
Apply optional Tube Sealant to the top side of the Expanding Closure.

Hip Trim
Place the Hip Trim over the Expanding Closure.

Expanding Closure
Place Expanding Closure parallel to each side of the hip center line so that hip fastener penetrates the center of the closure. Closure should be up from the panel end about 1".

Opt. Butyl Tape
Apply optional Butyl Tape across width of panel.



Panel Wood Screw
Fasten panels to the roof substrate using Wood Screws spaced according to the recommended fastening pattern and frequency, and in compliance with local building codes.

Panel
Install the panel and overhang the panel a minimum of 1" beyond the eave edge. See panel squaring method in this manual.

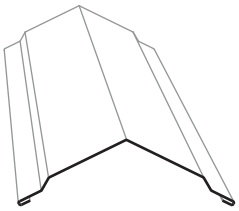
Moisture Barrier
Install moisture barrier according to the manufacture's recommended procedure and in compliance with local building code requirements.

Roof Substrate
Install the roof substrate according to local building code requirements.

BEST BUY METALS
Roofing That Lasts

Ridge

Numbers indicate suggested trim assembly sequence.



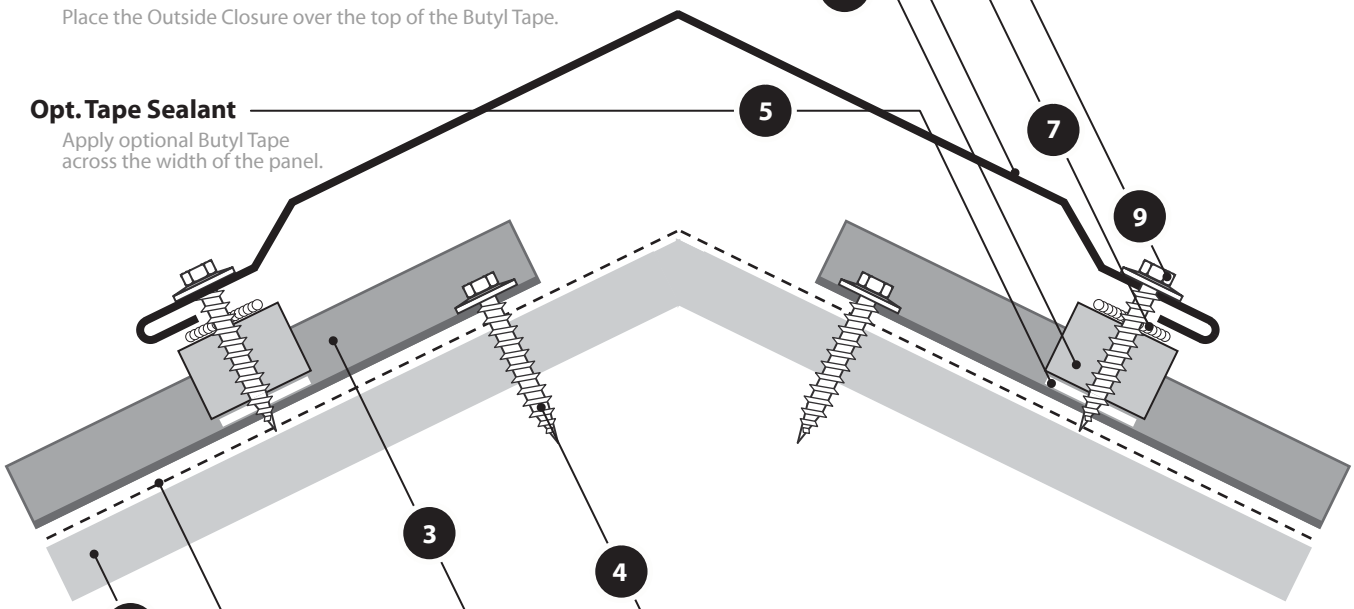
Trim Wood Screw
Fasten trim with Wood Screws spaced 18" apart along the length of the trim, through the rib. See lapping diagram.

Opt. Tube Sealant
Apply optional Tube Sealant to the top side of the Outside Closure.

Ridge Trim
Place the Ridge Trim over the Outside Closure.

Outside Closure
Place the Outside Closure over the top of the Butyl Tape.

Opt. Tape Sealant
Apply optional Butyl Tape across the width of the panel.



Panel Wood Screw
Fasten panels to the roof substrate using Wood Screws spaced according to the recommended fastening pattern and frequency, and in compliance with local building codes.

Panel
Install the panel and overhang the panel a minimum of 1" beyond the eave edge. See panel squaring method in this manual.

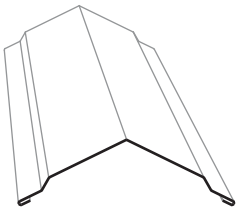
Moisture Barrier
Install moisture barrier according to the manufacture's recommended procedure and in compliance with local building code requirements.

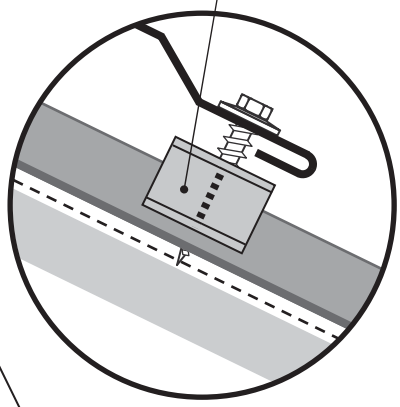
Roof Substrate
Install the roof substrate according to local building code requirements.

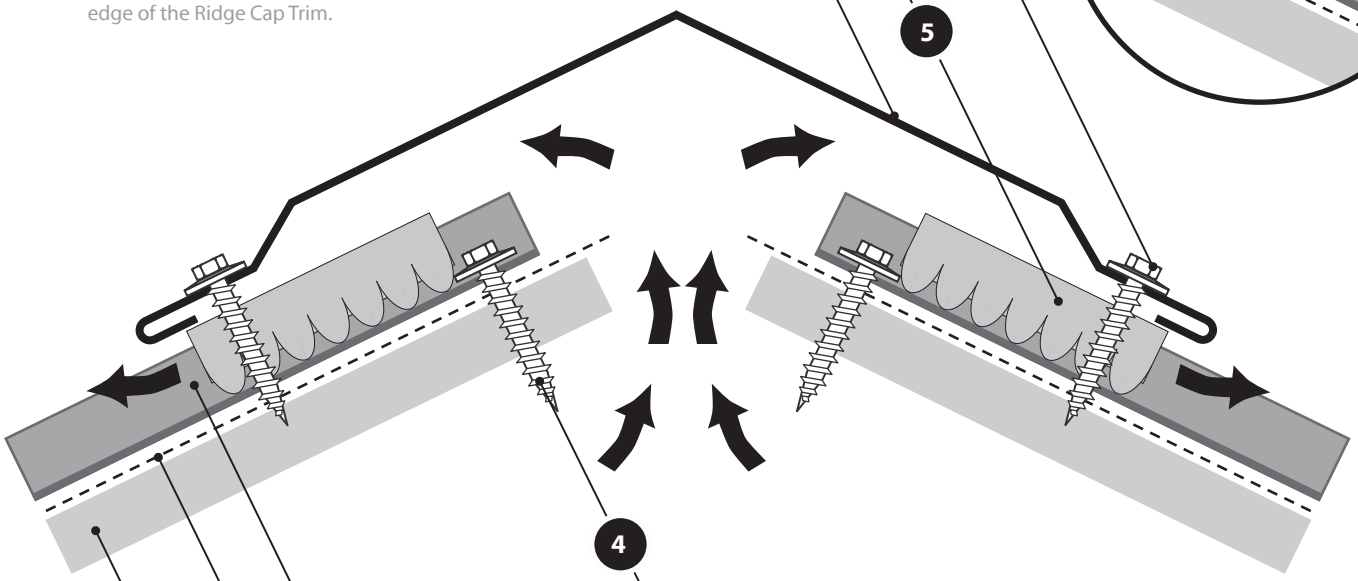
BEST BUY METALS
Roofing That Lasts

Vented Ridge

Numbers indicate suggested trim assembly sequence.







Trim Wood Screw — 7

Fasten trim with Wood Screws spaced 18" apart along the length of the trim, through the rib. See lapping diagram fastener pattern in this manual.

Ridge Trim — 6

Place the Ridge Trim over the Outside Closure.

Vent Material — 5

Apply ridge vent material along the outside edge of the Ridge Cap Trim.

Panel Wood Screw — 4

Fasten panels to the roof substrate using Wood Screws spaced according to the recommended fastening pattern and frequency, and in compliance with local building codes.

Panel — 3

Install the panel and overhang the panel a minimum of 1" beyond the eave edge. See panel squaring method in this manual.

Moisture Barrier — 2

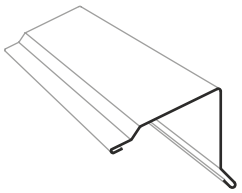
Install moisture barrier according to the manufacture's recommended procedure and in compliance with local building code requirements.

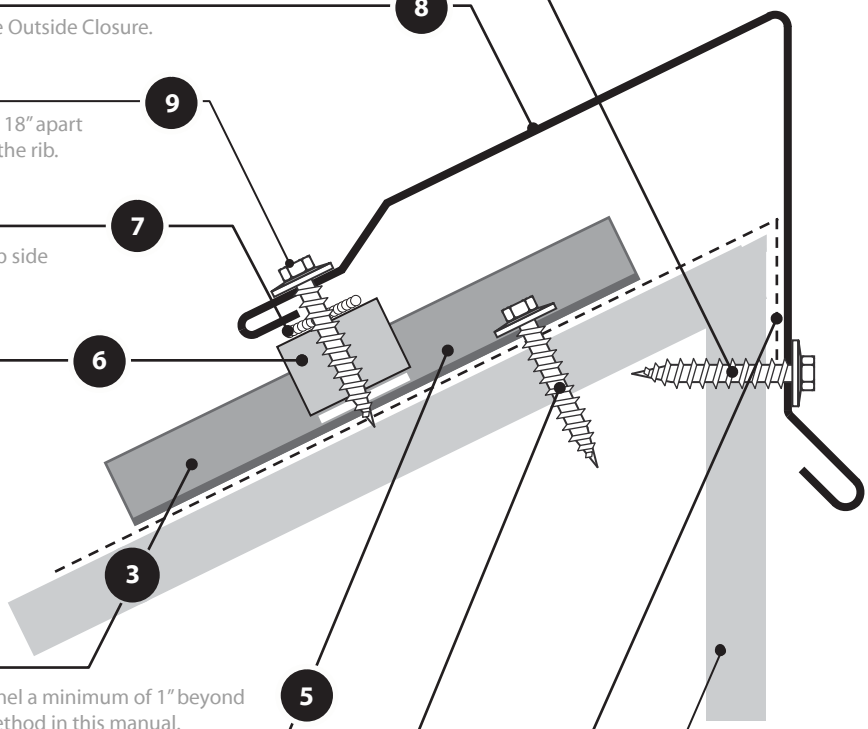
Roof Substrate — 1

Install the roof substrate according to local building code requirements.

High Side Peak

Numbers indicate suggested trim assembly sequence.





Trim Wood Screw — 10
Fasten trim with Wood Screws spaced 2' apart along the length of the trim. See lapping diagram.

High Side Peak Trim — 8
Place the High Side Peak Trim over the Outside Closure.

Trim Wood Screw — 9
Fasten trim with Wood Screws spaced 18" apart along the length of the trim, through the rib. See lapping diagram.

Opt. Tube Sealant — 7
Apply optional Tube Sealant to the top side of the Inside Closure.

Outside Closure — 6
Place the Outside Closure over the tip of the optional Butyl Tape.

Panel — 3
Install the panel and overhang the panel a minimum of 1" beyond the eave edge. See panel squaring method in this manual.

Opt. Butyl Tape — 5
Apply optional Butyl Tape across the width of the panel.

Panel Wood Screw — 4
Fasten panels to the roof substrate using Wood Screws spaced according to the recommended fastening pattern and frequency, and in compliance with local building codes.

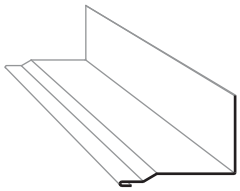
Moisture Barrier — 2
Install moisture barrier according to the manufacturer's recommended procedure and in compliance with local building code requirements.

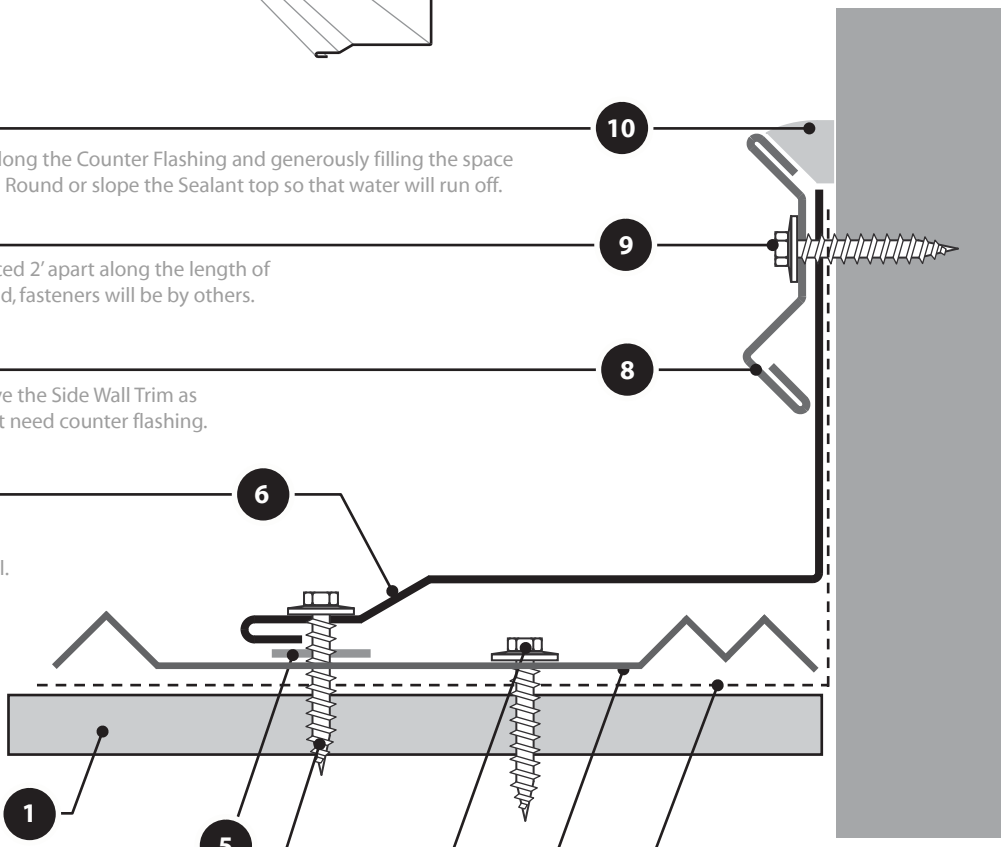
Roof Substrate — 1
Install the roof substrate according to local building code requirements.

BEST BUY METALS
Roofing That Lasts

Side Wall

Numbers indicate suggested trim assembly sequence.





Tube Sealant — 10
Apply Tube Sealant continuously along the Counter Flashing and generously filling the space between the flashing and the wall. Round or slope the Sealant top so that water will run off.

Trim Wood Screw — 9
Fasten trim with Wood Screws spaced 2' apart along the length of the trim. If wall material is not wood, fasteners will be by others.

Counter Flashing — 8
Position the Counter Flashing above the Side Wall Trim as shown. Some applications may not need counter flashing.

Side Wall Trim — 6
Place the Side Wall Trim over the Butyl tape and overlap the ends 4". See lapping diagram in this manual.

Roof Substrate — 1
Install the roof substrate according to local building code requirements.

Butyl Tape — 5
Apply Butyl Tape along the length of the panel.

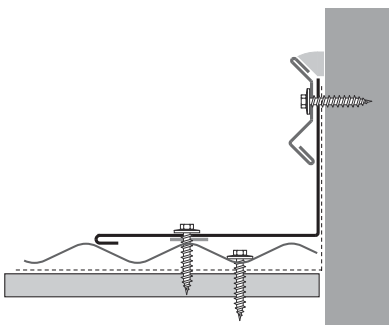
Trim Wood Screw — 7
Fasten trim with Wood Screws spaced 2' apart along the length of the trim. See lapping diagram.

Panel Wood Screw — 4
Fasten panels to the roof substrate using Wood Screws spaced according to the recommended fastening pattern and frequency, and in compliance with local building codes.

Panel — 3
Install the panel and overhang the panel a minimum of 1" beyond the eave edge. See panel squaring method in this manual.

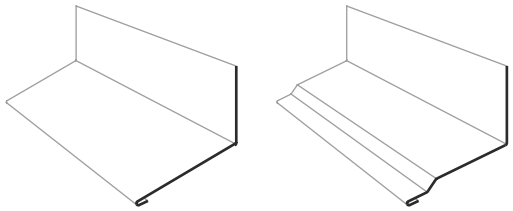
Moisture Barrier — 2
Install moisture barrier according to the manufacturer's recommended procedure and in compliance with local building code requirements.

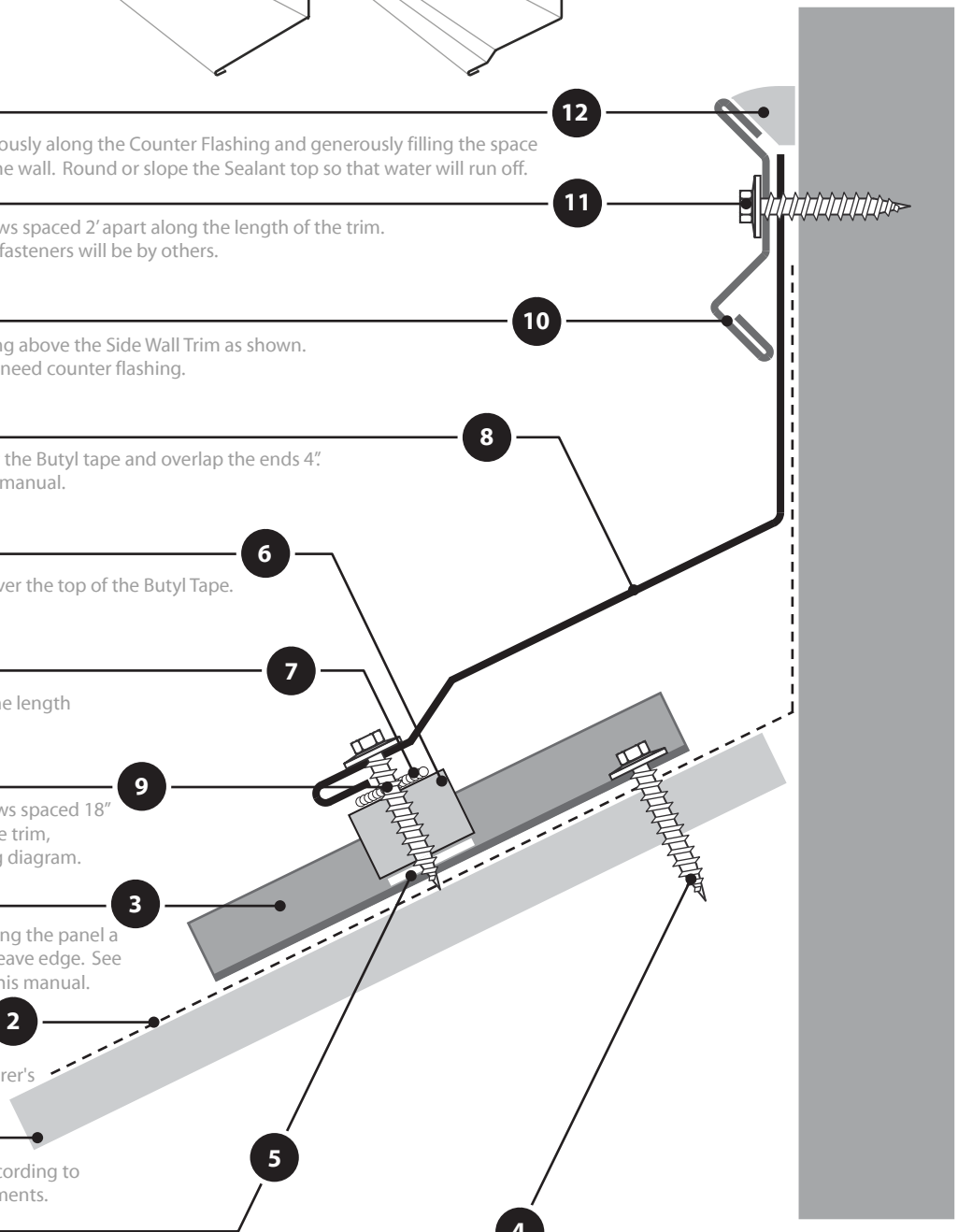
Corrugated - Flat Sidewall Option



End Wall

Numbers indicate suggested trim assembly sequence.





Tube Sealant — 12
Apply Tube Sealant continuously along the Counter Flashing and generously filling the space between the flashing and the wall. Round or slope the Sealant top so that water will run off.

Trim Wood Screw — 11
Fasten trim with Wood Screws spaced 2' apart along the length of the trim. If wall material is not wood, fasteners will be by others.

Counter Flashing — 10
Position the Counter Flashing above the Side Wall Trim as shown. Some applications may not need counter flashing.

End Wall Trim — 8
Place the End Wall Trim over the Butyl tape and overlap the ends 4". See lapping diagram in this manual.

Outside Closure — 6
Place the Outside Closure over the top of the Butyl Tape.

Tube Sealant — 7
Apply Tube Sealant along the length of the Outside Closure.

Trim Wood Screw — 9
Fasten trim with Wood Screws spaced 18" apart along the length of the trim, through the rib. See lapping diagram.

Panel — 3
Install the panel and overhang the panel a minimum of 1" beyond the eave edge. See panel squaring method in this manual.

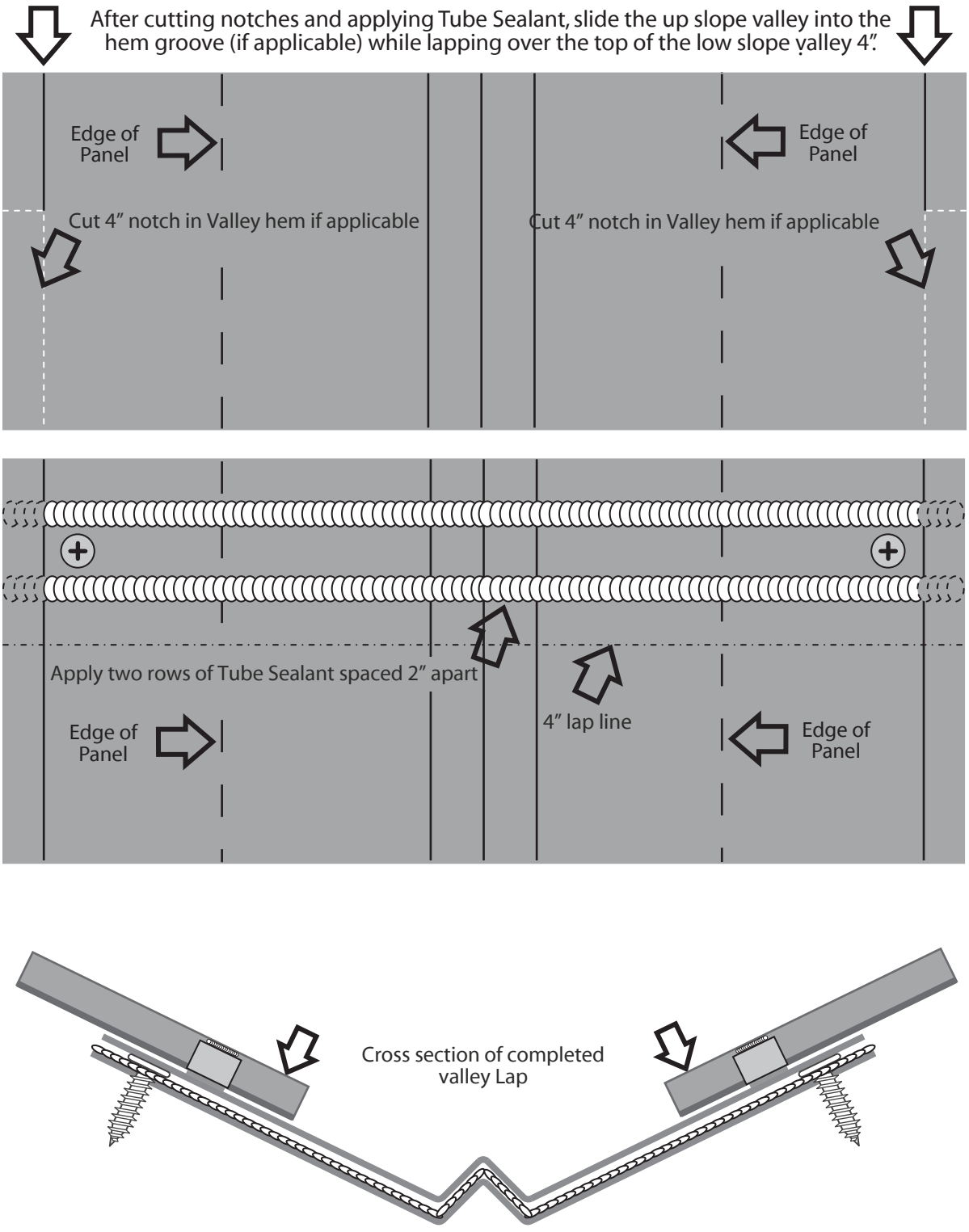
Moisture Barrier — 2
Install moisture barrier according to the manufacturer's recommended procedure.

Roof Substrate — 1
Install the roof substrate according to local building code requirements.

Butyl Tape — 5
Apply Butyl Tape along the length of the panel.

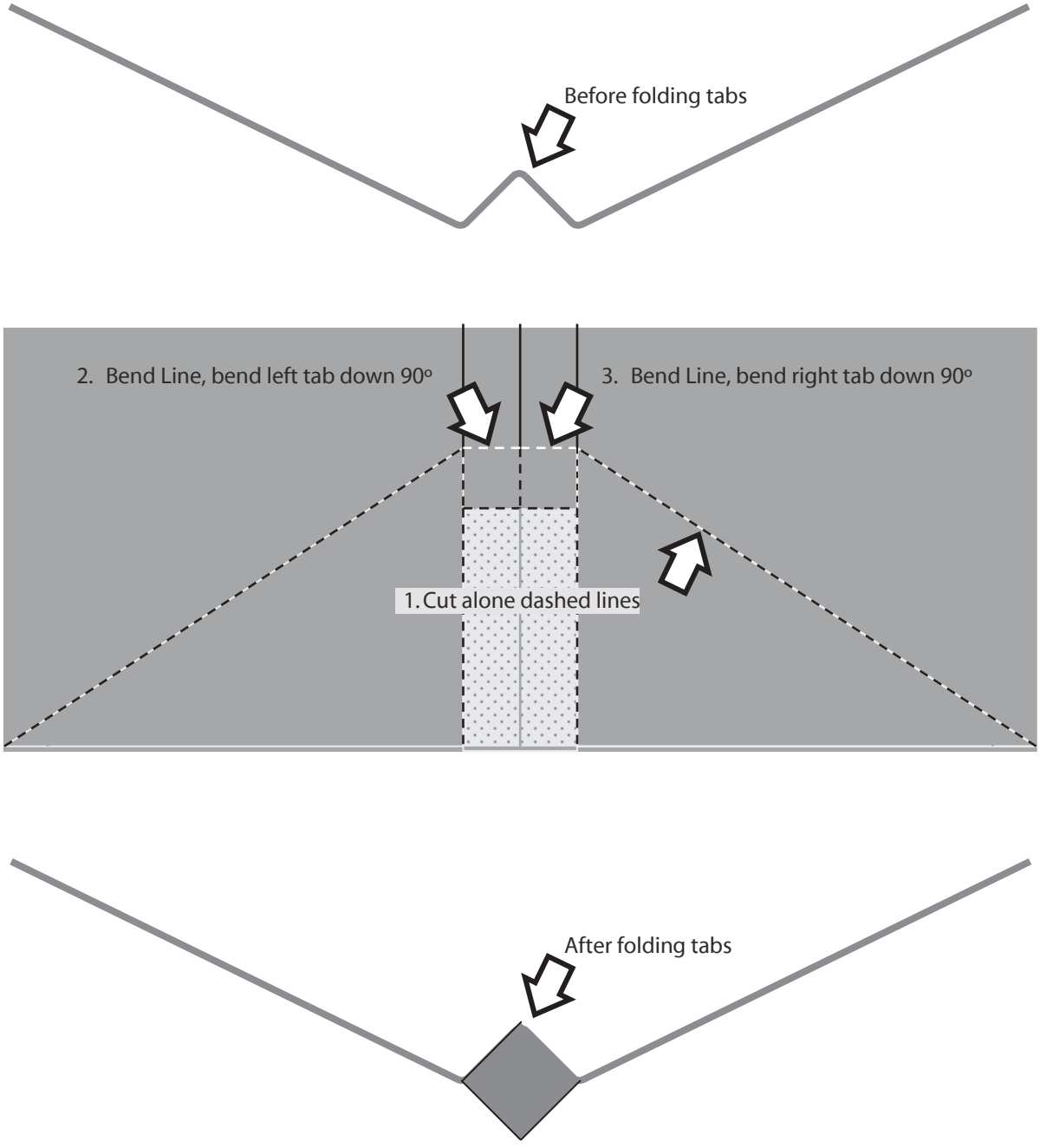
Panel Wood Screw — 4
Fasten panels to the roof substrate using Wood Screws spaced according to the recommended fastening pattern and frequency, and in compliance with local building codes.

Valley Lapping

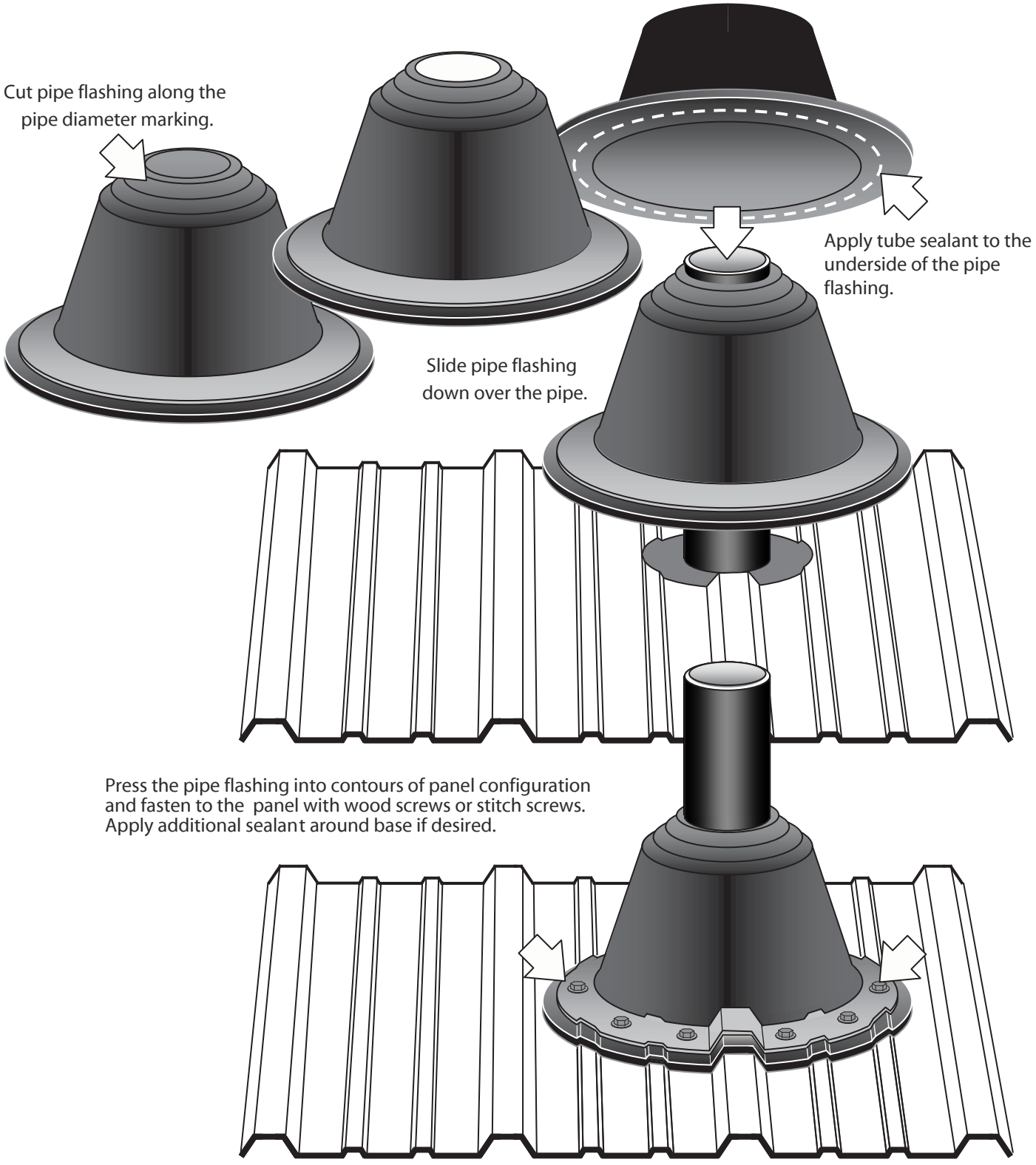


Valley Cutting at Eave

Valley starter cutting diagram with water diverter tabs.



Pipe Flashing

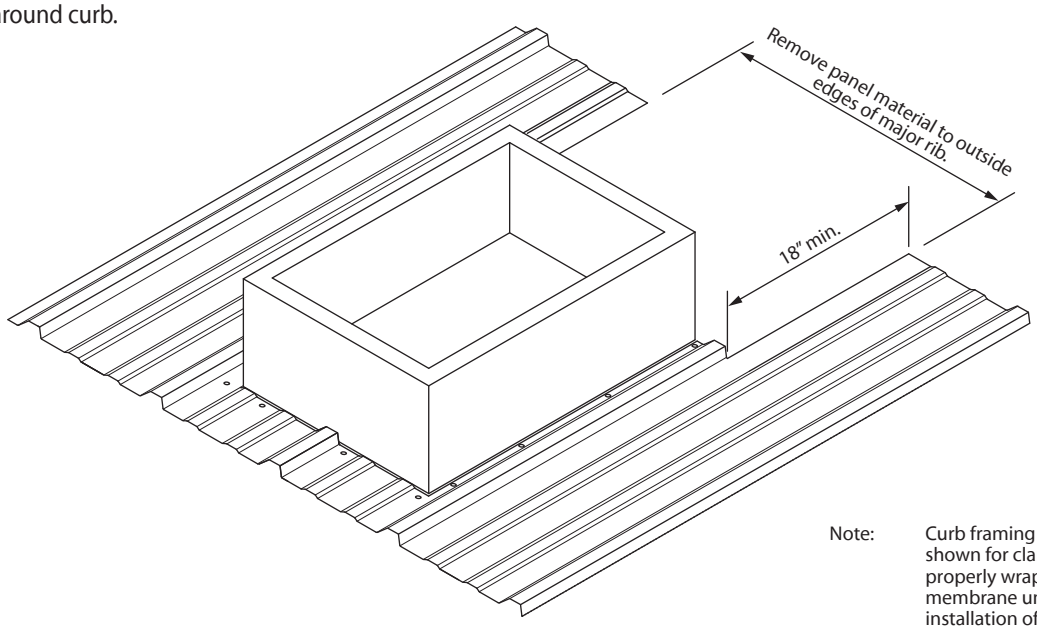


BEST BUY METALS
Roofing That Lasts

CURB DETAIL (Chimneys & Skylights)

STEP 1

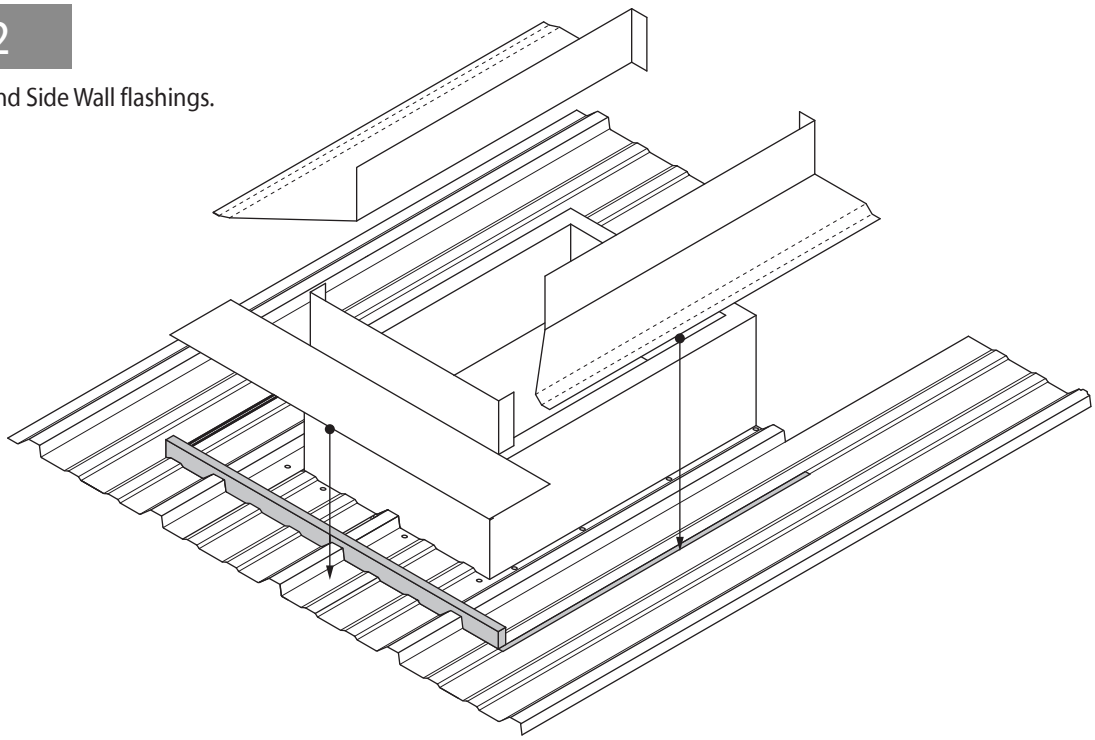
Install panels around curb.



Note: Curb framing and underlayment not shown for clarity. Curb must be properly wrapped with approved membrane underlayment prior to installation of panels/flashings.

STEP 2

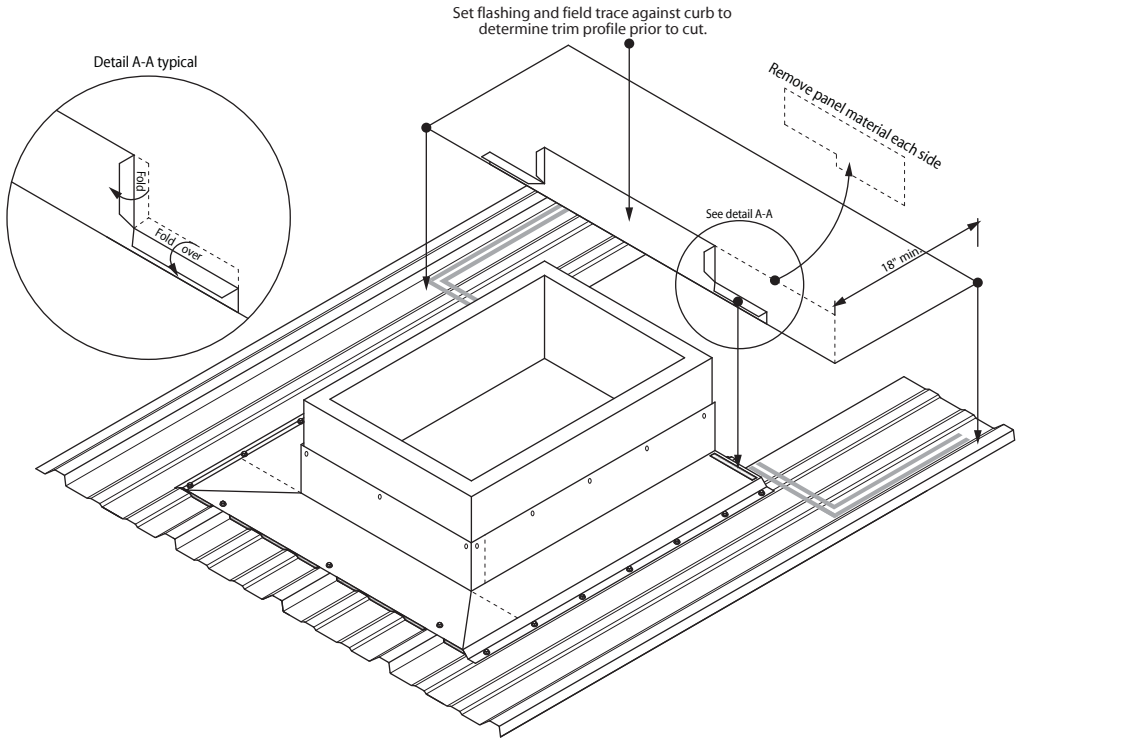
Apply End Wall and Side Wall flashings.



CURB DETAIL (Chimneys & Skylights) (cont.)

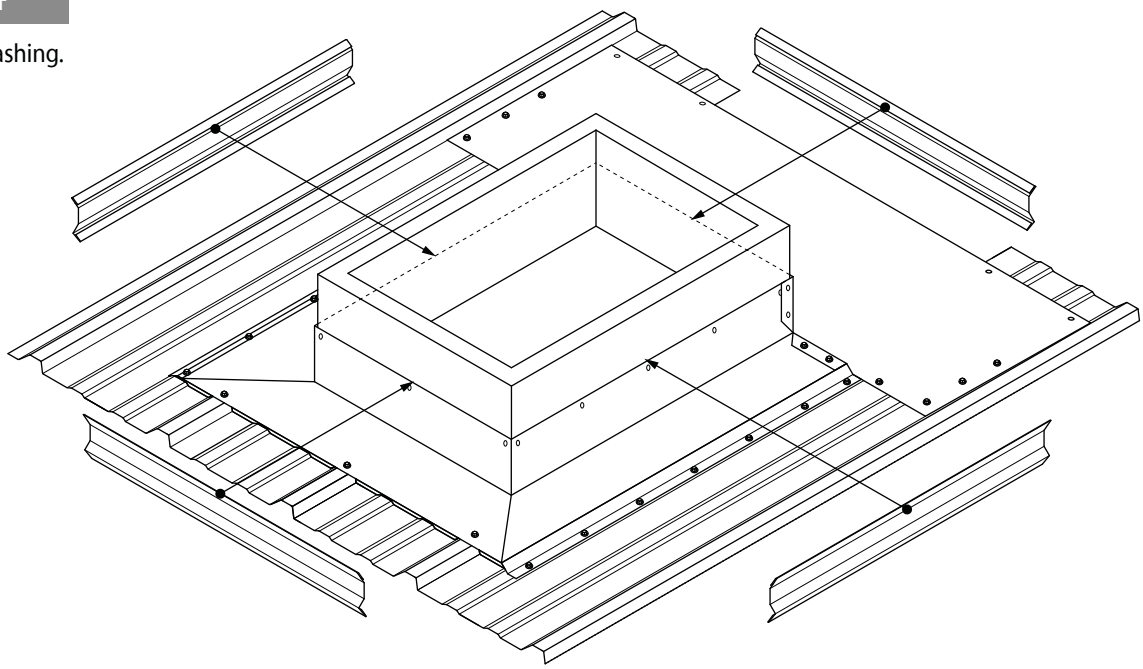
STEP 3

Install low wall flashing.



STEP 4

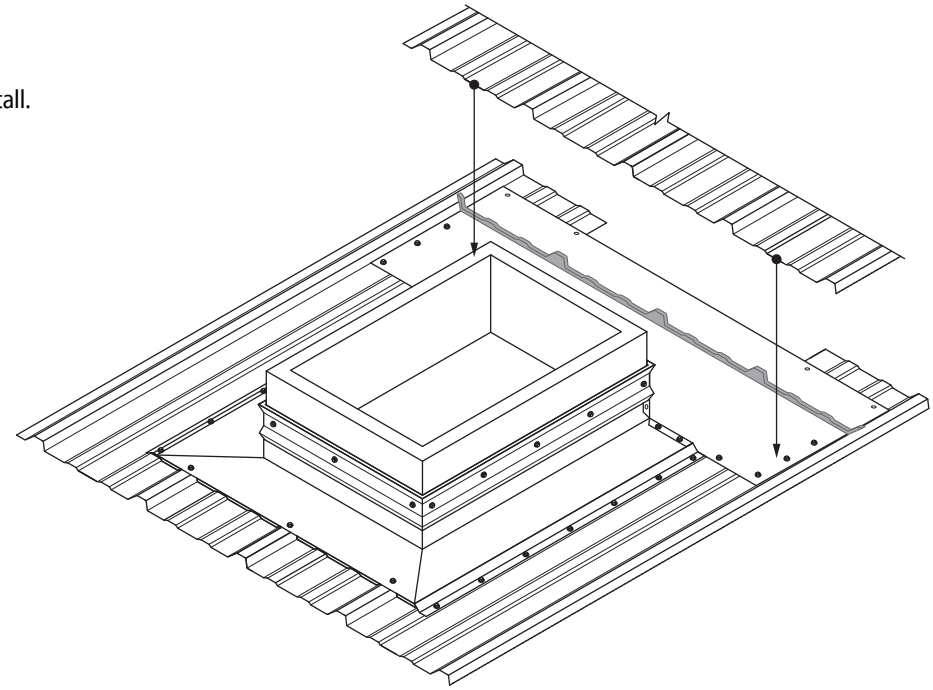
Install Counter Flashing.



CURB DETAIL (Chimneys & Skylights) (cont.)

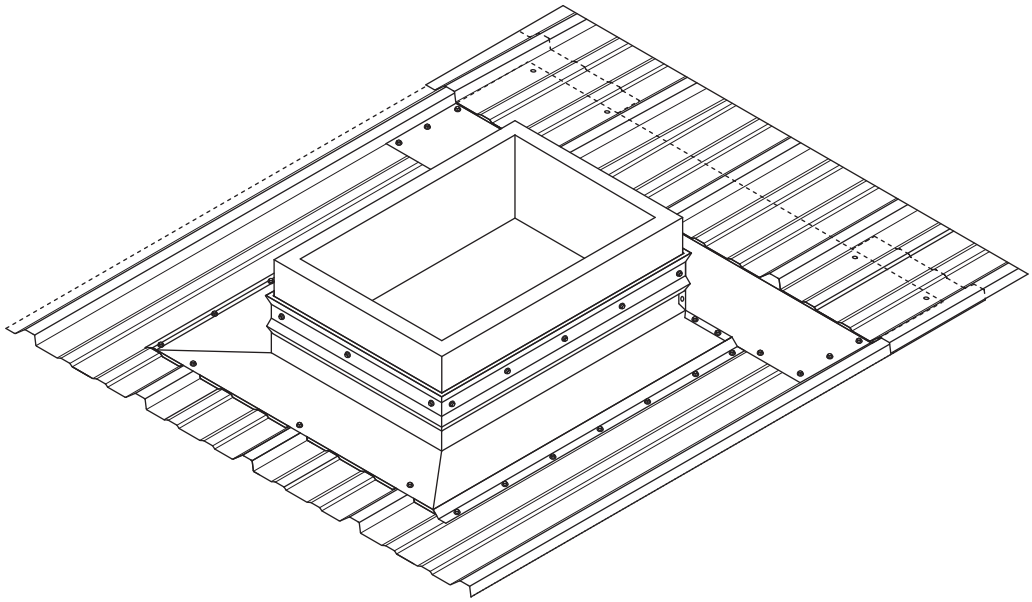
STEP 5

Install foam closure and prepare for upper panel install.



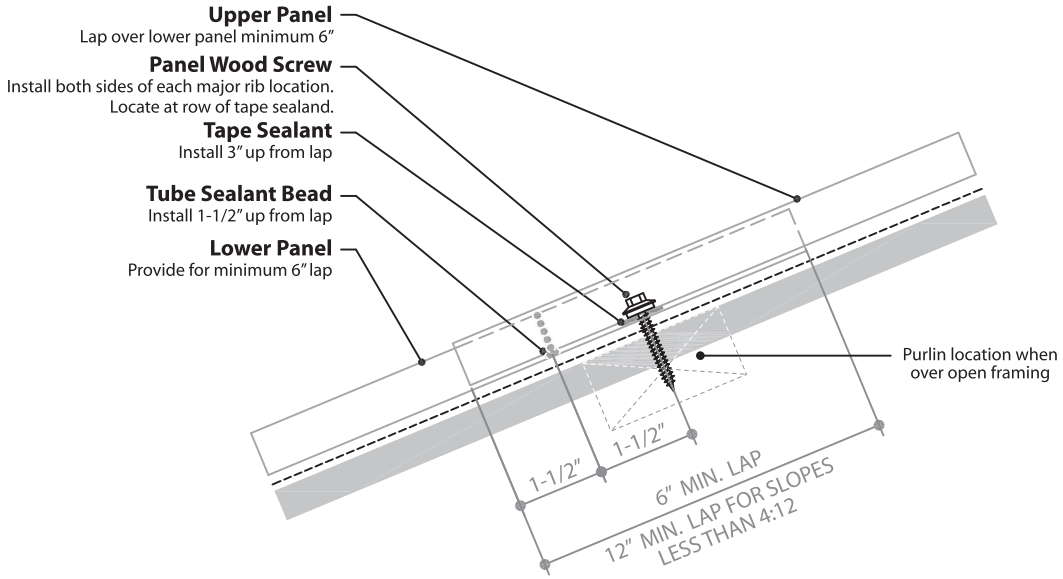
STEP 6

Fasten upper panel over Low Wall flashing.



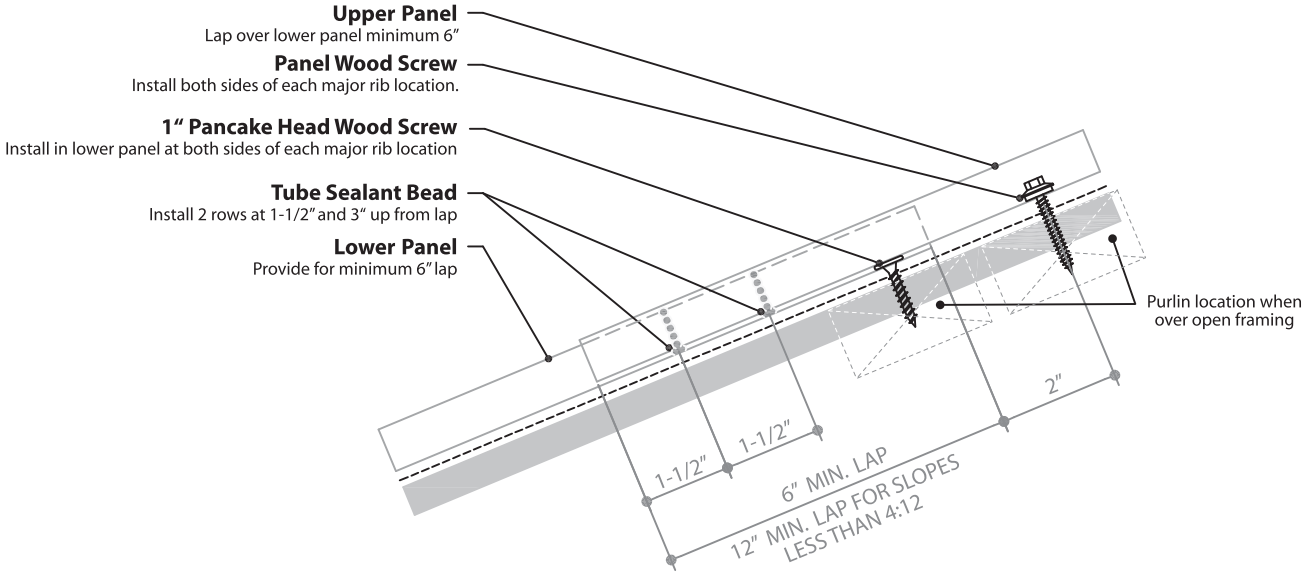
PANEL ENDLAP DETAIL (Short Run)

Use when total panel run is less than 35 feet



PANEL ENDLAP DETAIL (Long Run)

Use when total panel run is 35 feet or greater



BEST BUY METALS

Roofing That Lasts

Metal Roofing, Nationwide

**Pjm Dboojoh (xbwjoftt po gmbu qbo) jt b obuvsbm pddvssfodf jo gmbu qbo n fubm qbofmt boe jt opu b dbvtf gps qbofm sfkfdujpo/

800-728-4010
bestbuymetals.com