

# TUFF RIBB

**PANEL INSTALLATION GUIDE**

3.00

## INTRODUCTION

Congratulations on the purchase of your customized metal panel system from Bridger Steel. We hope our panel system helps you create lasting beauty. When picking up or receiving your metal package check the parts you received against the invoice. If there are any discrepancies notify Bridger Steel Personnel right away.

## HANDLING INSTRUCTIONS

Handle your panels and trim with care to avoid damage. Longer panels may need more than one pickup point when lifting on or off a trailer. Trim bundles can be heavy and awkward. Don't lift more than you can safely handle. Break open the bundle if needed.

## STORING YOUR PANELS

Bridger Steel recommends you should have your structure built before ordering metal. With actual building measurements, your materials can then be ordered. The longer the metal package is stored at your work site, the more opportunity for damage to occur.

If for some reason you cannot install the metal right away, proper storage is a must. Store metal panels and other materials in a covered, dry, well ventilated area ensuring moisture and direct sunlight are kept away from panels. If stored outside, wrap a tarp loosely around the panel bundles so air can circulate freely to avoid moisture build-up. One end of the bundle should be elevated so any accumulated moisture can run off. Never store materials in direct contact with the ground. The trim package you receive has a protective plastic film on it. The film should be removed within 90 days.

## SAFETY RECOMMENDATIONS

Safety is always your first consideration when installing your metal package. Hazards exist on the ground as well as on the roof.

- Always be aware of where you are on the roof. Openings, edges, electrical lines and tripping hazards (cords and equipment) are a constant danger.
- Watch electrical lines when maneuvering panels.
- Never install metal roofing on windy or stormy days. The wind can get under the panel and force you off the roof. If panel becomes loose or airborne it can become a sharp projectile.
- Roofing can be very slick when dusty, wet, or covered with frost. Avoid being on the roof when these conditions are present.
- Never step on panels until they are in place and secured with fasteners.
- Wearing soft soled shoes will help with traction while preventing scratching the panels.
- Use fall protection where needed.
- Be aware of your coworker. Make sure they are not putting themselves in danger.
- If your building has an open purlin system make sure to walk on the purlin not in between the purlin this may result in injury.

## PREPARING NEW CONSTRUCTION

**Bridger Steel quality light gauge material can be used for new or existing structures.**

1. If you need openings cut for venting through the ridge or plumbing vents or electrical conduits, now is the time to add them before panel installation.
2. It is very important to check for protruding nails and other objects which may puncture the underlayment and roofing panels. Be sure to clean all foreign materials from the roof.
3. Cover the deck with a moisture barrier such as a manufacturer approved synthetic underlayment or as code requires. Begin at the eave and roll the underlayment horizontally (along the eave). Overlap the next strip at least 3 inches. (Place a hi-temp ice & water membrane underlayment in areas which snow, ice, and rain can accumulate, such as valleys and eaves. This will be applied to the roof before rolling the underlayment out).
4. Place an alignment line along the gable end where the first panel will be installed. This line must be parallel to the gable edge of the roof and square with the eave edge. Check the roof for square-ness by making a 3 foot line across the eave. (See Figure A) Completing the 3' x 4' x 5' triangle should place the 4' line parallel along the gable edge. The first panel will be placed along this line. Any out of square conditions up to 3" can be covered by the gable trim.

**It is important to measure the roof from gable to gable. Proper placement of panels will allow the panel ribs on each side to be covered by the gable trim while creating a symmetrical appearance on the roof.**

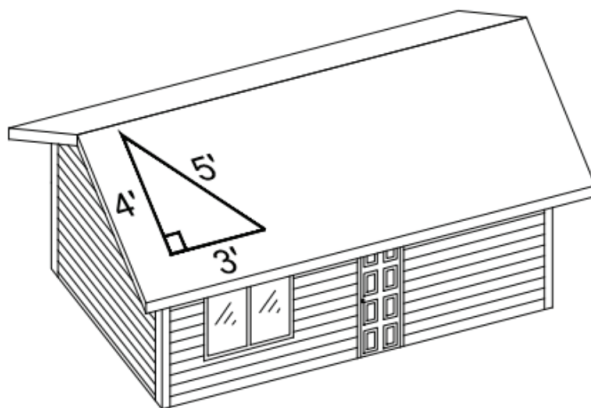


Figure A

## PREPARING PRE-EXISTING ROOF

It's best if existing roofing such as shingles, cedar shakes be removed so there is a smooth flat substrate for installing metal roofing panels. Metal roofing should never be installed over an uneven surface.

Another good reason for stripping a roof is to look for any defects which need repair or replacement. **Never apply metal roofing over a damaged substrate.** (If you are going to strip the roof go back to new roof installation, see Page 4). If you do decide to apply over existing roofing, inspect the roof for defects and repair so the new roofing has a flat surface to be applied to.

1. Secure or remove any warped roofing.
2. Make sure there are no protruding nails or other objects which may affect the new underlayment or roofing panels.
3. Remove all moss and other debris.
4. Remove all hip cap, ridge cap, and penetration flashing.
5. Cover the deck with a moisture barrier such as a manufacturer approved synthetic underlayment. Begin at the eave and roll the underlayment horizontally (along the eave). Overlap the next strip at least 3 inches. (Place a non-granulated hi-temp ice & water membrane underlayment in areas which snow, ice, and rain can accumulate, such as valleys and eaves. This will be applied to the roof before rolling the underlayment out).
6. Place an alignment line along the gable end where the first panel will be installed. This line must be parallel to the gable edge of the roof and square with the eave edge. Check the roof for square-ness by making a 3 foot line across the eave. (See Figure A, Page 3) Completing the 3' x 4' x 5' triangle should place the 4' line parallel along the gable edge. The first panel will be placed along this line. Any out of square conditions up to 3" can be covered by the gable trim.

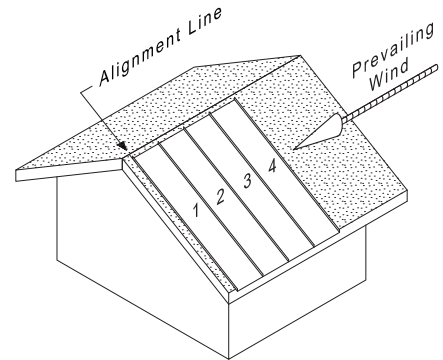
**It is important to measure the roof from gable to gable. Proper placement of panels will allow the panel ribs on each side to be covered by the gable trim while creating a symmetrical appearance on the roof.**

## PANEL INSTALLATION

Before beginning installation of panel systems, review Trim Installation Instructions for your panel system. Pay close attention to Valleys, Eaves, and Transitions.

### When installing Panel System follow these Guidelines:

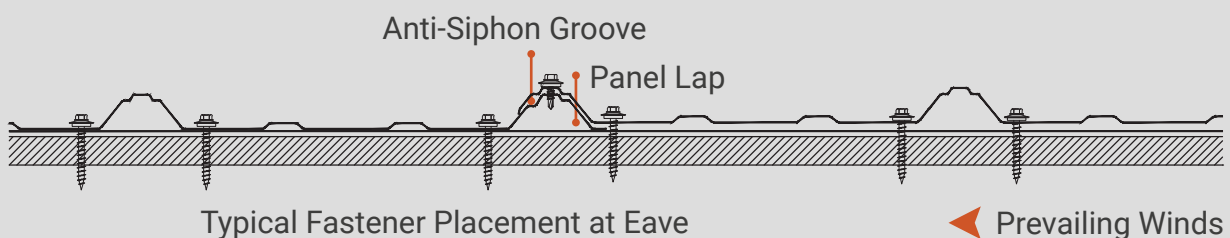
1. Install eave trim, valley trim prior to panel installation.
2. Always install your panels into the prevailing wind.
3. Align the edge of the first panel with the alignment line constructed along the gable end. Allow the panel to overhang the eave 1 to 2". (If venting through the ridge make sure you hold the underlayment down 2" from the ridge. Also make sure your decking is 2" down from the top of the ridge on both sides. Doing this will allow for air circulation in the attic space.)
4. After the first panel is properly aligned, fasten your first panel based on Eave or Endlap fastener requirements (see below). Lay down second and third panels, check the alignment, and be sure they are square. You may have to stretch or shrink the panel by either pulling the top or bottom of the panel to make up the distance needed to be square. If you have over a ¼" to make up it is best to stretch or shrink the panel over the next few panels.
5. After the panels are installed, you can install the rest of your trim and flashing. Start at the eave edges and work your way up. For example, place your gable trim starting at the bottom edge and work towards ridge. If pieces must be overlapped; a 2" minimum is recommended. Once the gable trim is installed, you may then install the ridge cap. Please see trim details on how each piece of trim is installed.



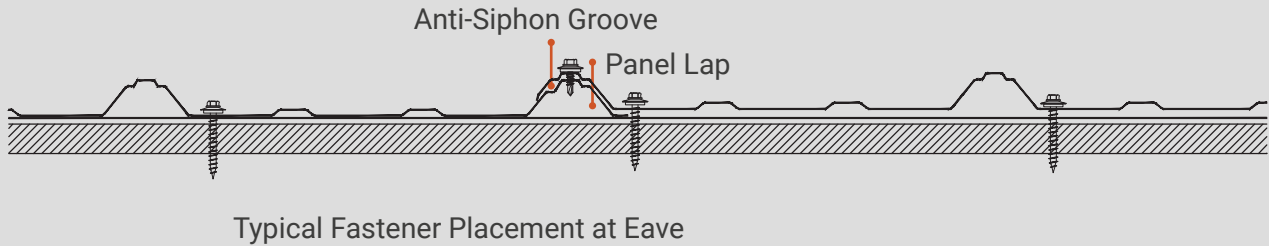
## INSTALLING EXPOSED FASTENERS

Screw fasteners have been proven to have 2 to 3 times the holding power of nails. For maximum holding power, it is recommended that the minimum wood penetration be 1 inch. Utilizing screw fasteners with EPDM and metal washers have an excellent quality and are specifically designed for fastening on the high rib of the metal roofing panels. For 1/2" OSB and plywood 1/2" or thicker, use #14 x 1" wood screws.

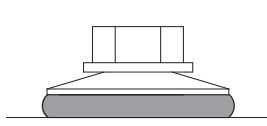
### EAVE OR ENDLAP FASTENER PLACEMENT - FIRST PANEL OVERLAP



## TUFF RIB FASTENER PLACEMENT

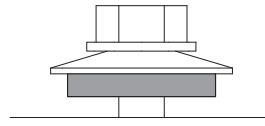


## PROPER FASTENER INSTALLATION



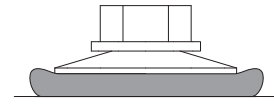
### **CORRECT**

EPDM Material is compressed and visible at the washer.



### **TOO LOOSE**

EPDM not at visible joint. Not enough compression.



### **TOO TIGHT**

EPDM is over-driven. Material is protruding beyond the fastener.

## PREVENTING JOBSITE DAMAGE TO PANELS

To prevent damage to panels and trim, install immediately or store in a cool dry area. Carbonized Steel, Galvanized Steel, Aluminized Steel, Galvalume and all alloys of Aluminum are susceptible to what is commonly referred to as "White" or "Black" rust and water stain. These types of staining are caused by electrolysis, which occurs when moisture exists between stacked sheets.

Painted metal products are also susceptible to a change of or loss of paint gloss discoloration, delaminating, disintegrating, and other accelerated defects of the paint as a result of moisture between the panels sheets.

Bridger Steel assumes no responsibility of liability for damage to our product which occurs in the possession of the consignee or which we deem to be improper handling and storage. If panels are to be cut or drilled be certain to wipe free any metal filings that may accumulate. Protective plastic film on the trim should be removed within 90 days. Failure to follow these instructions may void the warranty.

## ROOF MAINTENANCE

All roofs, metal or shingle, require periodic maintenance. An expert should perform any complex repair or addition; however, there are certain items that an owner can perform in order to maintain his or her roof in excellent condition.

### PERSONAL SAFETY

Safety is the top priority, climbing ladders and walking on any roof can be dangerous. Always use some method of fall protection that is approved by OSHA. Failure to provide the required safety equipment can result in serious injury or death. During the roof inspection, remember to take the following precautions:

- x Use fall protection and all required safety equipment.
- x Keep foot traffic to a minimum. Only walk on the roof if absolutely necessary.
- x Never walk on eave or rake flashings, gutters, hip, or ridge flashings.
- x Never walk on any skylight or fiberglass type panels.
- x Always walk near the roof panel supports.
- x Don't wear black soled shoes; the marks they leave are almost impossible to remove.
- x Soft soled shoes are recommended.

### ANNUAL ROOF MAINTENANCE

The following are a few of the actions to complete (yourself or professionally). Failure to do so could decrease your roof's life dramatically:

- x Clean gutters, down spouts, and drain boxes of leaves and debris.
- x Inspect & remove tree branches or other items which are touching the roof.
- x Clear the valleys and waterways on flat roofs and pooling areas. Leaves and other debris can block the flow of water in valleys or drainage paths. Organic material left on your roof can cause irreversible corrosion to your panels.
- x Check for leaks in roof penetration points like heat, air vents, or skylights. Some leaks are caused by the shrinking or hardening of applied silicones as they dry out. Fill suspicious areas using a Metal Roofing Sealant such as *Weathertite*.
- x Inspect areas around chimneys, heat vents, oil condensers above cooking areas and air conditioners. Exposing your roofing to chemicals can damage the paint and corrode metals.
- x Look for loose flashings, roof sheets, fasteners, or punctures from falling objects.
- x Inspect your roof paint for scratches. Should this occur, clean the area with mineral spirits, Rinse completely with water and allow to dry.

If **Exposed Fasteners** have been used on your roof, it is imperative that they are inspected annually. The inspection entails several key points:

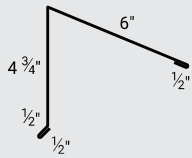
- x Are the fasteners installed correctly? Sometimes fasteners are tightened down too much which may cause them to cut or split the neoprene washers.
- x Other fasteners may not be tightened properly which will not create a seal between the fastener and the metal panel or flashing.
- x EPDM rubber washers are a flexible and durable material that should withstand harsh environments and exposure to ultraviolet rays for many years. However, it is still important to periodically check the washers for any degradation or hardening of the EPDM rubber and replace any fasteners that show evidence of failure. By rubbing you finger nail over the washer you will notice if it is still flexible or has hardened and is breaking apart.

Finally, look at the closures or venting materials under the ridge caps, transitions, end walls and valleys. At times this material can come loose or break down from sun exposure and cause leaks.

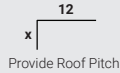
**Replace As Needed**

## TOP CAP

### 4' MINI TOP CAP

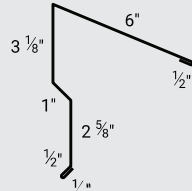


Profile Code: **TR1**  
Detail Code: **04**  
Detail Num: **mtc**  
Girth Num: **12.25"**

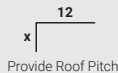


Provide Roof Pitch

### 6' TOP CAP



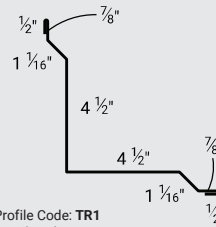
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Detail Num: **6TC**  
Girth Num: **14.25"**



Provide Roof Pitch

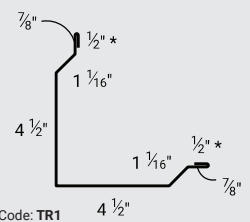
## CORNERS

### INSIDE CORNER



Profile Code: **TR1**  
Detail Code: **06**  
Detail Num: **IC**  
Girth Num: **13.875"**

### OUTSIDE CORNER

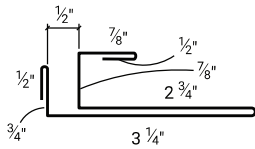


Profile Code: **TR1**  
Detail Code: **08**  
Detail Num: **WV2**  
Girth Num: **28.0"**

\*RF Girth=13.625"

## TRIM PIECES

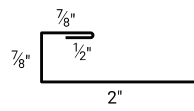
### F&J TRIM



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Detail Num: **FJ1**  
Girth Num: **9.5"**

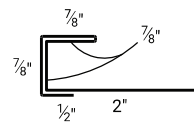
\*V-SOFFIT TO 3' TUF RIB

### 7/8" J TRIM



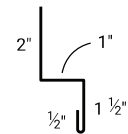
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Detail Code: **05**  
Detail Num: **JM1**  
Girth Num: **4.25"**

### 7/8" DOUBLE J TRIM



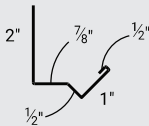
Profile Code: **TR1**  
Detail Code: **05**  
Detail Num: **JM2**  
Girth Num: **6.0"**

### WAINSCOT



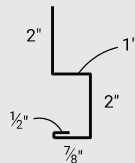
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Detail Num: **ZM2**  
Girth Num: **5.0"**

### HEAD TRIM



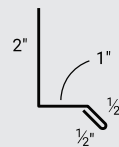
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Detail Code: **05**  
Detail Num: **HT**  
Girth Num: **4.875"**

### BROOM BASE



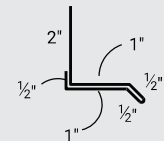
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Detail Code: **05**  
Detail Num: **BT3**  
Girth Num: **6.375"**

### BASE DRIP



Profile Code: **TR1**  
Detail Code: **05**  
Detail Num: **B11**  
Girth Num: **4.0"**

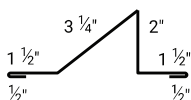
### DOUBLE BASE DRIP



Profile Code: **TR1**  
Detail Code: **05**  
Detail Num: **BT2**  
Girth Num: **5.5"**

## SPECIALTY

### SNOW BREAK



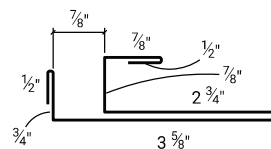
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Detail Code: **09**  
Detail Num: **SB**  
Girth Num: **9.25"**

### DOOR CAP



Profile Code: **TR1**  
Detail Code: **09**  
Detail Num: **dc**  
Girth Num: **VAR.**

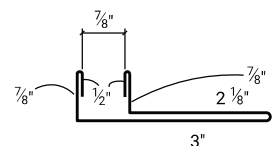
### F&J TRIM



Profile Code: **ML5**  
Detail Code: **07**  
Detail Num: **HL**  
Girth Num: **18.5"**

3' TUF RIB TO 3' TUF RIB

### F TRIM

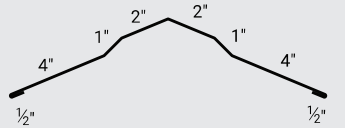


Profile Code: **TR1**  
Detail Code: **09**  
Detail Num: **F1**  
Girth Num: **7.875"**

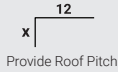


## RIDGE DETAILS

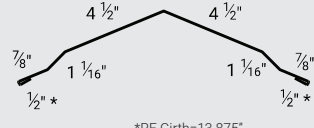
### VENTED RIDGE CAP



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Detail Code: **VR**  
Girth Num: **15.0"**

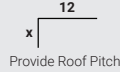


### NON-VENTED RIDGE CAP

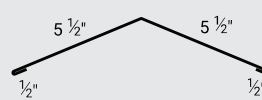


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Detail Code: **01**  
Detail Num: **NV**  
Girth Num: **13.875"**

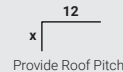
\*RF Girth=13.875"



### HIP RIDGE

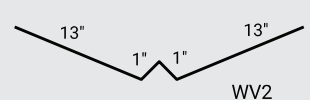


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Detail Num: **HR**  
Girth Num: **12.0"**

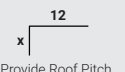


## VALLEY

### 28" W-VALLEY

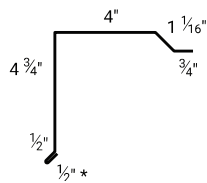


Profile Code: **TR1**  
Detail Code: **08**  
Detail Num: **WV2**  
Girth Num: **28.0"**



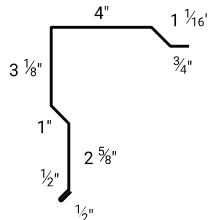
## GABLE DETAILS

### 4" MINI GABLE



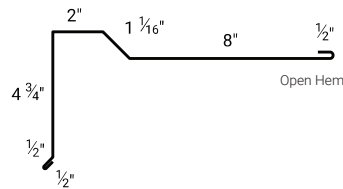
Profile Code: **TR1**  
Detail Code: **02**  
Detail Num: **4GD**  
Girth Num: **11.563"**

### 6" GABLE



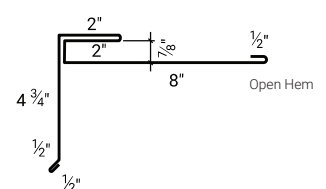
Profile Code: **TR1**  
Detail Code: **02**  
Detail Num: **6GD**  
Girth Num: **13.563"**

### OPEN PROW GABLE



Profile Code: **TR1**  
Detail Code: **02**  
Detail Num: **PG2**  
Girth Num: **17.313"**

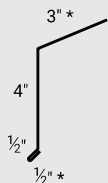
### CLOSED PROW GABLE



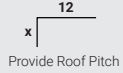
Profile Code: **TR1**  
Detail Code: **02**  
Detail Num: **PG1**  
Girth Num: **19.125"**

## EAVE DETAILS

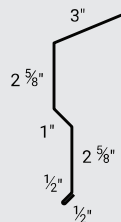
### 4" EAVE



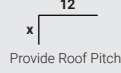
Profile Code: **TR1**  
Detail Code: **03**  
Detail Num: **4ED**  
Girth Num: **8.0"**



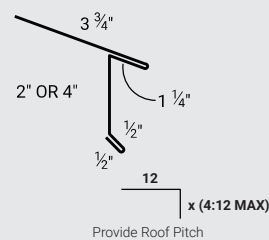
### 6" EAVE



Profile Code: **TR1**  
Detail Code: **03**  
Detail Num: **6ED**  
Girth Num: **10.25"**



### STYLE D EAVE

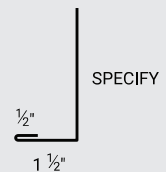


Profile Code: **ML5**  
Detail Code: **03**  
Detail Num: **F**  
Girth Num: **Var.**

Profile Code: **ML5**  
Detail Code: **08**  
Detail Num: **WV1**  
Girth Num: **24.0"**

Provide Roof Pitch

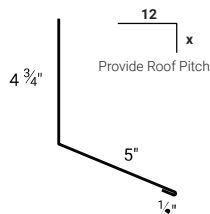
### FASCIA



Profile Code: **TR1**  
Detail Code: **03**  
Detail Num: **F**  
Girth Num: **VAR.**

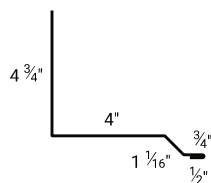
## TRANSITIONS

### ENDWALL



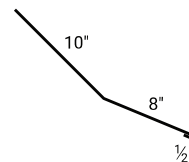
Profile Code: **TR1**  
Detail Code: **07**  
Detail Num: **EW**  
Girth Num: **10.25"**

### SIDEWALL



Profile Code: **TR1**  
Detail Code: **07**  
Detail Num: **SW**  
Girth Num: **11.063"**

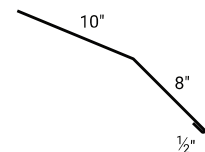
### TRANSITION HIGH LOW



Profile Code: **ML5**  
Detail Code: **07**  
Detail Num: **HL**  
Girth Num: **18.5"**

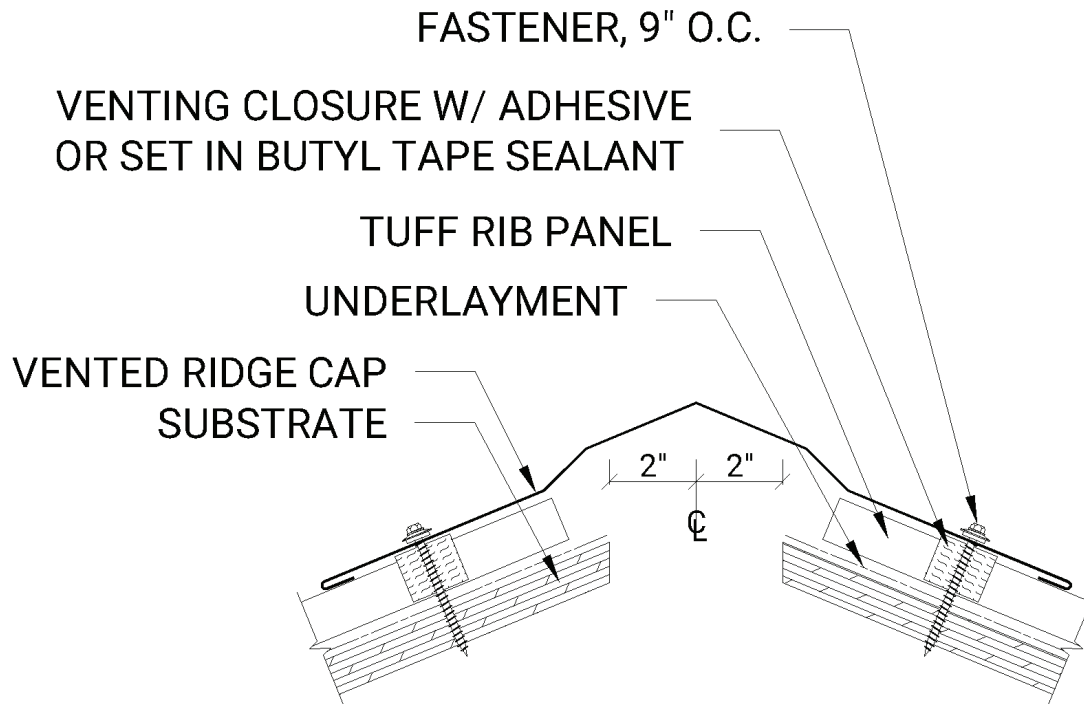
Provide Both  
Roof Pitches

### TRANSITION LOW HIGH



Profile Code: **ML5**  
Detail Code: **07**  
Detail Num: **LW**  
Girth Num: **18.5"**

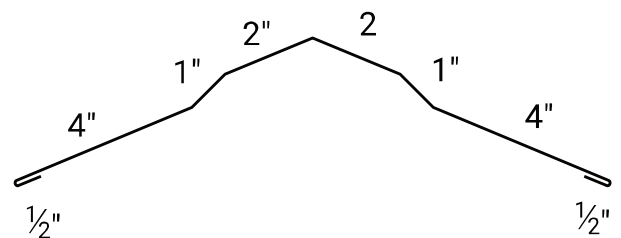
Provide Both  
Roof Pitches



## NOTES:

1. Make sure to leave a 2" gap from both sides of the ridge.
2. Install roof panels on both sides of the ridge, making sure not to cover up the 2" opening at the ridge.
2. Place vented closures on roof panel and fasten down both sides of the ridge on every major rib.

## VENTED RIDGE CAP



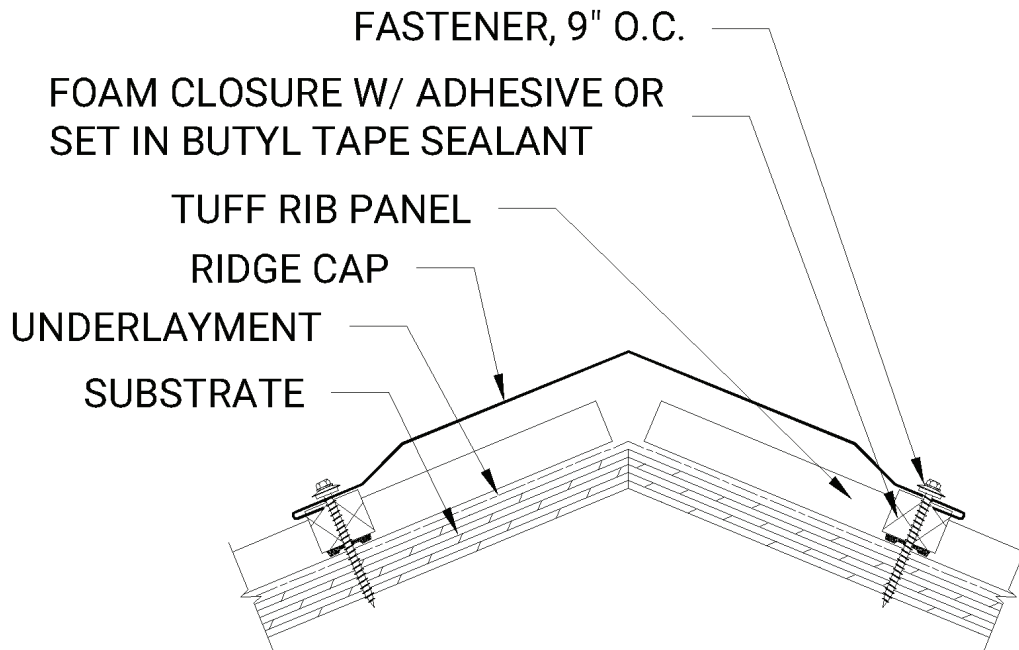
Profile Code: **TR1**

Detail Code: **01**

Detail Num: **VR**

Girth Num: **15.0"**

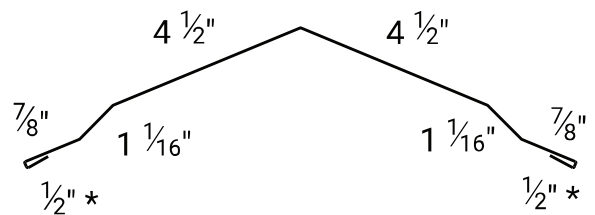
**12**  
x  
Provide Roof Pitch



## NOTES:

1. Install roof panels on both sides of ridge.
2. Place foam closure between panels and ridge cap.
3. Place ridge on roof and fasten on every major rib both sides of roof.

## NONVENTED RIDGE CAP



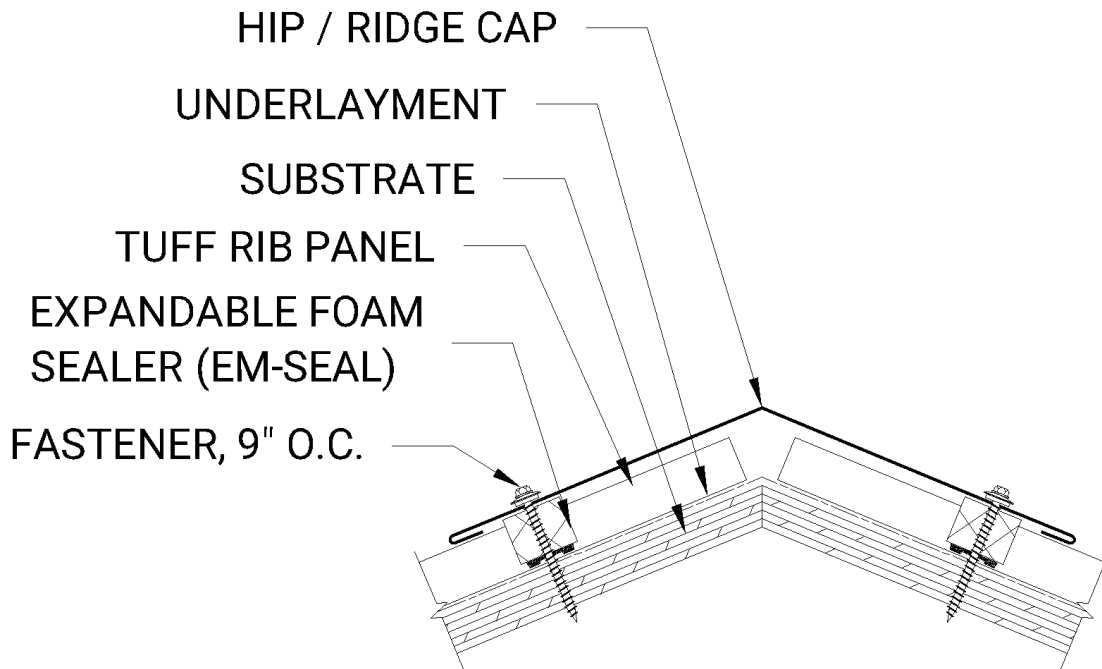
Profile Code: **TR1**

Detail Code: **01**

Detail Num: **NV**

Girth Num: **13.875"**

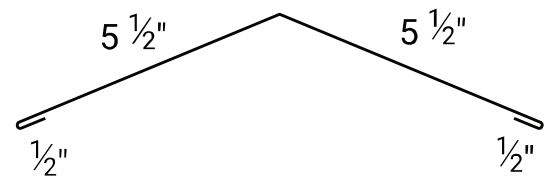
**12**  
x  
Provide Roof Pitch



## NOTES:

1. Install roof panels on both sides of ridge.
2. Place foam closure between panels and ridge cap.
3. Place ridge on roof and fasten on every major rib both sides of roof.

## HIP RIDGE



Profile Code: **TR1**

Detail Code: **01**

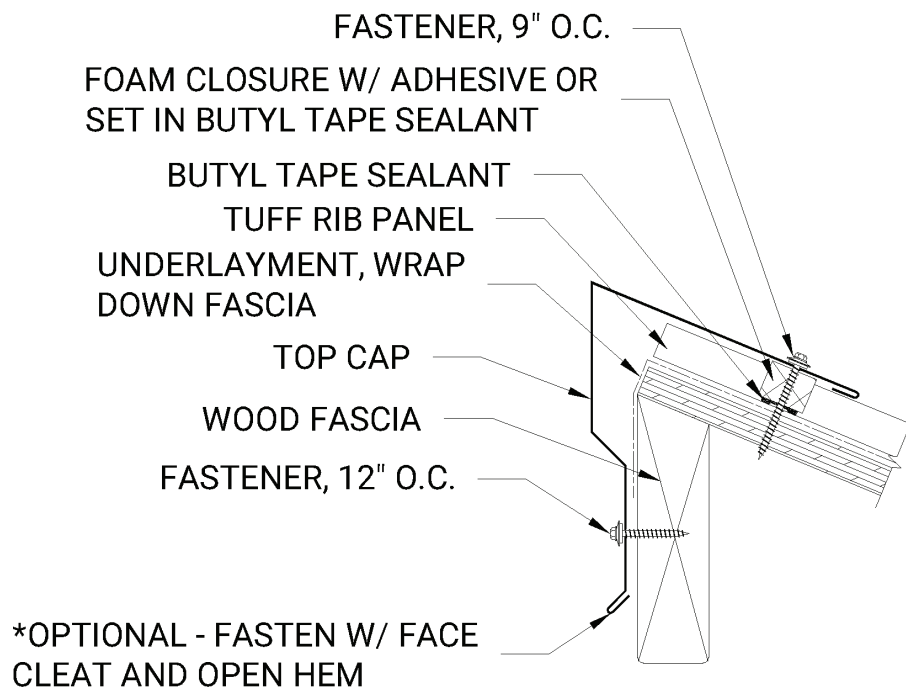
Detail Num: **HR**

Girth Num: **12.0"**

**12**

**x**

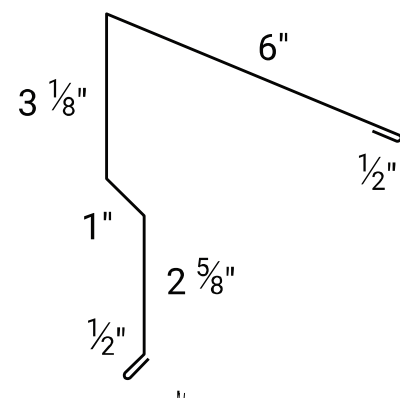
Provide Roof Pitch



## NOTES:

1. Install roof on building.
2. Install closures on upper portion of roof.
3. Place top cap over roof panels and closure.
4. Fasten top cap on every major rib of roof panel.

## 6" TOP CAP



Profile Code: **TR1**

Detail Code: **04**

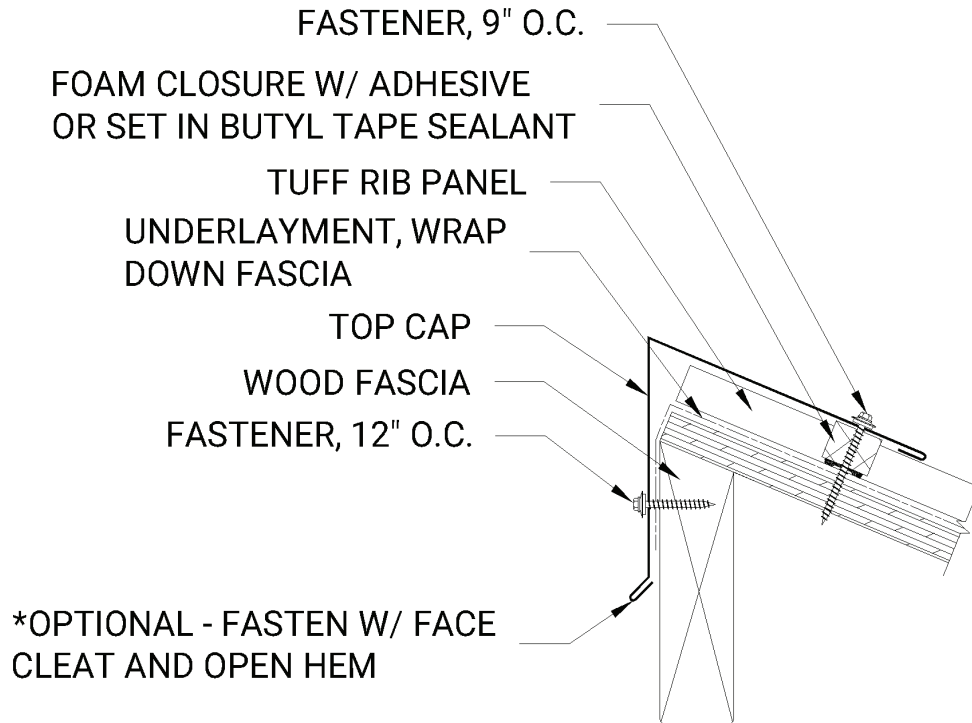
Detail Num: **6TC**

Girth Num: **14.25"**

**12**

**x**

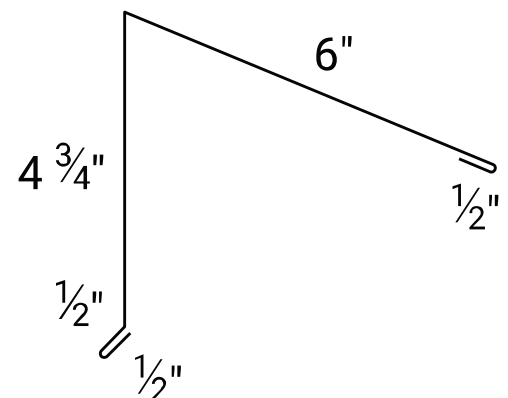
Provide Roof Pitch



## NOTES:

1. Install roof on building.
2. Install closures on upper portion of roof.
3. Place top cap over roof panels and closure.
4. Fasten top cap on every major rib of roof panel.

## 4" TOP CAP



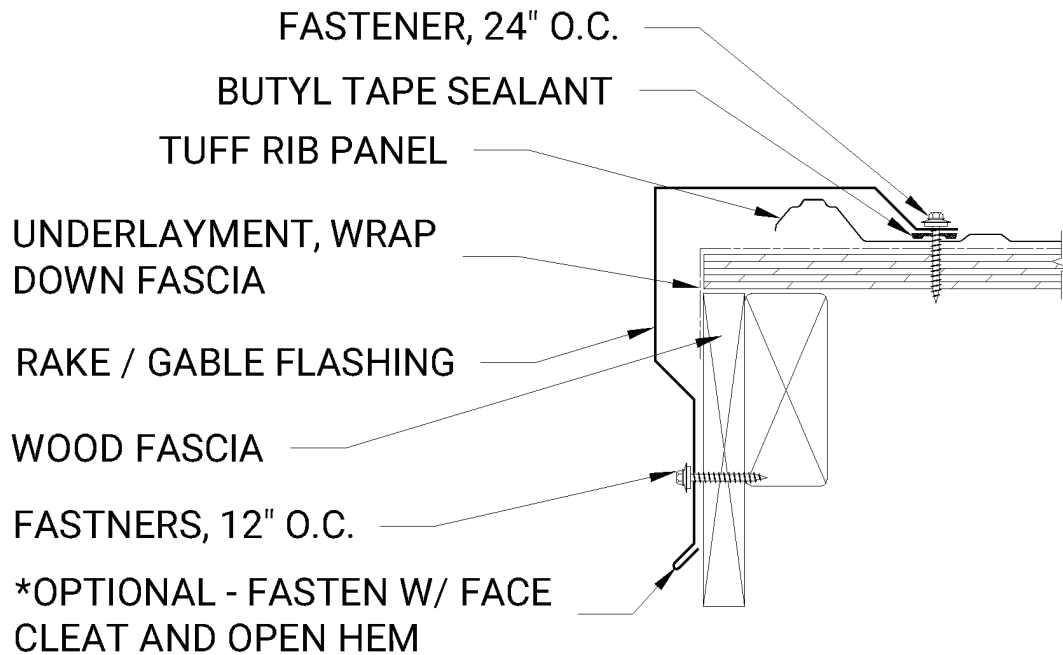
Profile Code: **TR1**

Detail Code: **04**

Detail Num: **MTC**

Girth Num: **12.25"**

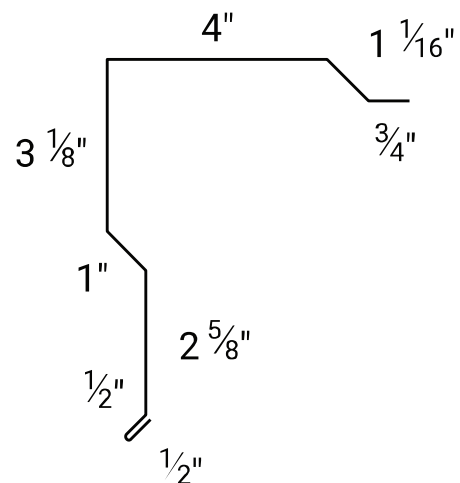
**12**  
x  
Provide Roof Pitch



## NOTES:

1. Apply roofing panels to building.
2. Place gable trim on top of roof sheet and fasten every 24" o.c.

## 2X6 GABLE

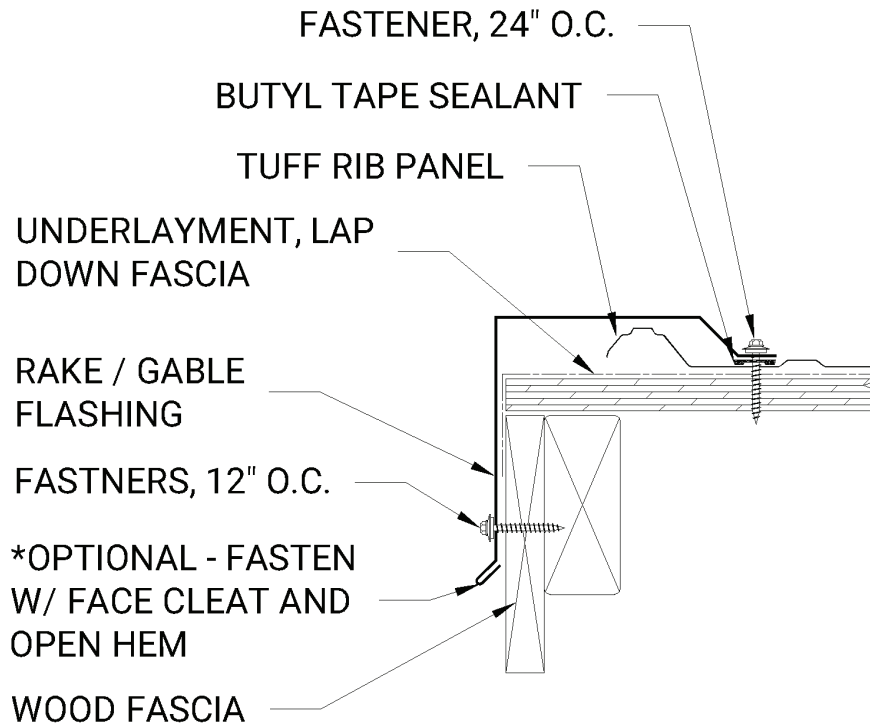


Profile Code: **TR1**

Detail Code: **02**

Detail Num: **6GD**

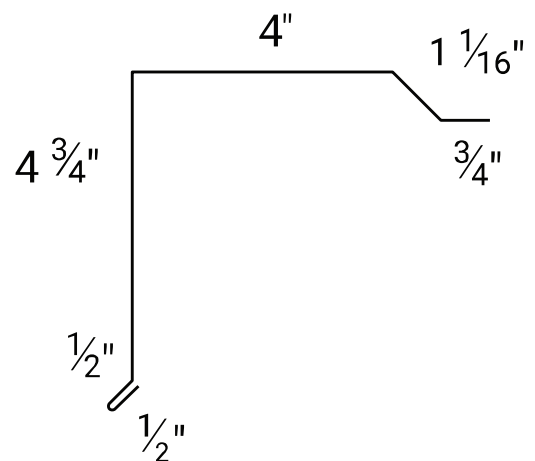
Girth Num: **13.563"**



## NOTES:

1. Apply roofing panels to building.
2. Place gable trim on top of roof sheet and fasten every 24" o.c.

## 2X4 GABLE



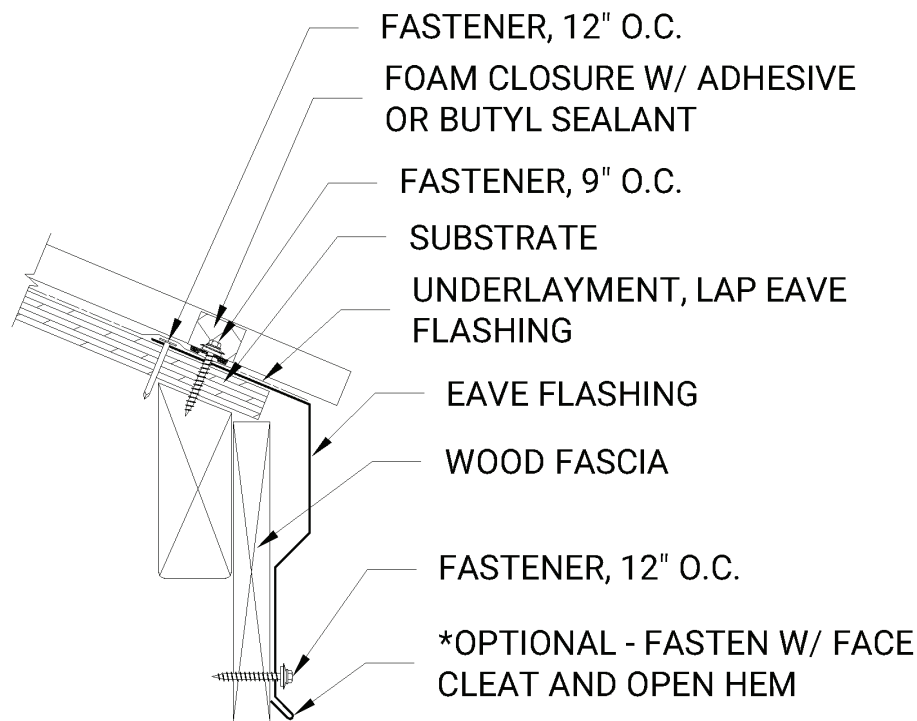
Profile Code: **TR1**

Detail Code: **02**

Detail Num: **4GD**

Girth Num: **11.563"**

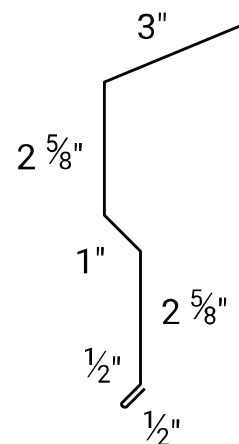




## NOTES:

1. Place eave trim on lower edge of roof with nailing flange towards ridge. Fasten nailing flange every 12".
2. Apply underlayment over top of nailing flange.
3. Next you may start installing panels.

## 2X6 EAVE



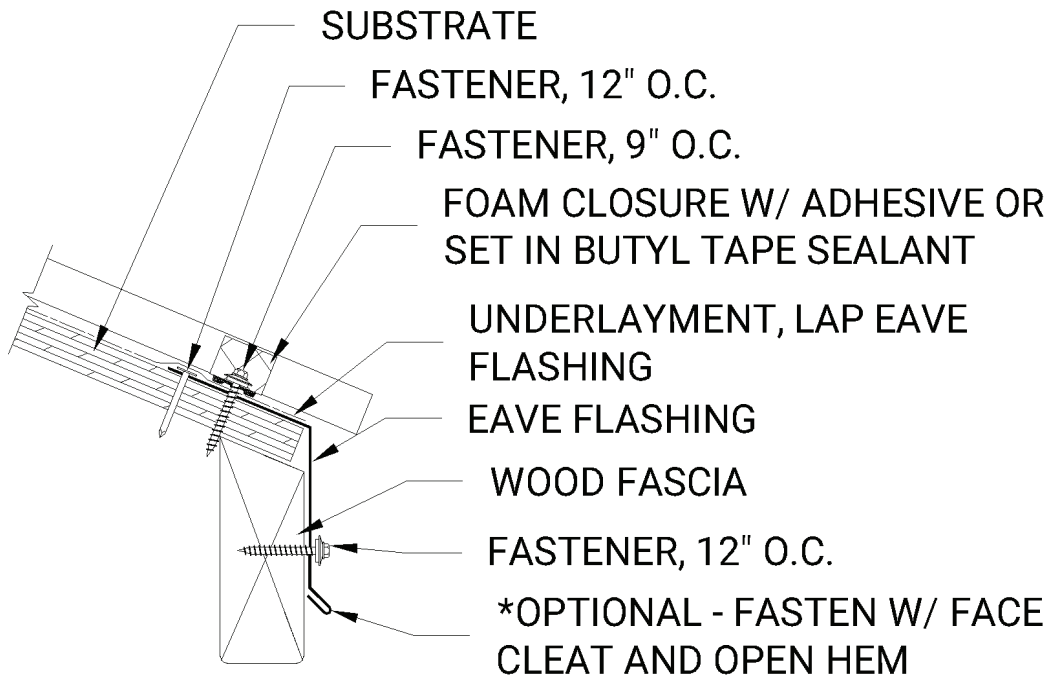
Profile Code: **TR1**

Detail Code: **03**

Detail Num: **6ED**

Girth Num: **10.25"**

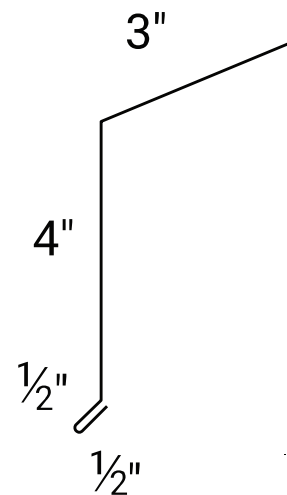
**12**  
x  
Provide Roof Pitch



## NOTES:

1. Place eave trim on lower edge of roof with nailing flange towards ridge. Fasten nailing flange every 12".
2. Apply underlayment over top of nailing flange.
3. Next you may start installing panels.

## 2X4 EAVE



Profile Code: **TR1**

Detail Code: **03**

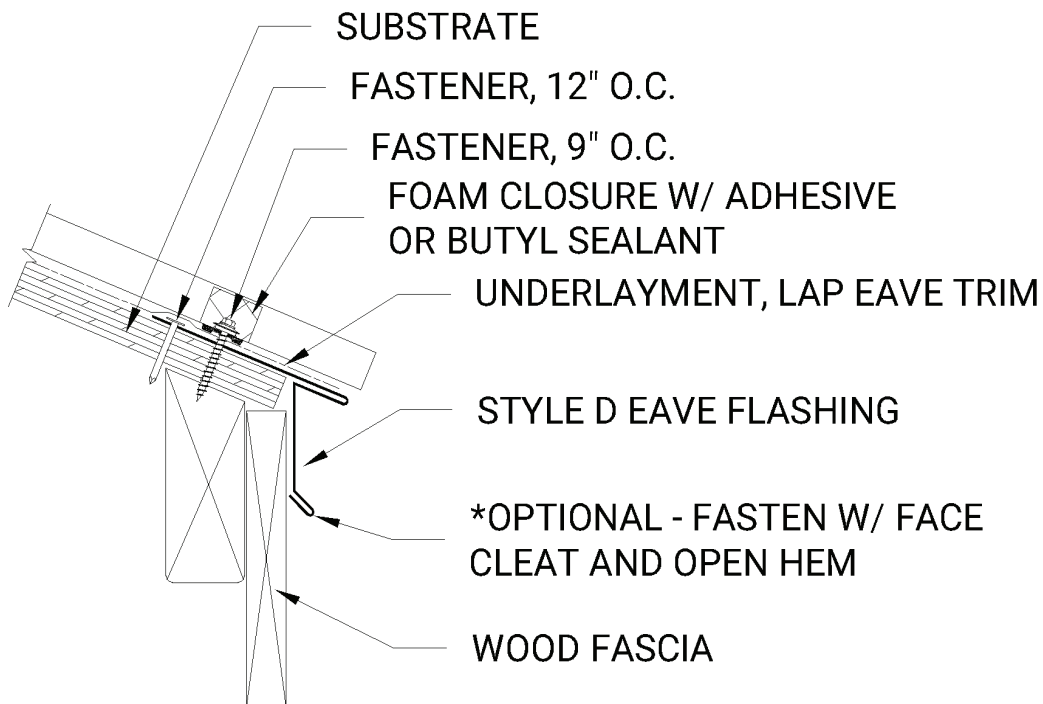
Detail Num: **4ED**

Girth Num: **8.0"**

**12**

**x**

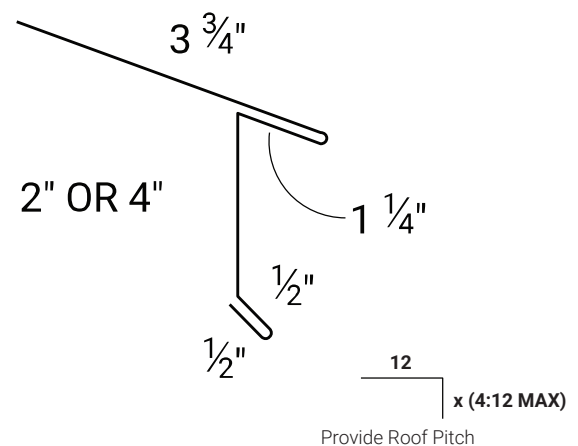
Provide Roof Pitch



## NOTES:

1. Place Style D Eave at edge of roof with nailing flange towards the ridge.
2. Fasten down every 12" o.c., then apply underlayment over nailing flange.
3. Next you may start installing panels.

## STYLE D EAVE



### 2" Style D Eave

Profile Code: **TR1**

Detail Code: **03**

Detail Num: **2D**

Girth Num: **8.0"**

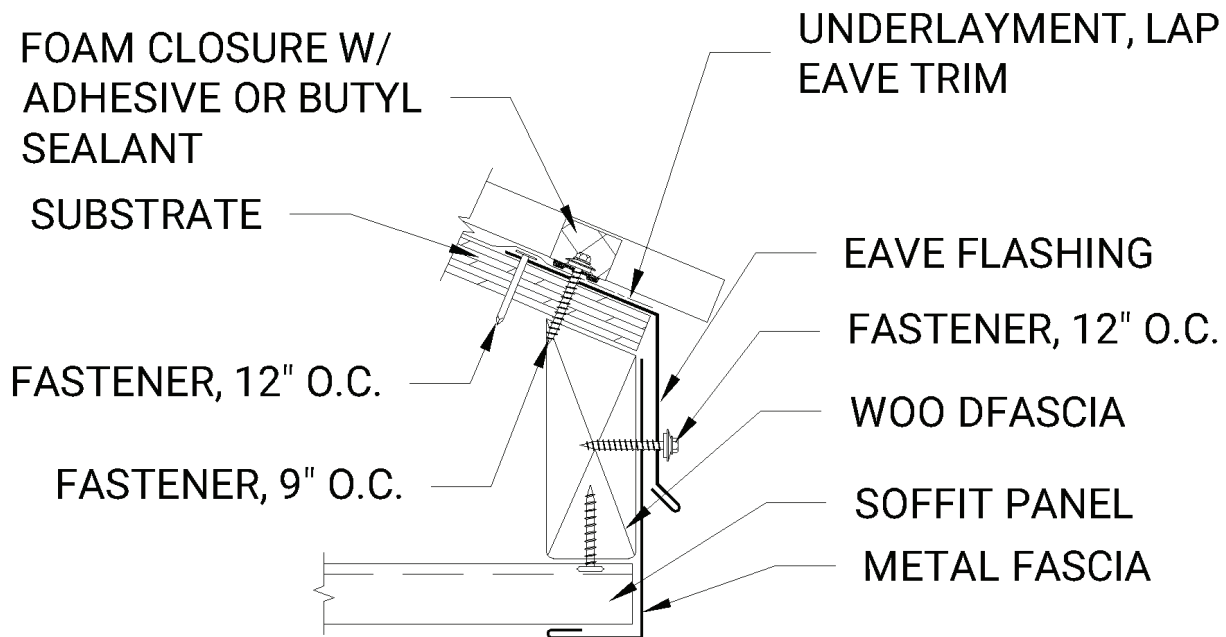
### 4" Style D Eave

Profile Code: **TR1**

Detail Code: **03**

Detail Num: **4D**

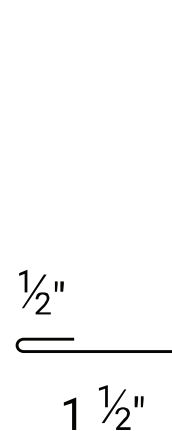
Girth Num: **10.0"**



## NOTES:

1. Place Style D Eave at edge of roof with nailing flange towards the ridge.
2. Fasten down every 12" o.c., then apply underlayment over nailing flange.
3. Next you may start installing panels.

## FASCIA



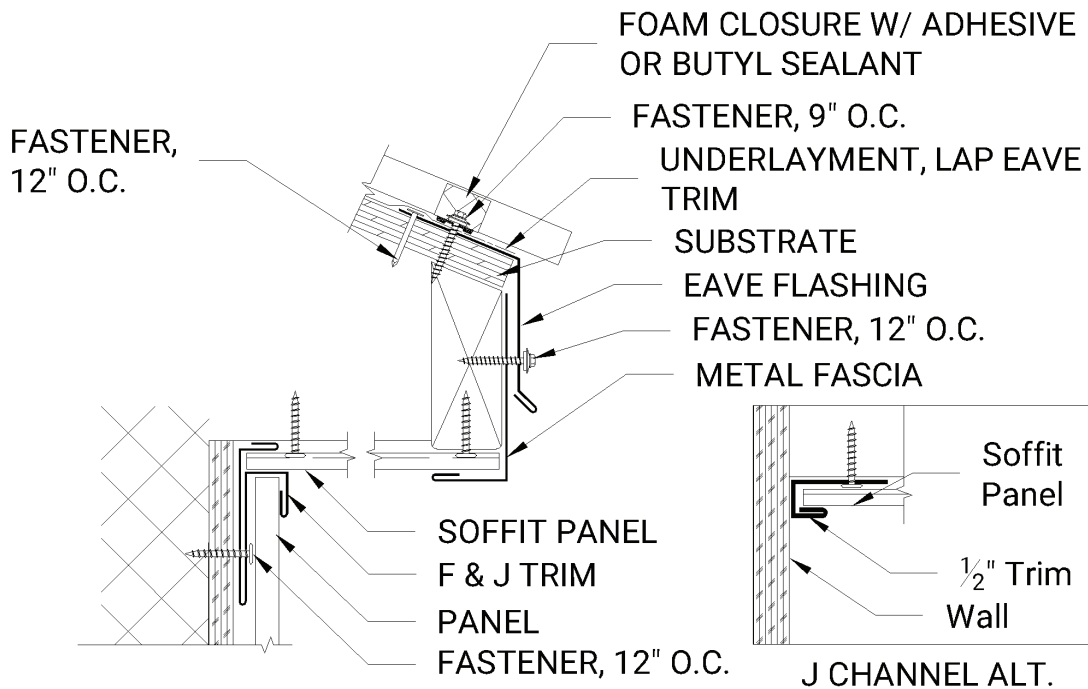
**SPECIFY**

Profile Code: **TR1**

Detail Code: **03**

Detail Num: **F**

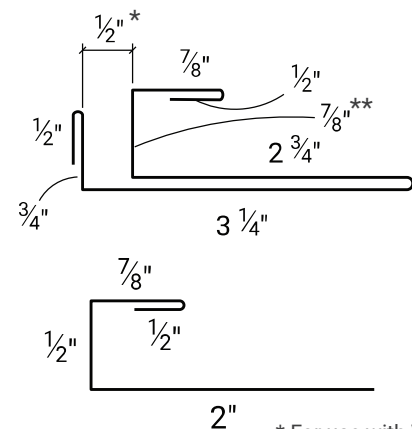
Girth Num: **VAR.**



## NOTES:

1. Place either F & J or 1/2" J Trim on wall of the building.
2. Make sure that the F & J or J Trim is parallel with your fascia.
3. Once F & J or 1/2" J Trim is installed either install wall panels or soffit panel.

## F & J TRIM / 1/2" J TRIM



\* For use with V-Soffit Panel  
\*\* For use with Tuff Rib Panel

### F&J Trim

Profile Code: **TR1**

Detail Code: **05**

Detail Num: **FJ1**

Girth Num: **9.5"**

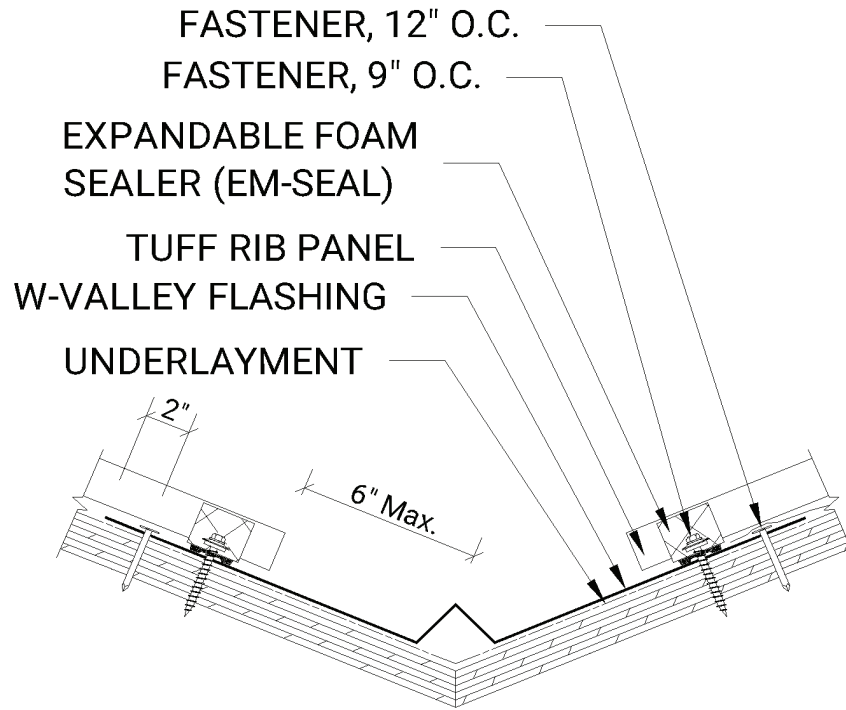
### 1/2" J Trim

Profile Code: **TR1**

Detail Code: **05**

Detail Num: **JM**

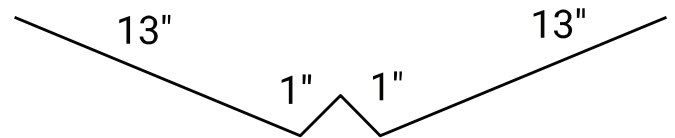
Girth Num: **3.875"**



## NOTES:

1. Install underlayment in bottom of the valley.
2. Lay valley panel down and fasten 2" from the outside edge every 12" o.c.
3. Apply second layer of underlayment over outer edge of valley, approximately 3" down on both sides of the valley.

## W VALLEY



Profile Code: **TR1**

Detail Code: **08**

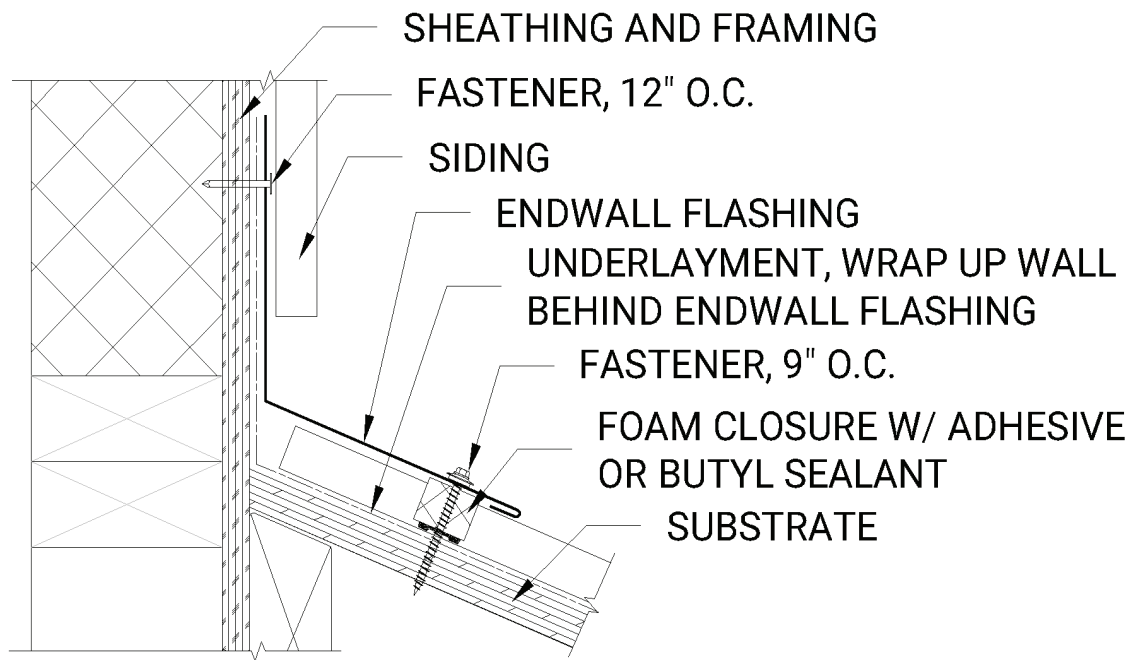
Detail Num: **WV2**

Girth Num: **28.0"**

**12**

**x**

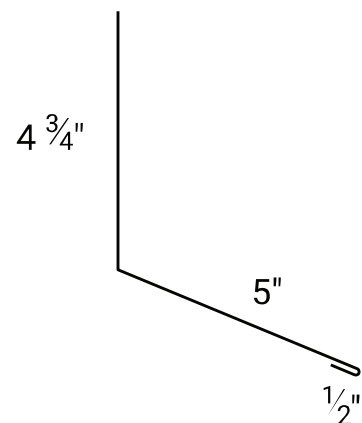
Provide Roof Pitch



## NOTES:

1. Install roof panels.
2. Install foam closure on roof panels in continuous butyl tape sealant.
3. Place endwall on the top of the roof panel and fasten endwall trim every 9" o.c. (major rib).
4. Fasten upper flange to wall every 12".

## ENDWALL



Profile Code: **TR1**

Detail Code: **07**

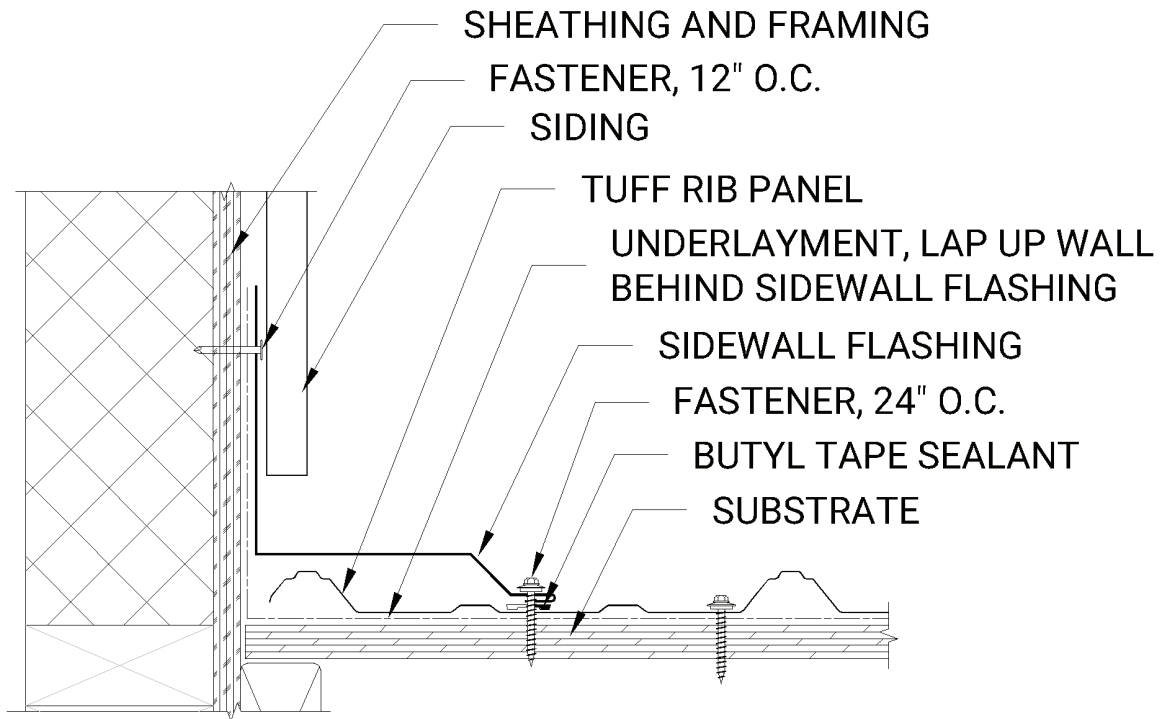
Detail Num: **EW**

Girth Num: **10.25"**

**12**

**x**

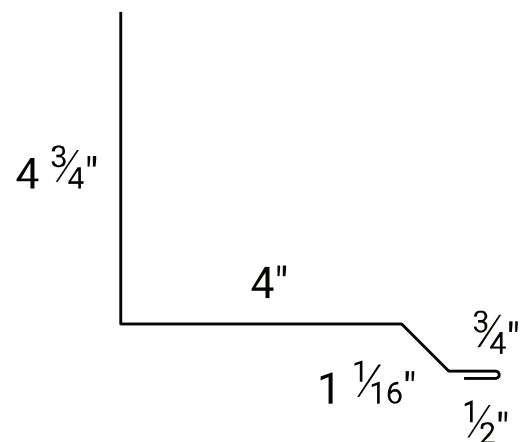
Provide Roof Pitch



## NOTES:

1. Install roof panels.
2. Install Sidewall Flashing on top of roofing panel.
3. Fasten through screw flange every 24" o.c.
4. Fasten nailing flange to wall every 12" o.c.

## SIDEWALL



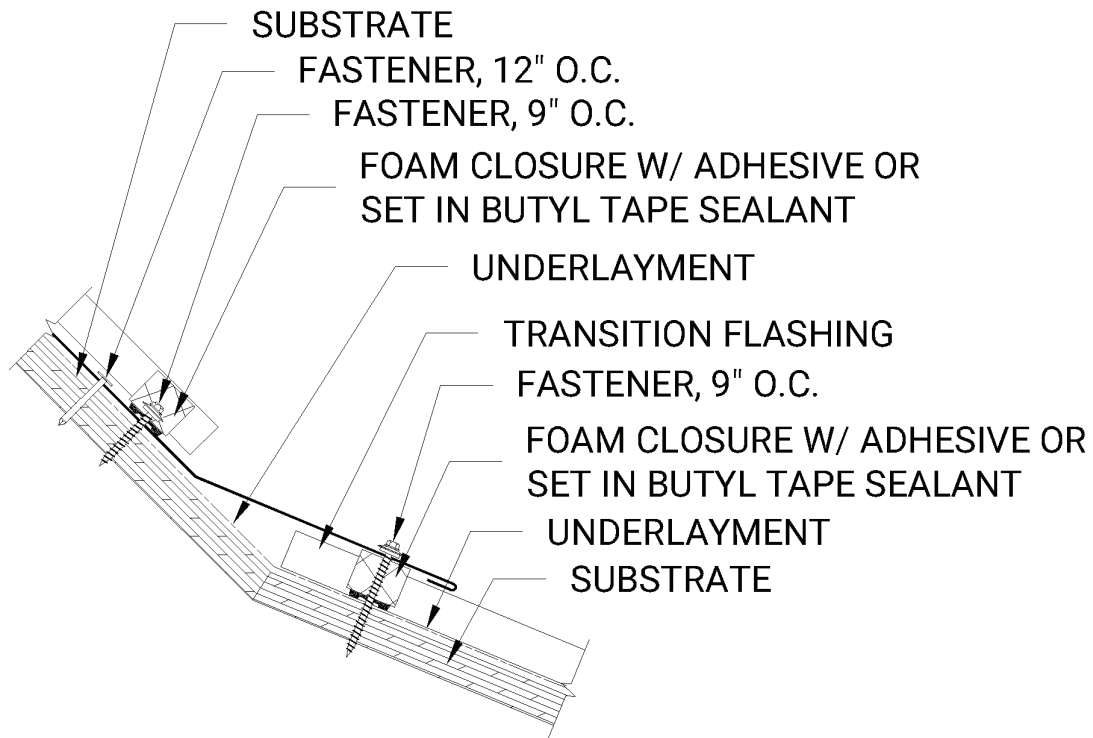
Profile Code: **TR1**

Detail Code: **07**

Detail Num: **SW**

Girth Num: **11.063"**

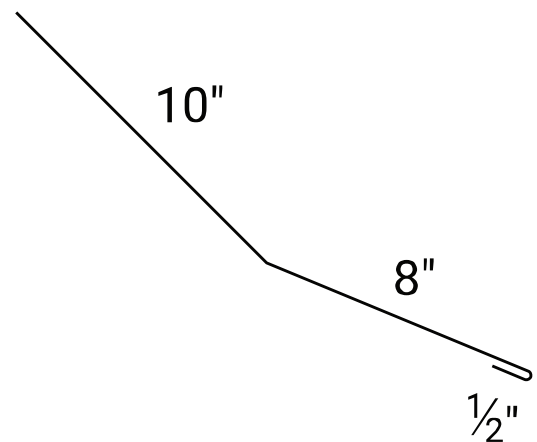




## NOTES:

1. Install lower roof panels.
2. Install closures to lower roof panels.
3. Install High Low Transition over lower roof panels, make sure the transition covers closures. Fasten on top of all major ribs on lower roof panels.
4. Fasten upper leg of transition every 12".

## TRANSITION HIGH-LOW

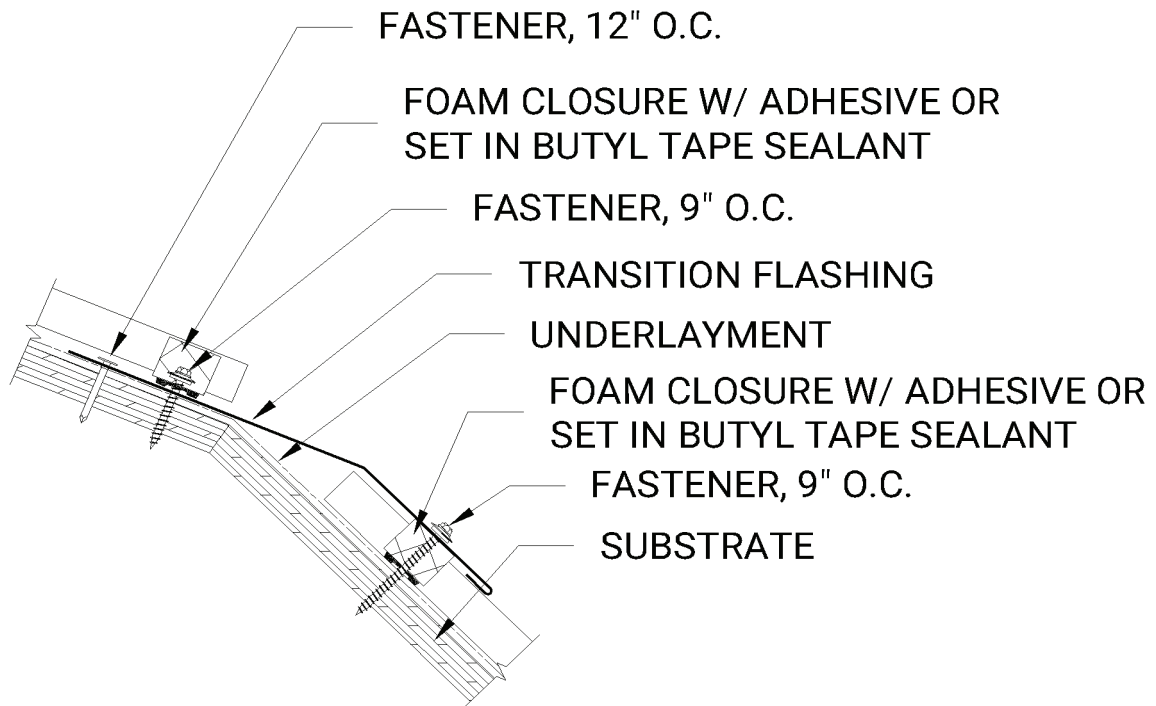


Profile Code: **TR1**

Detail Code: **07**

Detail Num: **HL**

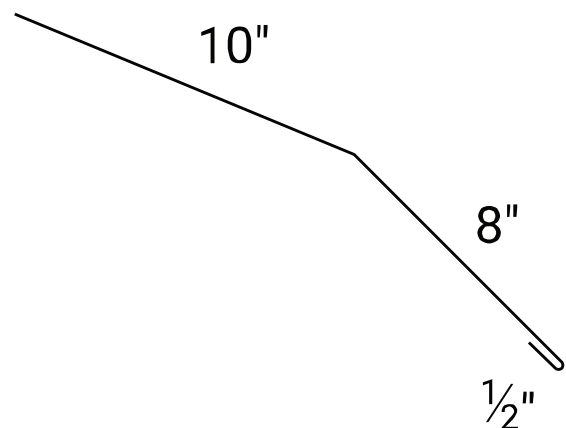
Girth Num: **18.5"**



## NOTES:

1. Install lower roof panels.
2. Install closures to lower roof panels.
3. Install Low High Transition over lower roof panels, make sure the transition covers closures. Fasten on top of all major ribs on lower roof panels.
4. Fasten upper leg of transition every 12".

## TRANSITION LOW-HIGH

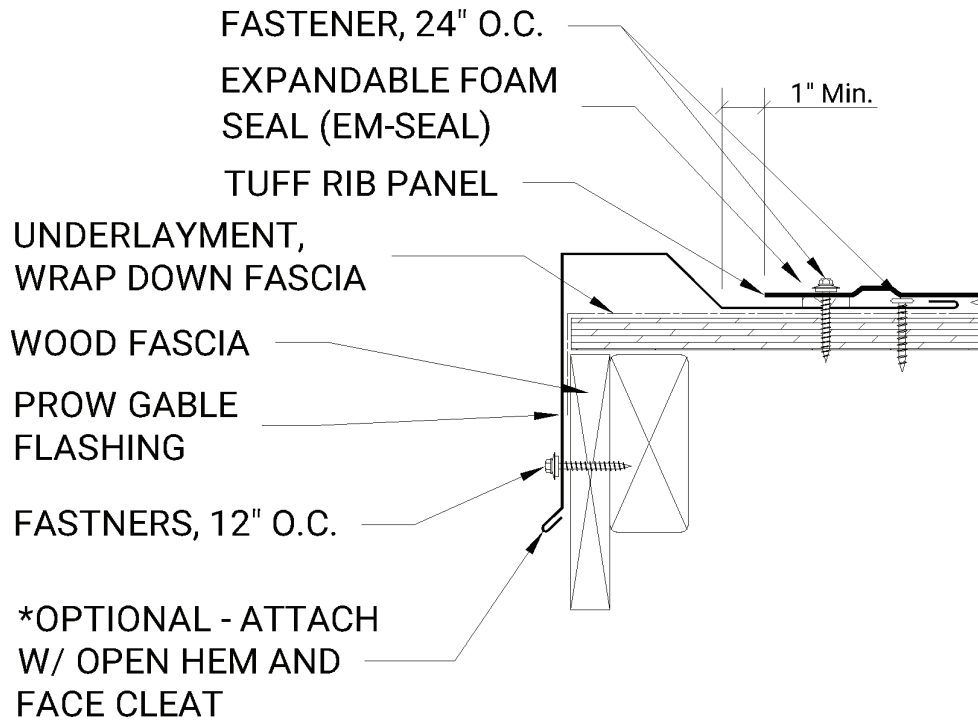


Profile Code: **TR1**

Detail Code: **07**

Detail Num: **LW**

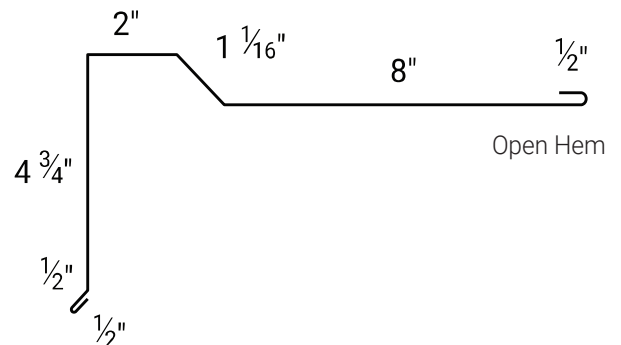
Girth Num: **18.5"**



## NOTES:

1. Install underlayment over edge of prow gable.
2. Lay prow gable trim down and fasten 2" from the outside edge every 12" o.c.
3. Apply universal closure under panel leaving panel 1" from flashing closure.

## OPEN PROW GABLE

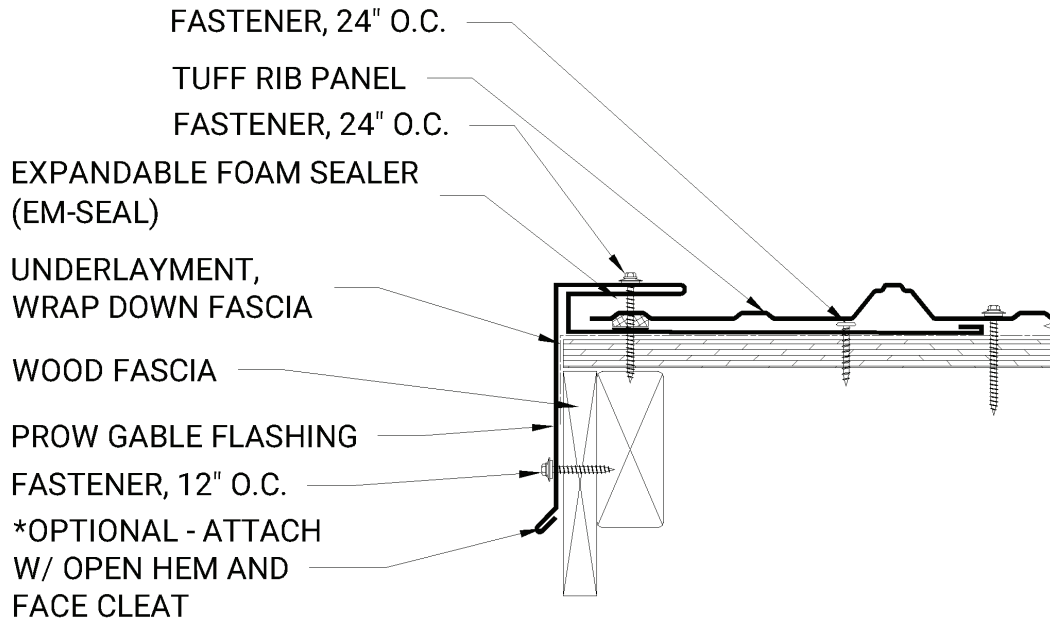


Profile Code: **TR1**

Detail Code: **02**

Detail Num: **PG2**

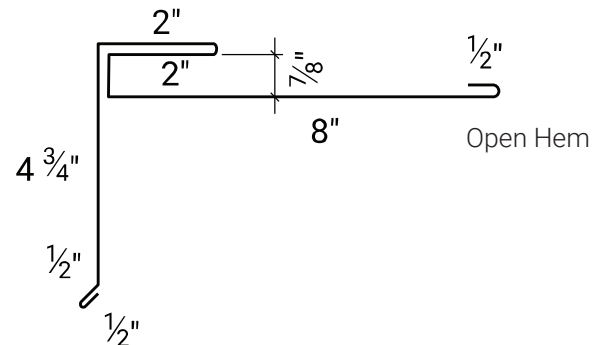
Girth Num: **17.313"**



## NOTES:

1. Install underlayment over edge of prow gable.
2. Lay prow gable trim down and fasten 2" from the outside edge every 12" o.c.
3. Apply universal closure under panel leaving panel 1" from flashing closure.

## CLOSED PROW GABLE

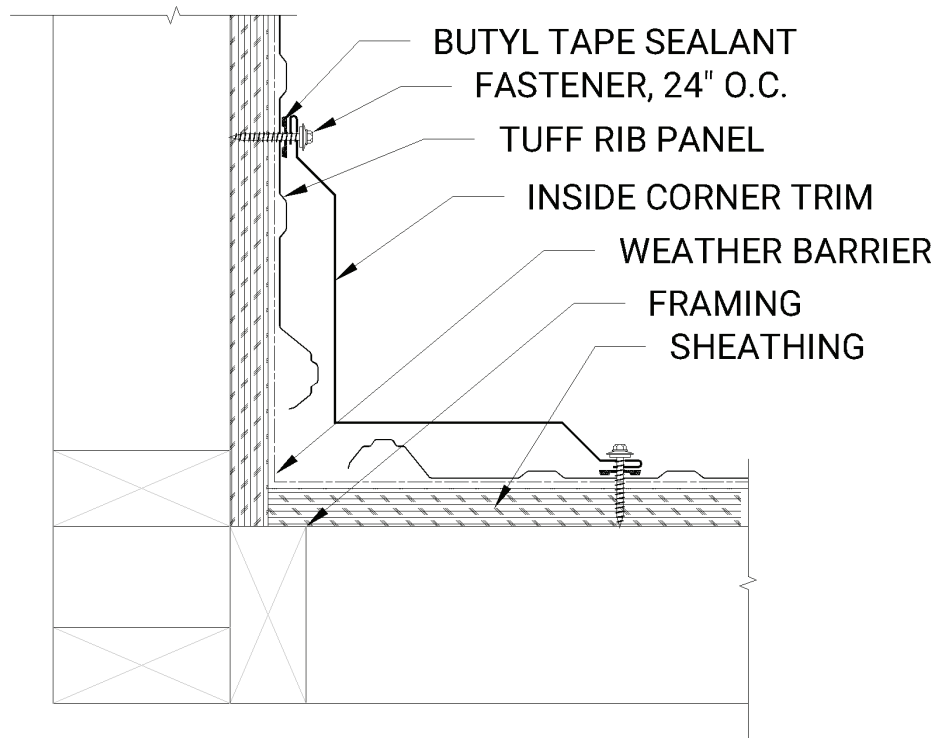


Profile Code: **TR1**

Detail Code: **02**

Detail Num: **PG1**

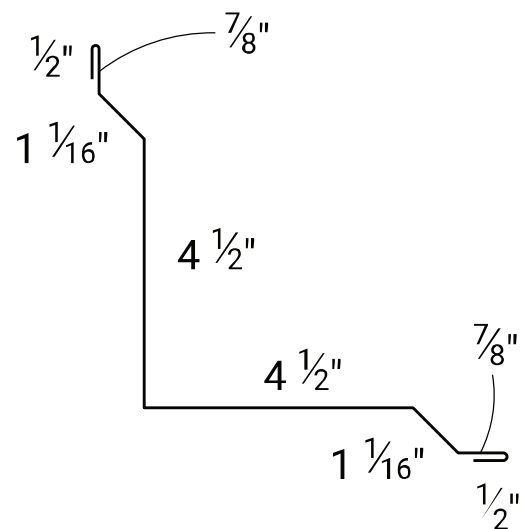
Girth Num: **19.125"**



## NOTES:

1. Install wall panels.
2. Install corners on the building, always working from base of wall to roof. Fasten every 24" on both sides of corner.

## INSIDE CORNER

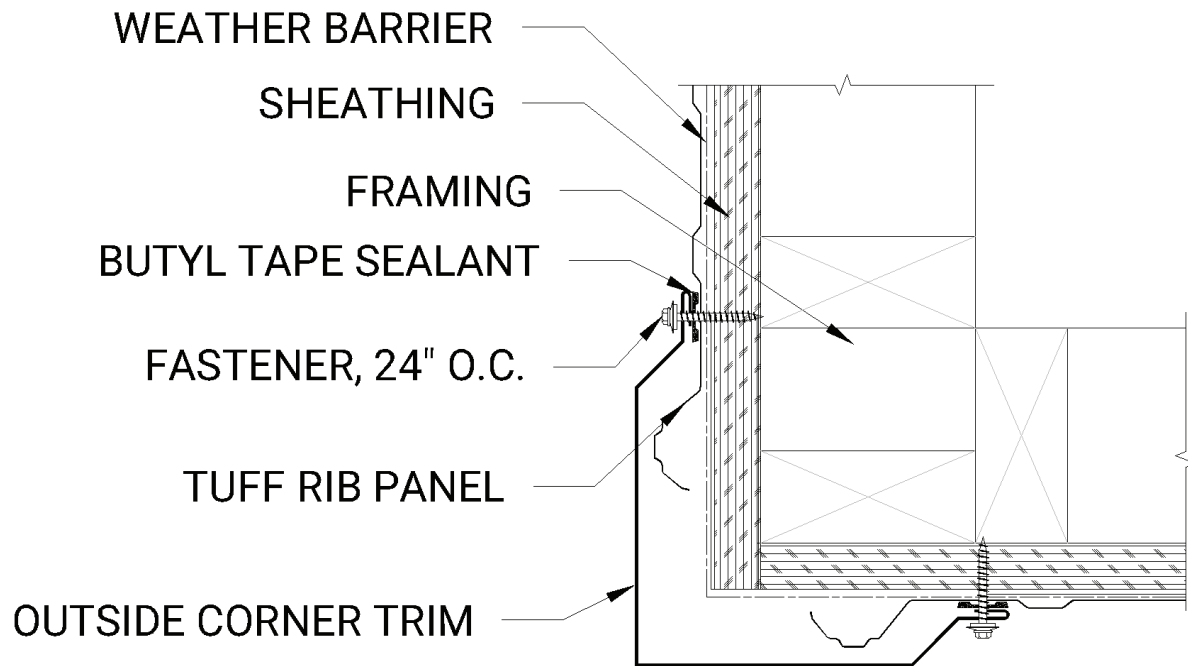


Profile Code: **TR1**

Detail Code: **06**

Detail Num: **IC**

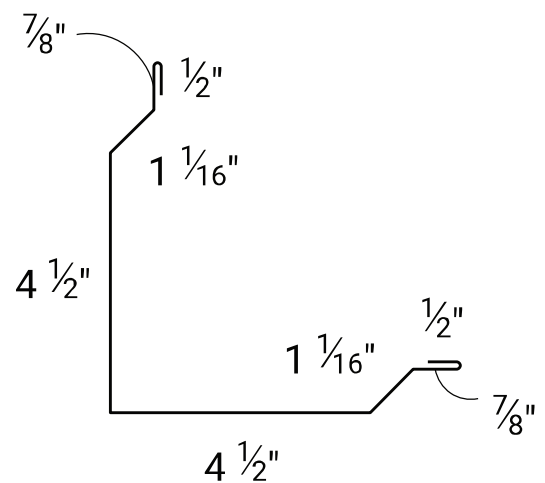
Girth Num: **13.875"**



## NOTES:

1. Install wall panels.
2. Install corners on the building, always working from base of wall to roof. Fasten every 24" on both sides of corner.

## OUTSIDE CORNER

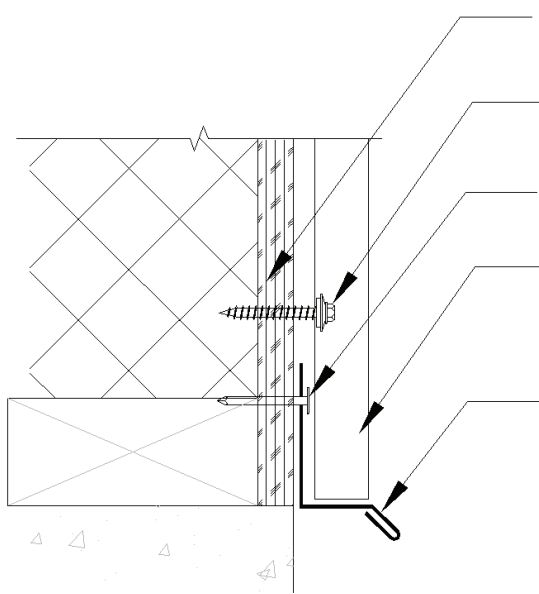


Profile Code: **TR1**

Detail Code: **08**

Detail Num: **WV2**

Girth Num: **28.0"**

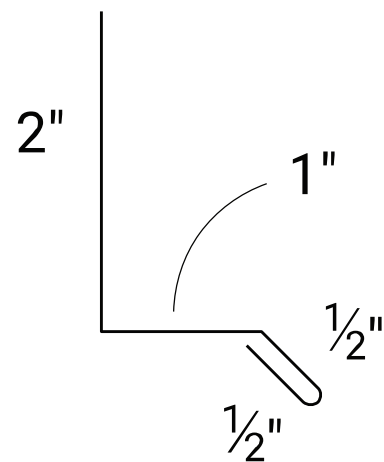


SHEATHING & FRAMING  
FASTENER, 9" O.C.  
FASTENER, 12" O.C.  
TUFF RIB PANEL SIDING  
BASE DRIP FLASHING

## NOTES:

1. Apply Base Drip to bottom of wall to keep panels straight.
2. Base Drip must be installed above ground and fastened every 12" o.c. on nailing flange.

## BASE DRIP

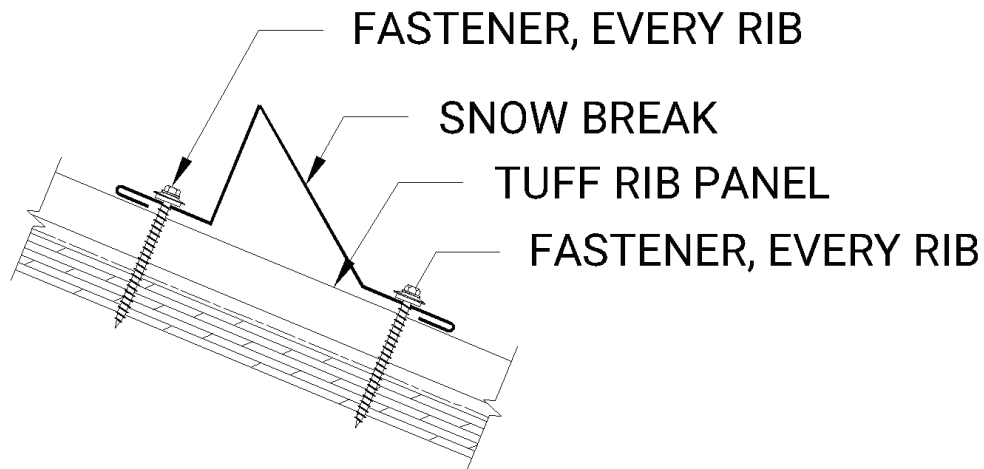


Profile Code: **TR1**

Detail Code: **05**

Detail Num: **B11**

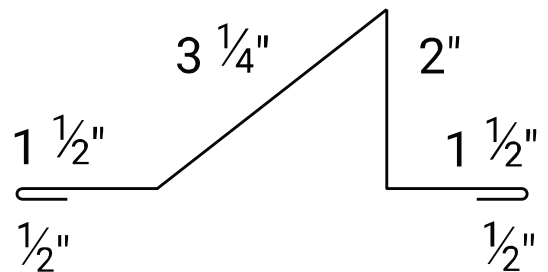
Girth Num: **4.0"**



## NOTES:

1. For sheeted roofs, install first row of snow break 6" to 12" above the eave line.
2. For open framed roofs, install first row of snow break over the first roof purlin.
3. Top and bottom flange of the snow break trim must be securely fastened into the roof deck or roof purlin with 2" fasteners.

## SNOW BREAK



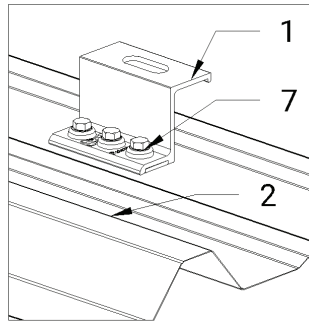
Profile Code: **TR1**

Detail Code: **09**

Detail Num: **SB**

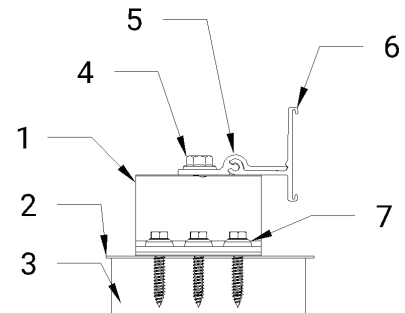
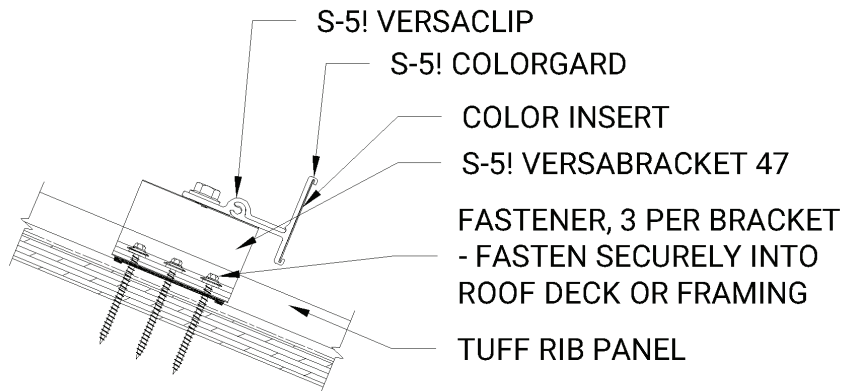
Girth Num: **9.25"**





**GENERAL NOTES:**

1. VERSABRACKET 47
2. TUFF RIB PANEL
3. SUBSTRATE
4. M8 HEX FLANGE BOLT
5. VERSACLIP
6. COLORGARD
7. FASTENER



**NOTES:**

1.Snow retention calculations available.  
Consult with your Product Specialist.  
Provide the engineered roof snow  
load for accurate snow retention  
calculations.

**S-5!® COLORGARD® COLOR INSERT**

2"

Profile Code: **TR1**

Detail Code: **09**

Detail Num: **SB**

Girth Num: **2.0"**