

The application and detail drawings in this manual are strictly for illustration purposes and may not be applicable to all building designs or product installations. All projects should conform to applicable building codes for that particular area. It is recommended to follow all building regulations and standard industry practices.

Metal Sales Manufacturing Corporation is not responsible for the performance of the roof system if it is not installed in accordance with the suggested instructions referenced in this manual. If there is a conflict between this manual and the actual erection drawings, the erection drawings are to take precedence.

Prior to ordering and installing materials, all dimensions should be verified by field measurements.

Metal Sales reserves the right to modify, without notice, any details, recommendations or suggestions. Any questions you may have regarding proper installation of these Architectural roofing systems should be directed to your local Metal Sales representative, (see pages 2 and 3).

Oil canning is not a cause for rejection. Oil canning can be described as the amount of waviness found in the flat areas of metal panels. Oil canning is an inherent characteristic of light gauge cold formed metal products, particularly those with broad flat areas. There are many factors which may contribute to oil canning that Metal Sales is not able to control. These factors include: misalignment of the support system, over driving of fasteners used on the panels, stress (whether inherent in the panel or induced), thermal expansion and contraction of the panel, improper material handling, width, gauge, length, color of panels, and improper installation (reference Metal Construction Association "Oil Canning Position Paper"- Appendix A).

Consult your local Metal Sales Branch for any additional information not outlined in this manual.

This manual is designed to be utilized as a guide when installing an Architectural roofing system. It is the responsibility of the erector to ensure the safe installation of this product system.

## **SAFETY**

### **STUDY APPLICABLE OSHA AND OTHER SAFETY REQUIREMENTS BEFORE FOLLOWING THESE INSTRUCTIONS.**

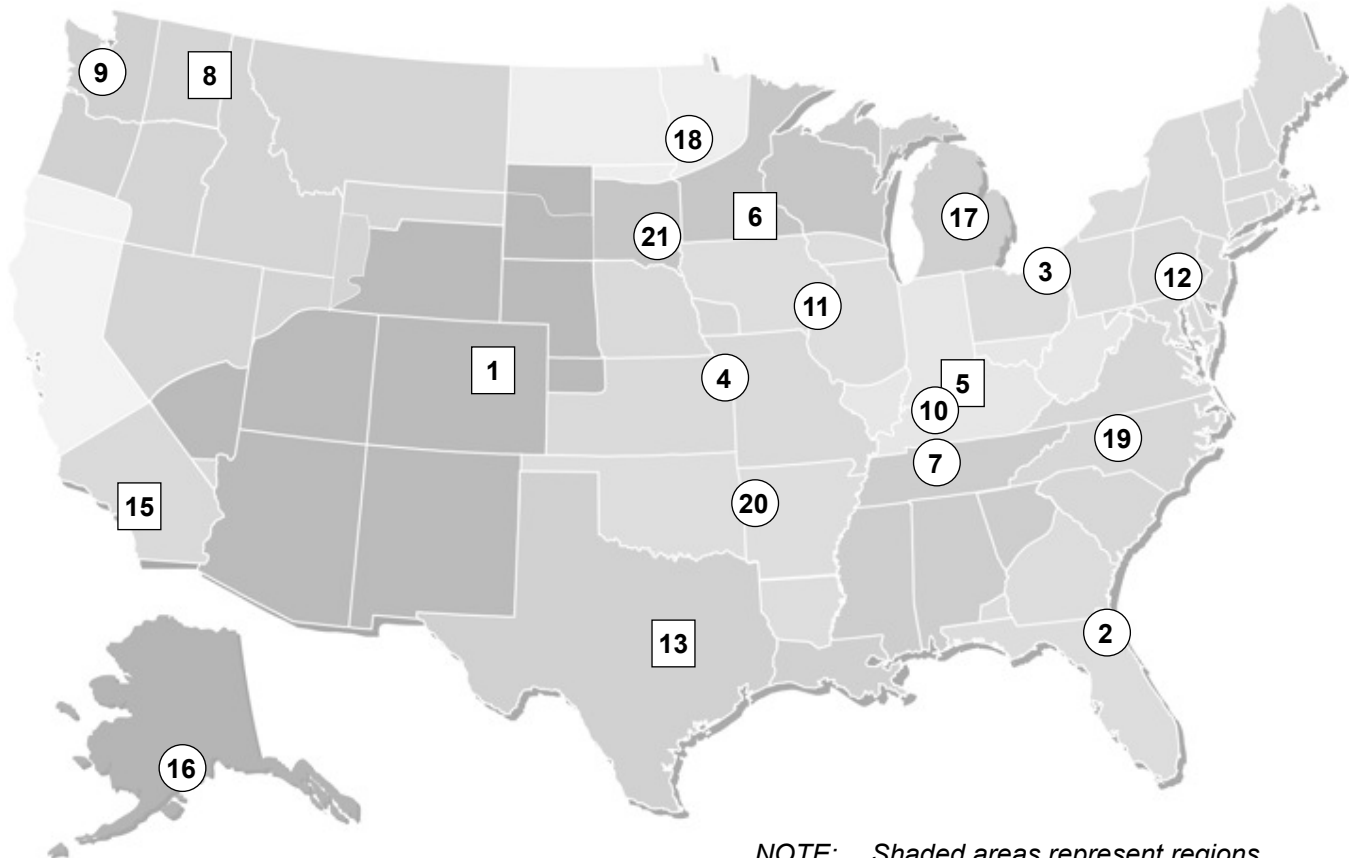
The installation of metal roof systems is a dangerous procedure and should be supervised by trained knowledgeable erectors. **USE EXTREME CARE WHILE INSTALLING ROOF PANELS.** It is not possible for Metal Sales to be aware of all the possible job site situations that could cause an unsafe condition to exist. The erector of the roof system is responsible for reading these instructions and determining the safest way to install the roof system.

These instructions are provided only as a guide to show a knowledgeable, trained erector the correct parts placement one to another. If following any of the installation steps would endanger a worker, the erector should stop work and decide upon a corrective action.

Provide required safety railing, netting, or safety lines for crew members working on the roof.

Do not use the roof panel as a walking platform. The roof panels will not withstand the weight of a person standing at the edge of the panel.

Do not stand on the roof panel at the ends until the panels have been attached.



*NOTE: Shaded areas represent regions served by each location.*

**ms metal sales<sup>TM</sup>**  
manufacturing corporation

**Metal Sales offers a complete line of metal roof, wall and fascia panel systems for the commercial, architectural, industrial, residential, and agricultural markets. Metal Sales offers over 75 profiles with a wide selection of widths, colors and gauges - new construction or retrofit.**

## 1. DENVER

7990 East I-25 Frontage Road  
Longmont, CO 80504  
303.702.5440  
800.289.7663  
800.289.1617 /Fax

## 2. JACKSONVILLE

7110 Stuart Avenue  
Jacksonville, FL 32254  
904.783.3660  
800.394.4419  
904.783.9175 /Fax

## 3. JEFFERSON

352 East Erie Street  
Jefferson, OH 44047  
440.576.9070  
800.321.5833  
440.576.9242 /Fax  
800.233.5719 /Fax

## 4. INDEPENDENCE

1306 South Powell Road  
Independence, MO 64057  
816.796.0900  
800.747.0012  
816.796.0906 /Fax

## 5. SELLERSBURG

7800 State Road 60  
Sellersburg, IN 47172  
812.246.1866  
800.999.7777  
812.246.0893 /Fax  
800.477.9318 /Fax

## 6. ROGERS

22651 Industrial Boulevard  
Rogers, MN 55374  
763.428.8080  
800.328.9316  
763.428.8525 /Fax  
800.938.9119 /Fax

## 7. NASHVILLE

4314 Hurricane Creek Boulevard  
Antioch, TN 37013  
615.641.7100  
800.251.8508  
615.641.7118 /Fax

## 8. SPOKANE

2727 East Trent Avenue  
Spokane, WA 99202  
509.536.6000  
800.572.6565  
509.534.4427 /Fax

## 9. SEATTLE

20213 84th Avenue South  
Kent, WA 98032  
253.872.5750  
800.431.3470 (outside WA)  
800.742.7900 (inside WA)  
253.872.2008 /Fax

## 10. NEW ALBANY

999 Park Place  
New Albany, IN 47150  
812.944.2733  
800.640.0976  
812.944.1418 /Fax

## 11. ROCK ISLAND

8111 West 29th Street  
Rock Island, IL 61201  
309.787.1200  
800.747.1206  
309.787.1833 /Fax

## 12. DEER LAKE

29 Pinedale Industrial Road  
Orwigsburg, PA 17961  
570.366.2020  
800.544.2577  
570.366.1648 /Fax  
800.544.2574 /Fax

## 13. TEMPLE

3838 North General Bruce Drive  
Temple, TX 76501  
254.791.6650  
800.543.4415  
800.543.4473 /Fax

## 14. WOODLAND

1326 Paddock Place  
Woodland, CA 95776  
530.668.5690  
800.759.6019  
530.668.0901 /Fax

## 15. FONTANA

14213 Whittram Avenue  
Fontana, CA 92335  
909.829.8618  
800.782.7953  
909.829.9083 /Fax

## 16. ANCHORAGE

4637 Old Seward Highway  
Anchorage, AK 99503  
866.640.7663  
907.646.7663  
907.646.7664 /Fax

## 17. BAY CITY

5209 Mackinaw Road  
Bay City, MI 48706  
888.777.7640  
989.686.5879  
989.686.5870 /Fax

## 18. DETROIT LAKES

1435 Egret Avenue  
Detroit Lakes, MN 56501  
218.847.2988  
888.594.1394  
218.847.4835 /Fax  
888.594.4835 /Fax

## 19. MOCKSVILLE

188 Quality Drive  
Mocksville, NC 27028  
336.751.6381  
800.228.6119  
336.751.6301 /Fax  
800.228.7916 /Fax

## 20. FORT SMITH

7510 Ball Road  
Fort Smith, AR 72908  
479.646.1176  
479.646.5204 /Fax

## 21. SIOUX FALLS

2700 West 3rd Street, Suite 4  
Sioux Falls, SD 57104  
479.646.1176  
479.646.5204 /Fax

## TECHNICAL SUPPORT

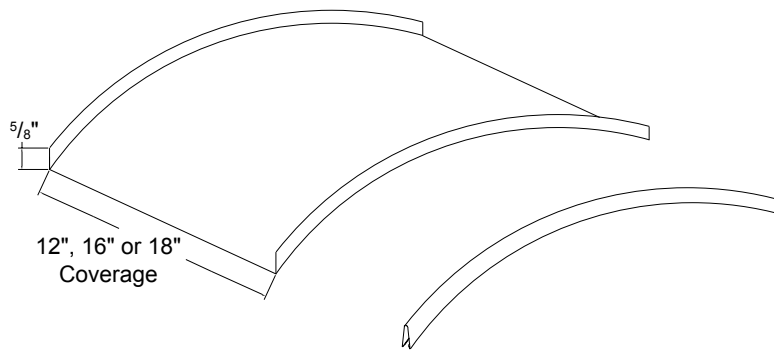
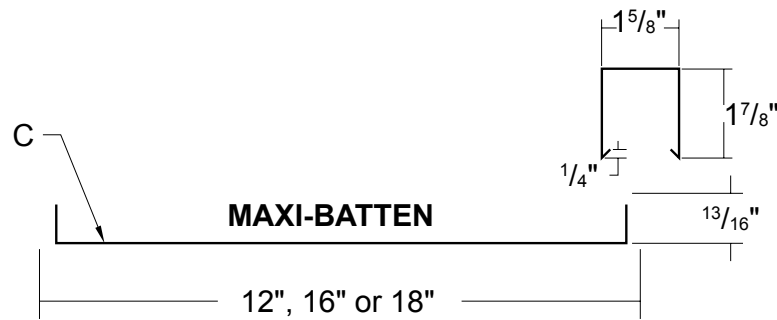
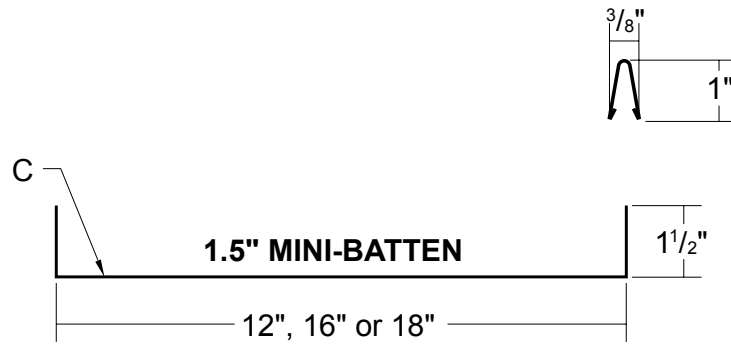
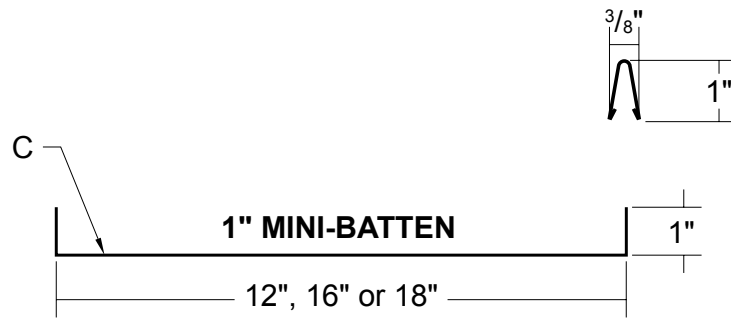
### TECHNICAL SERVICES

545 South 3rd Street  
Suite 200  
Louisville, KY 40202  
800.406.7387  
502.855.4290 /Fax

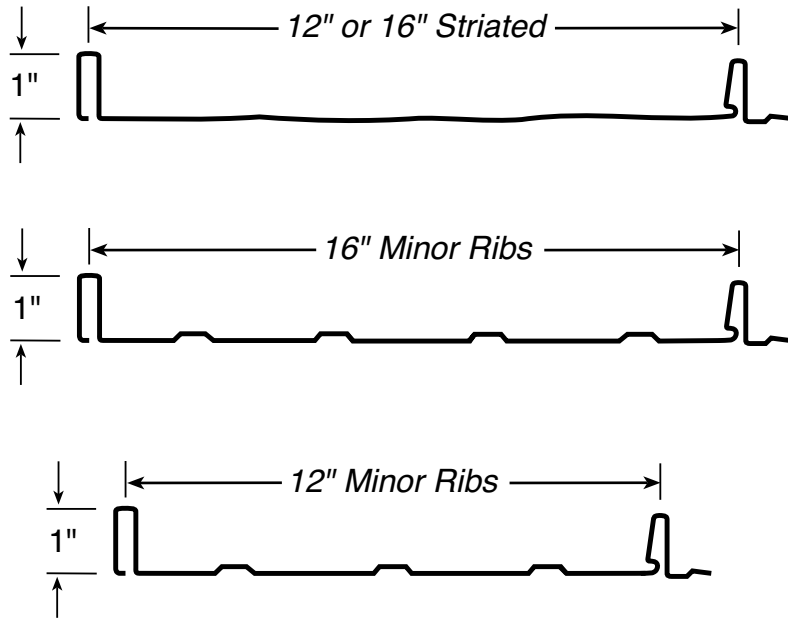
	PAGE NO.
General Information	
Important Information .....	1
Metal Sales' Locations .....	2
Customer Service .....	3
Table of Contents .....	4 - 5
Panel Profiles .....	6 - 7
Flashing Profiles .....	8 - 11
Accessory Profiles .....	12 - 13
Handling Material	
Receiving Material .....	14
General Handling .....	14
Mechanical Handling .....	14
Manual Handling .....	15
Storage	
General .....	16
Storage on Roof .....	17
Foot Traffic .....	18
Field Cutting and Touch-up	
Field Cutting .....	19
Touch-up Paint .....	19
Fastener Selection Guide .....	20
Design / Installation Considerations	
Fastener Installation Technique .....	21
Condition of Substructure .....	22
Ventilation .....	22
Panel Applications .....	23
Installation of Mini-Batten Panel .....	24 - 25
Installation of Maxi-Batten Panel .....	26 - 27
Mini / Maxi-Batten Installation - Batten End Installation .....	28
Installation of Image II Panel (Exposed Fastened End) .....	29
Installation of Image II Panel (Concealed Fastened End) .....	30
Installation of Soffit Panel .....	31 - 32

	<b>PAGE NO.</b>
Architectural Details	
Eave with Offset Cleat .....	33
Extended Eave .....	34
Gutter with Offset Cleat .....	35
Valley with Offset Cleat .....	36
Rake .....	37
Rake Parapet with Counter .....	38
Rake Parapet with Reglet .....	39
Ridge / Hip .....	40
Vented Ridge .....	41
Peak .....	42
High Side Eave at Parapet with Counter .....	43
High Side Eave at Parapet with Reglet .....	44
Slope Change .....	45
Transition .....	46
Gravel Stop .....	47
Outside Corner .....	48
Inside Corner .....	49
Sill/Head .....	50
Sill to Soffit .....	51
Coping .....	52
Base .....	52
Jamb .....	53
Soffit to Wall .....	53
Panel Splice .....	54
Image II Hemming .....	55
Mini/Maxi-Batten Hemming .....	56
Z-Closure Installation .....	57
Care and Maintenance .....	58
Notes .....	59 - 60

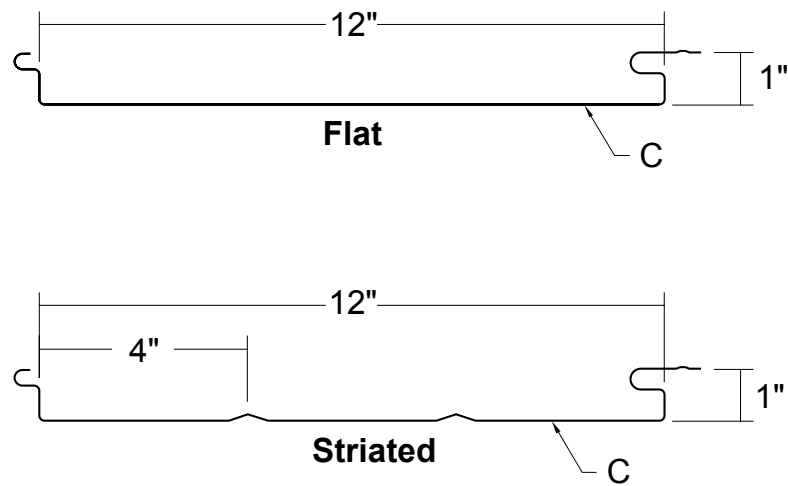
MINI / MAXI-BATTEN



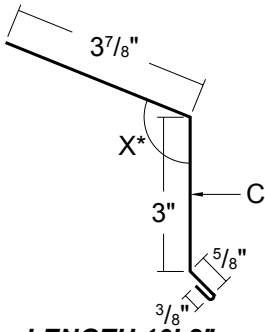
**IMAGE II**



**SOFFIT**

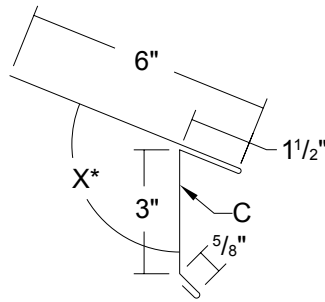


## EAVE



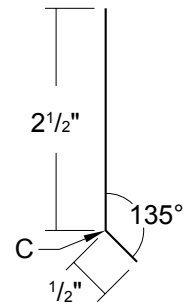
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\*Specify Slope Angle

## EXTENDED EAVE



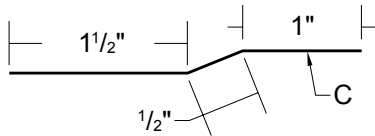
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## CLEAT



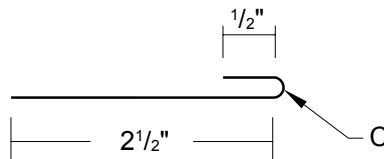
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## OFFSET CLEAT



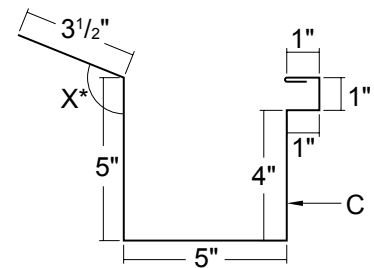
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## STARTER



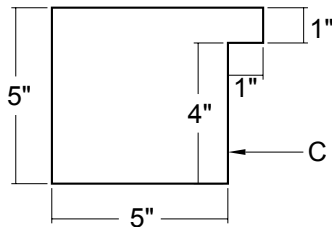
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## BOX GUTTER

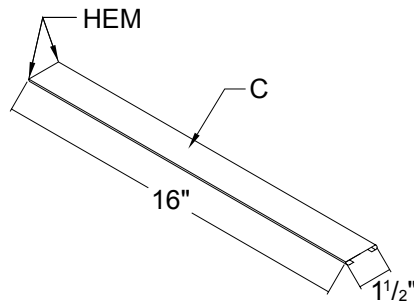


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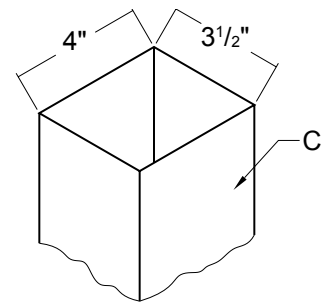
## GUTTER END



## UNIVERSAL GUTTER / DOWNSPOUT STRAP

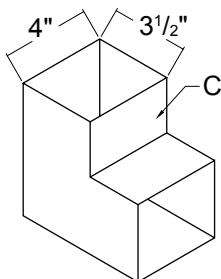


## 4" x 3.5" DOWNSPOUT



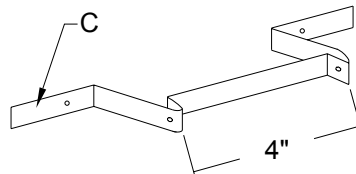
**LENGTH 10'-2", 20'-3"**  
(Also available 4" x 6")

## 95° ELBOW (4" x 3.5")

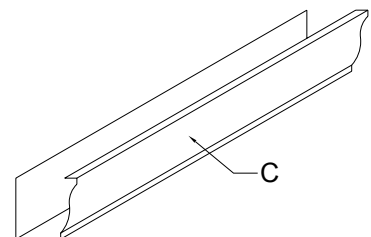


(Also available 4" x 6")

## DOWNSPOUT BRACKET



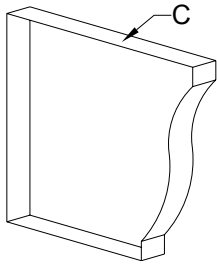
## 5K GUTTER



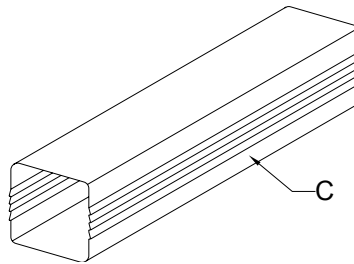
**LENGTH 20'-6"**



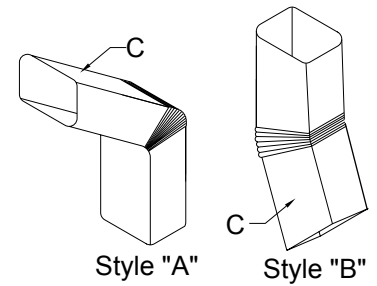
### 5K GUTTER ENDCAP



### 3" DOWNSPOUT

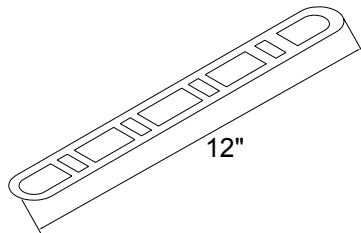


### 3" DOWNSPOUT ELBOW

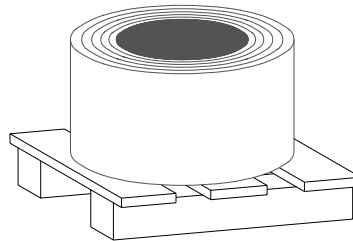


**LENGTH 10'-0"**

### 12" DOWNSPOUT BRACKET

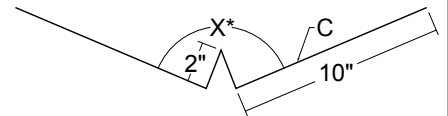


### 12" COIL (For Continuous Gutters)



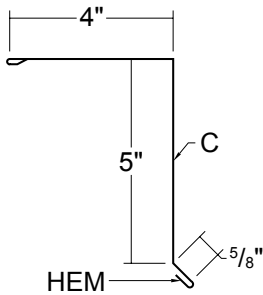
**16" Inside Diameter  
LENGTH 150'-0"**

### VALLEY



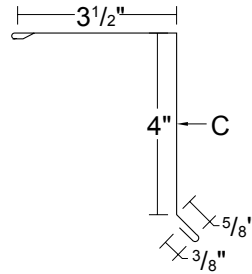
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\*Specify Slope Angle**

### RAKE



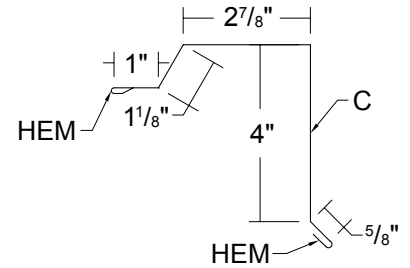
**LENGTH 10'-2", 20'-3"**

### IMAGE II RAKE



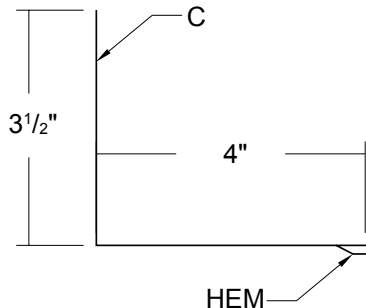
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### IMAGE II STEP RAKE



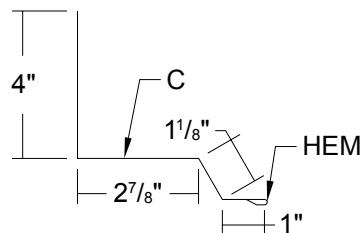
**LENGTH 10'-2", 20'-3"**

### RAKEWALL



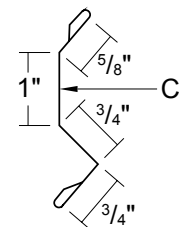
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### IMAGE II STEP RAKEWALL



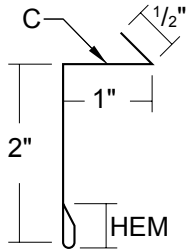
**LENGTH 10'-2"**

### COUNTER FLASHING



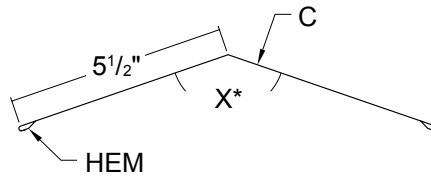
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### REGLET FLASHING



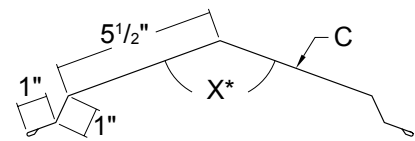
**LENGTH 10'-2"**

### 11" RIDGE / HIP COVER



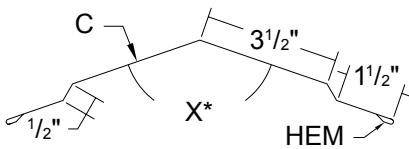
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### 13" RIDGE / HIP COVER



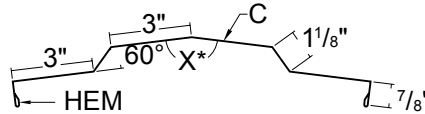
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### STEP RIDGE/HIP COVER



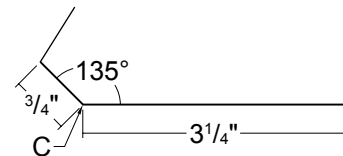
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\*Specify Slope Angle

### VENTED RIDGE COVER



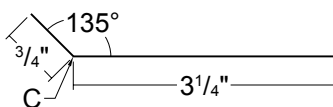
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### VENT DRIP



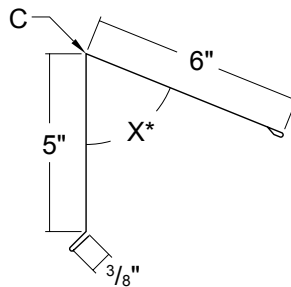
**LENGTH 10'-2"**

### PERFORATED VENT DRIP



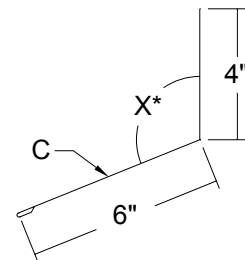
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(.032 ALUMINUM  
LINEN WHITE ONLY)

### PEAK



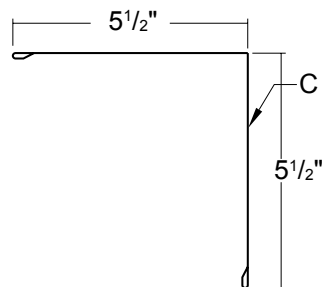
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\*Specify Slope Angle

### PITCH BREAK



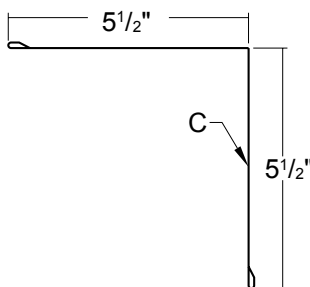
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### OUTSIDE CORNER



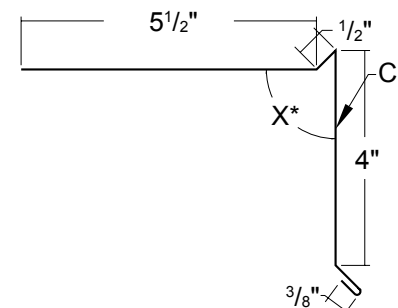
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### INSIDE CORNER



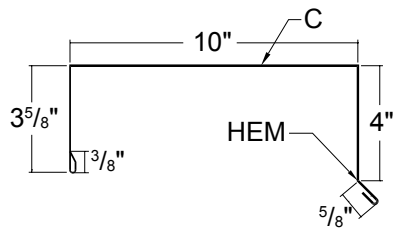
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### GRAVEL STOP



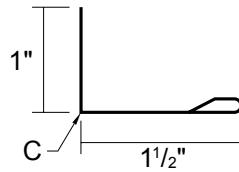
**LENGTH 10'-2", 20'-3"**

### COPING



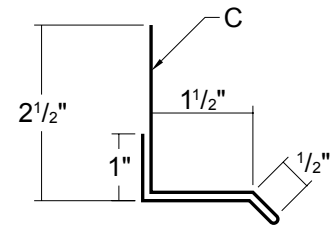
**LENGTH 10'-2", 20'-3"**

### SOFFIT PANEL MITER TRIM



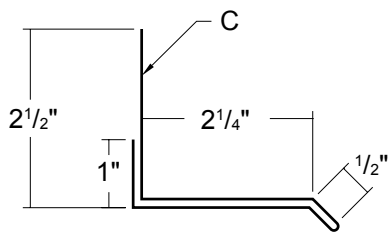
**LENGTH 10'-2"**

### 1.5" SILL / HEAD



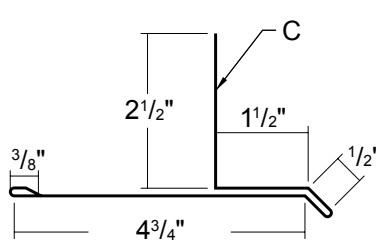
**LENGTH 10'-2"**

### 2.25" SILL / HEAD



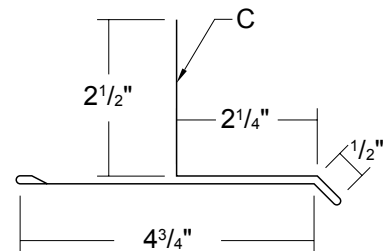
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### 1.5" SILL TO SOFFIT



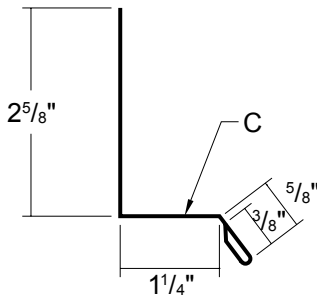
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### 2.25" SILL TO SOFFIT



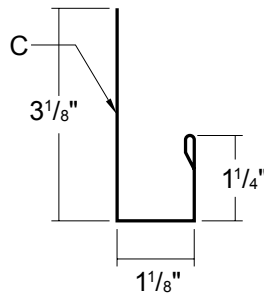
**LENGTH 10'-2"**

### 1.25" BASE



**LENGTH 10'-2"**

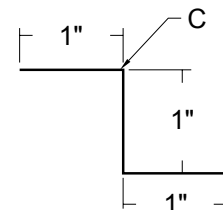
### SOFFIT PANEL JAMB



**LENGTH 10'-2"**

### 1" Z-CLOSURE

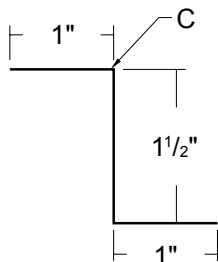
(MINI-BATTEN, IMAGE II, AND SOFFIT PANEL)



**LENGTH 10'-2"**

### 1.5" Z-CLOSURE

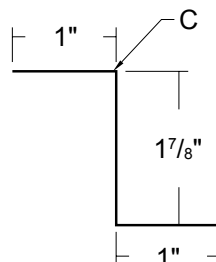
(MINI-BATTEN)



**LENGTH 10'-2"**

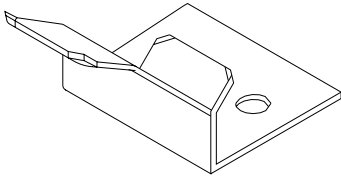
### 1.875" Z-CLOSURE

(MAXI-BATTEN)

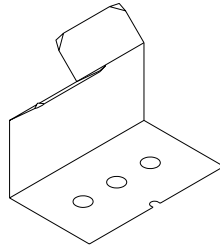


**LENGTH 10'-2"**

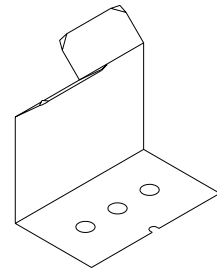
**CURVED MINI-BATTEN  
(5/8") CLIP**



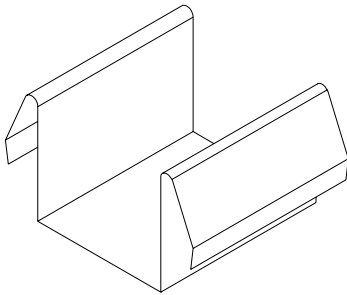
**MINI-BATTEN (1") CLIP**



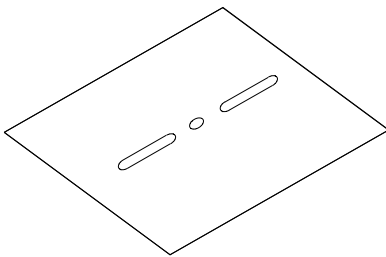
**MINI-BATTEN (1.5") CLIP**



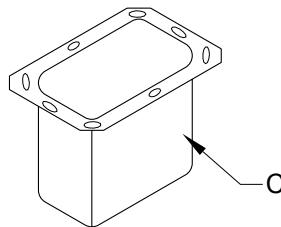
**MAXI-BATTEN CLIP**



**BEARING PLATE**

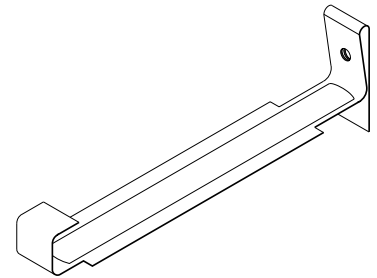


**OUTLET TUBE 2" x 3"**



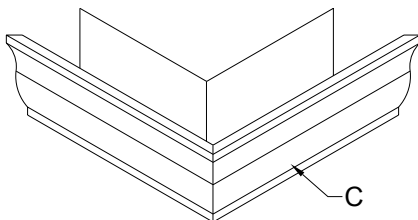
Contact Branch for Availability

**FASCIA BRACKET**



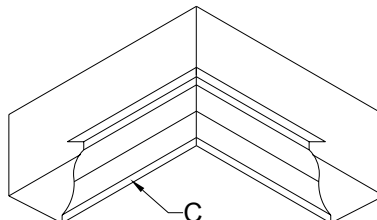
Contact Branch for Availability

**OUTSIDE MITER**



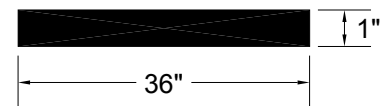
Contact Branch for Availability

**INSIDE MITER**

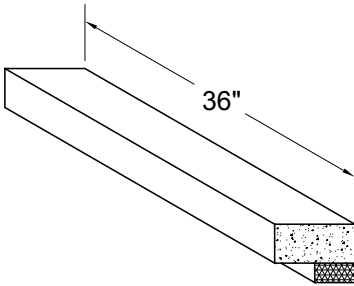


Contact Branch for Availability

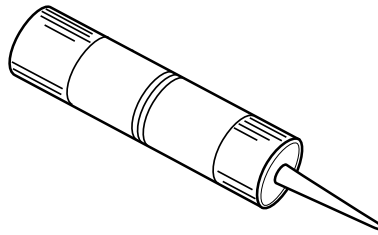
**OUTSIDE CLOSURE**



## COBRA VENTED CLOSURE

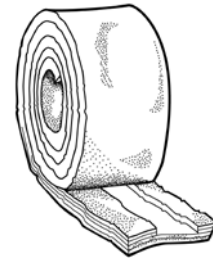


## TUBE SEALANT



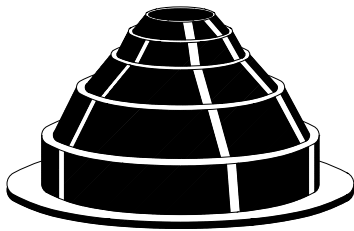
10.3 oz. CARTRIDGE  
URETHANE

## TAPE SEALANT



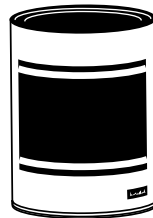
$\frac{7}{8}$ " X  $\frac{3}{16}$ " X 25'  
DOUBLE BEAD  
BUTYL - GRAY

## RUBBER ROOF JACK



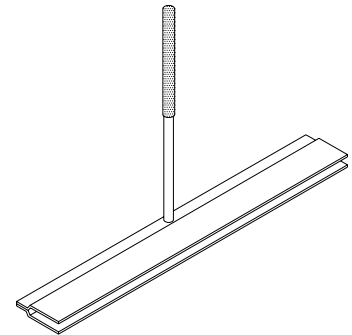
#2 ( $1\frac{3}{4}$ " TO 3" O.D. PIPE)  
#4 (3" TO 6" O.D. PIPE)

## TOUCH-UP PAINT

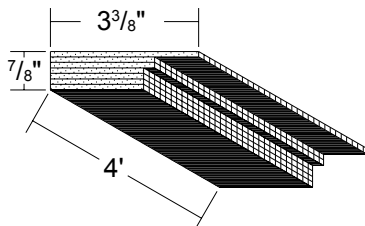


AVAILABLE IN PINTS  
PVDF / MS CF45

## METAL PANEL HEMMING TOOL



## VENT MATERIAL



## RECEIVING MATERIAL

It is the responsibility of the installer to unload material from the delivery truck. The installer shall be responsible for providing suitable equipment for unloading of material from the delivery.

After receiving material, check the condition of the material, and review the shipment against the shipping list to ensure all materials are accounted for. If damages or shortages are discovered, it should be noted on the Bill of Lading at the time of delivery. A claim should be made against the carrier as soon as possible. **(Metal Sales is not responsible for any damages or shortages unless they are documented in writing and presented to Metal Sales within 48 hours.)**

## GENERAL HANDLING

Each bundle should be handled carefully to avoid being damaged. Care should be taken to prevent bending of the panel or abrasion to finish. Whenever possible, the bundle should remain crated until it is located in its place of storage. If bundles must be opened, we recommend you recreate them before lifting. To avoid damage please lift the bundle at its center of gravity.

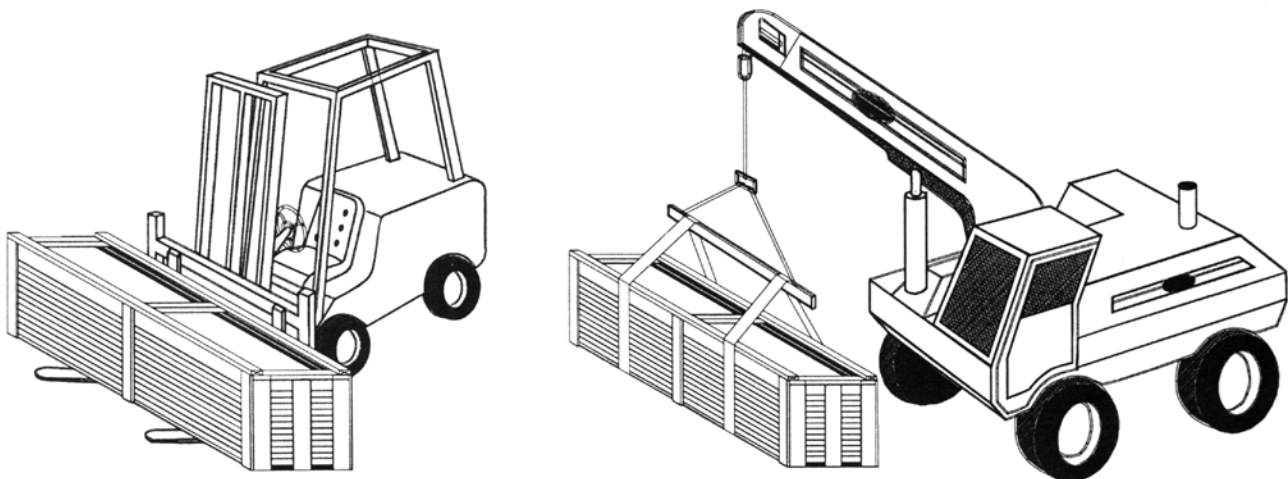
### CAUTION

Improper loading and unloading of bundles and crates may result in bodily harm and/or material damage. Metal Sales is not responsible for bodily injuries and/or material damages resulting from improper loading and unloading.

## MECHANICAL HANDLING

**Forklift** - A forklift may be used for panels up to 20'-0" long. Please make sure the forks are at their maximum separation. Do not transport open bundles. When transporting bundles across rough terrain, or over a longer distance, some means of supporting the panel load must be used.

**Crane** - A crane should be used when lifting panels with lengths greater than 20'-0". Please be sure to utilize a spreader bar to ensure the even distribution of the weight to the pick up points. As a rule when lifting panels, no more than  $\frac{1}{3}$  of the length of the panel should be left unsupported. Never use wire rope because this will damage the panels.

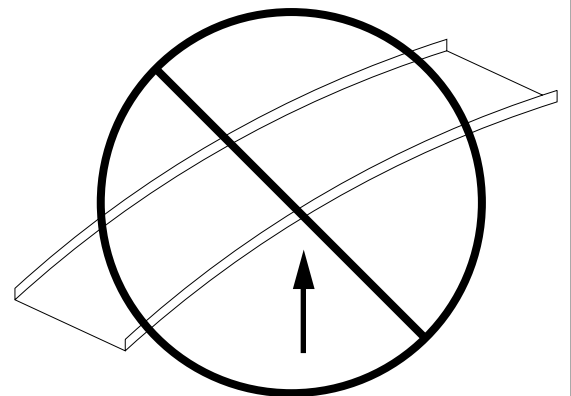
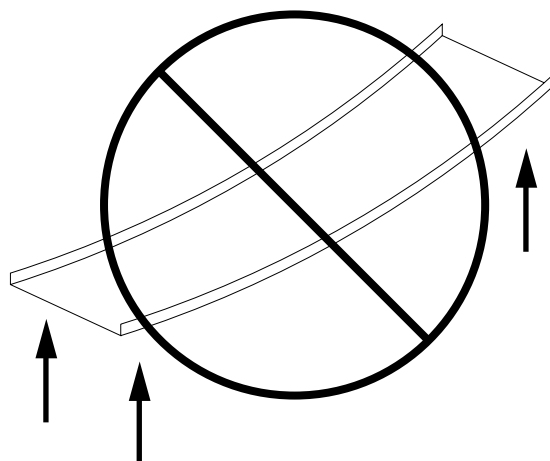
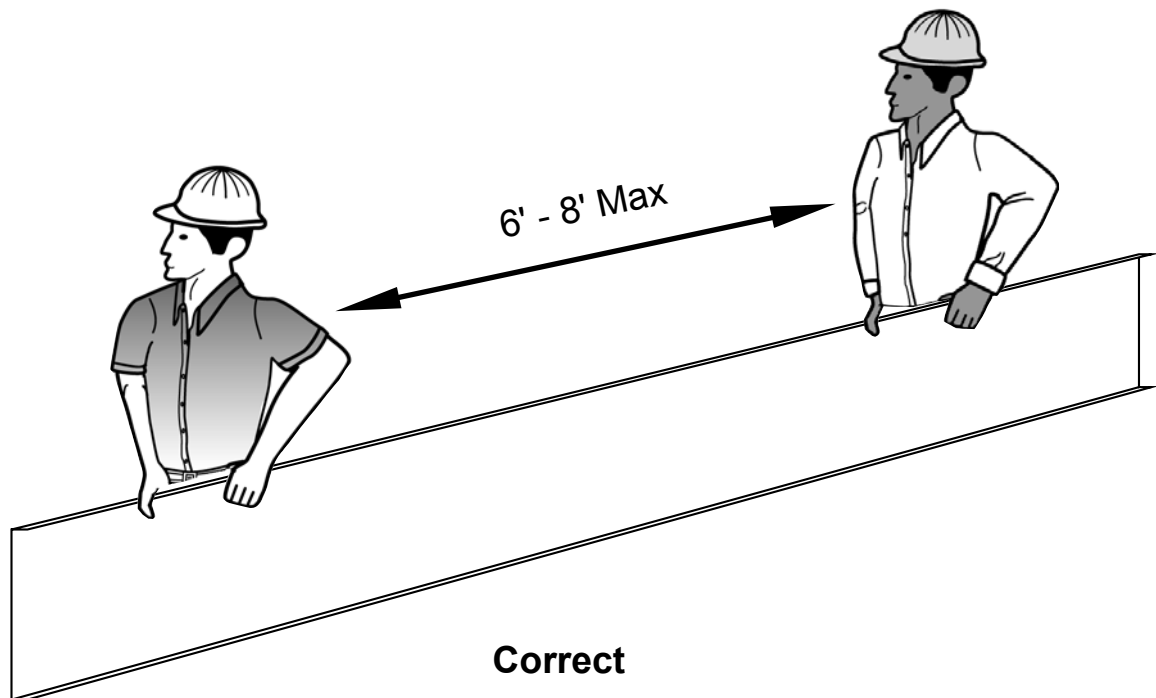


## MANUAL HANDLING

When handling painted steel care should be taken to prevent scratching of material. Clean gloves should be worn at all times to prevent a reaction with salts found on bare skin. Installers should wear rubber sole shoes to keep from scuffing material while walking on the roof.

Handling of individual panels should be done carefully and properly to avoid bending or damaging. Architectural panels should be carried by grasping the edge of the panel so that the Architectural panel is vertical to the ground. The Architectural panel should not be carried with the panel horizontal to the ground as this could cause the panel to buckle or bend in the center.

Normally, individual panels can be handled by people placed every 6'-0" to 8'-0" along the length of the panel.

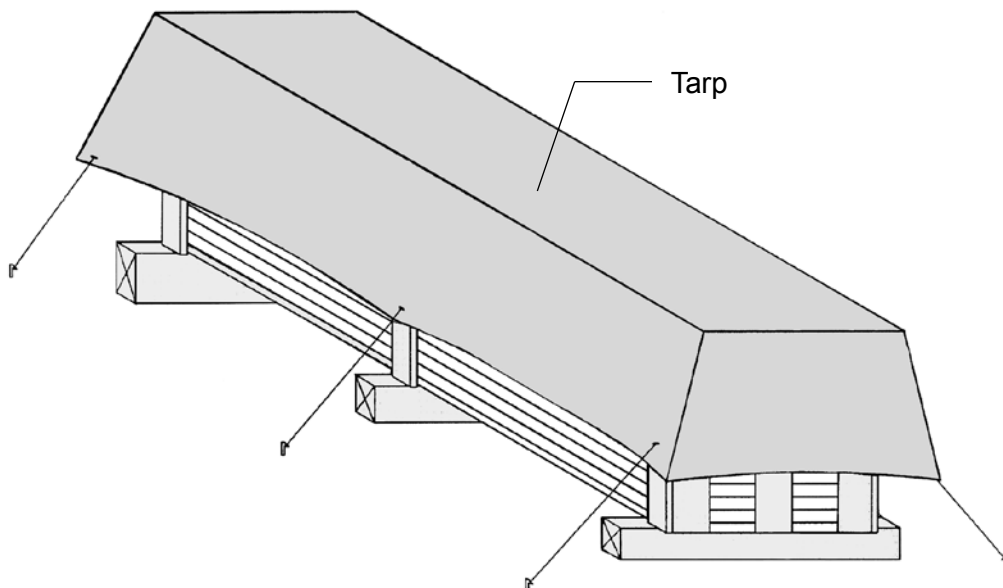
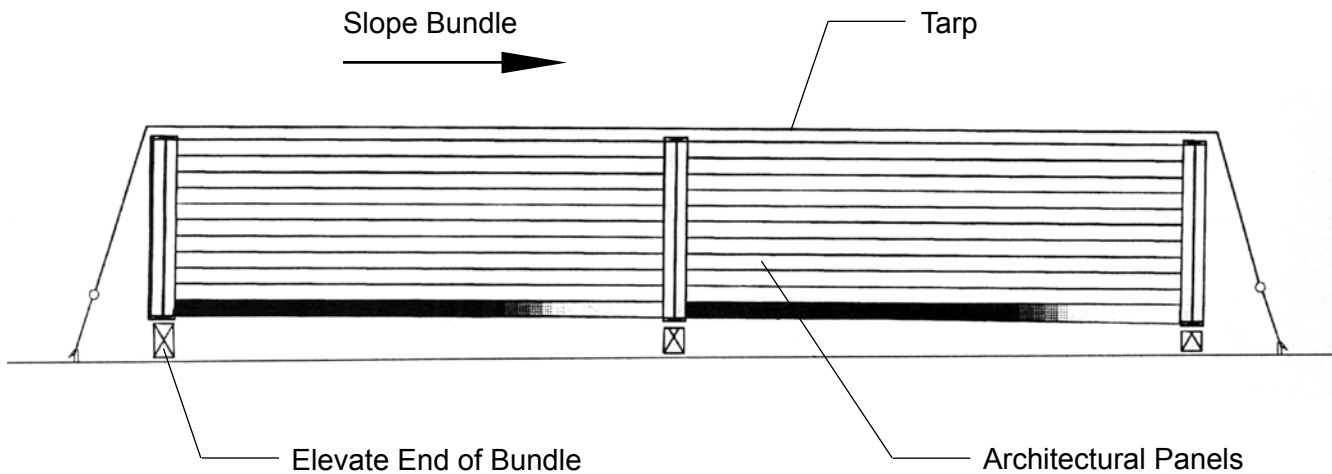


Incorrect

## GENERAL

Please inspect panels for moisture accumulation. If moisture has formed, the panels should be unbundled, wiped dry, and allowed to dry completely. Once dry, carefully re-stack the panels and loosely recover allowing for ample air circulation.

Bundled sheets should be stored high enough off of the ground to allow for air circulation and prevent contact with accumulating water. Elevate one end of the bundle to allow any moisture to run off the panels. Metal Sales recommends covering the bundle with a tarp. Do not use tight fitting plastic-type tarps as panel bundle covers. While they may provide protection from heavy downpours, they can also retard necessary ventilation and trap heat and moisture that may accelerate metal corrosion. If panels are to be stored in possible bad weather, we suggest they be stored inside. Extended storage of panels in a bundle is not recommended. **Under no circumstances should the sheets be stored near or come in contact with salt water, corrosive chemicals, ash, or fumes generated or released inside the building or nearby plants, foundries, plating works, kilns, fertilizer and wet or green lumber.**



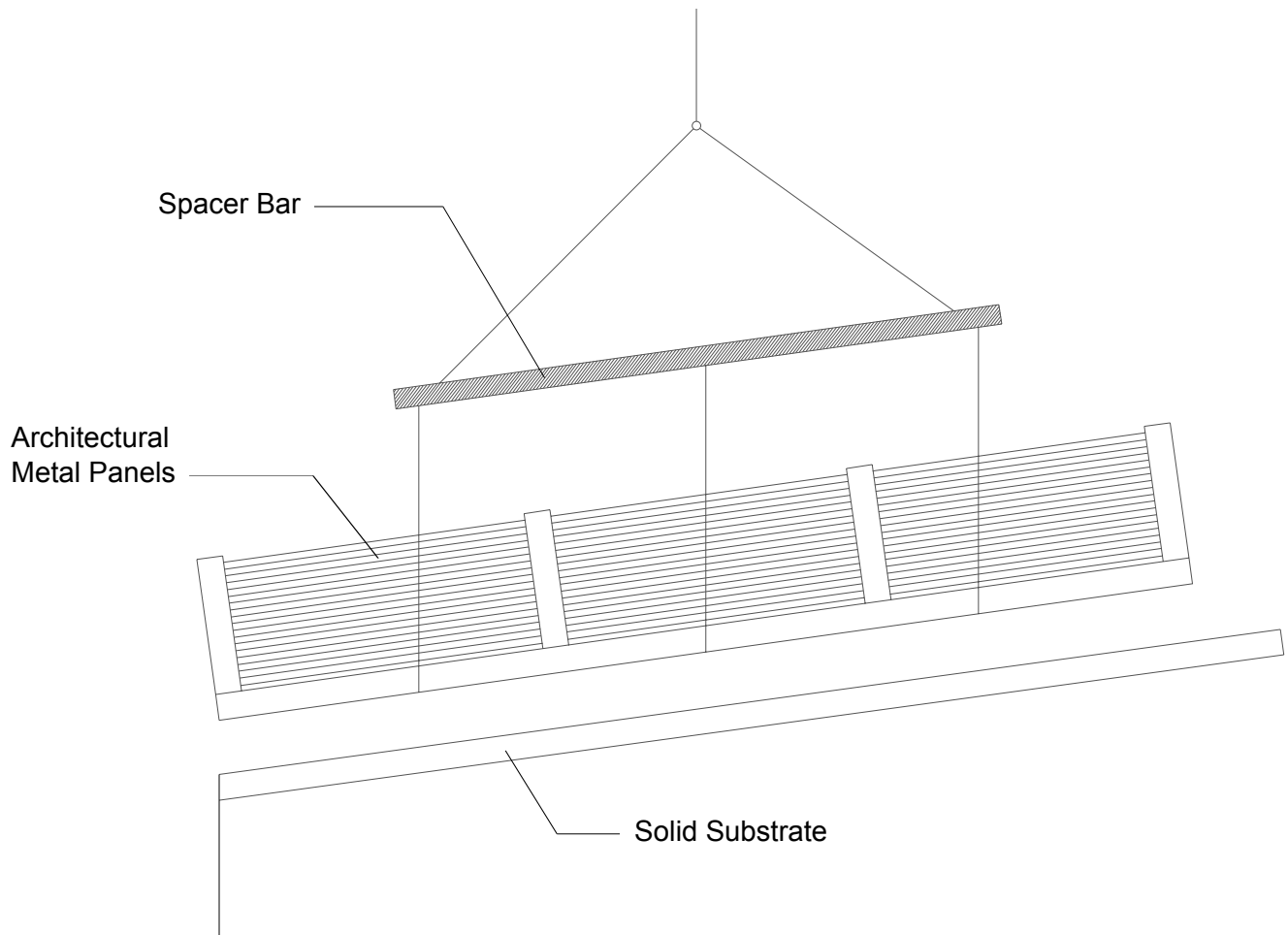


## STORAGE ON ROOF

To facilitate the handling of Architectural panels, panel bundles can be lifted and placed on the roof. Bundles need to be placed on the roof in order for the roof structure to handle the weight. Loading capabilities of the structure must be checked.

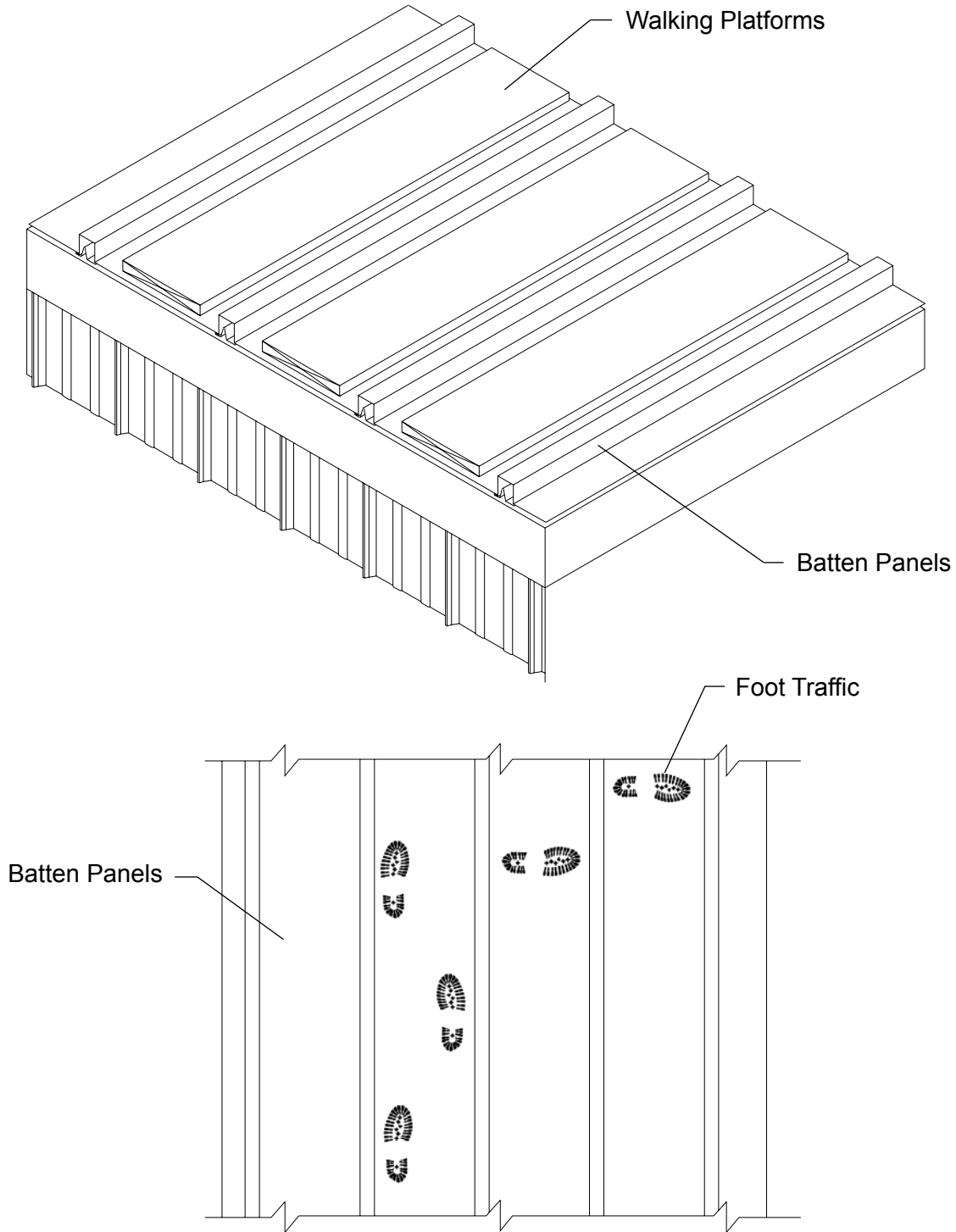
When lifting packaged sheets, make certain they are adequately supported. Panels less than 20'-0" in length can normally be lifted with a forklift; however, when lifting panels in excess of 20'-0", it is recommended that a spreader bar and slings be used. As a rule, when lifting, no more than  $\frac{1}{3}$  of the length of the panel should be left unsupported.

Make a plan for bundle placement by determining how much area a bundle of panels will cover. Bundles should be placed on the roof in accordance with the direction the panel will be installed. Consider where the string line, if any, is to run at the eave to set roof panels by. Roof bundles should not interfere with this string line.



Care of Architectural metal panels and flashings must be exercised throughout erection. Foot traffic can cause distortion of panel and damage to finish. Traffic over the installed system must be kept to an absolute minimum. If continuous foot traffic is necessary for maintenance over certain areas of the roof, then a permanent walkway should be installed.

If continuous foot traffic is necessary during installation, provide walking platforms to avoid any panel damage as shown below. When walking on the roof panels is unavoidable, walk only in the flats of the panel. Walking on the ribs can cause damage to the panels.



## FIELD CUTTING

Tin snips or a "nibbler" type electric tool are recommended for field cutting Architectural panels. Cutting the steel generates slivers or metal chips. These slivers and metal chips must be immediately removed from the Architectural panels because they will damage the finish and shorten the life of the product.

One method of preventing this problem is to flip the panels over when cutting. This allows the slivers and metal chips to be brushed from the back side and avoids damaging the paint on the top side of the panels.

When cutting metal panels, goggles must be worn for eye protection.

### CAUTION

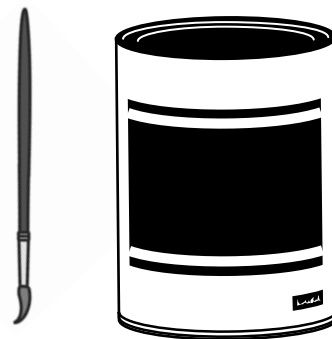
All product surfaces should be free of debris at all times. Installed surfaces should be wiped clean at the end of each work period. Never cut panels over metal surfaces. Metal shavings will rust on the surface, voiding the warranty.

## TOUCH-UP PAINT

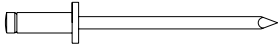
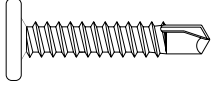
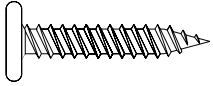
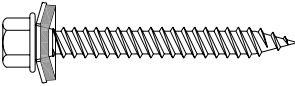
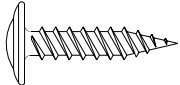
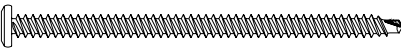
All painted panels and flashings have a factory applied baked on finish. Handling and installing panels may result in some small scratches or nicks to the paint finish. Touch-up paint is available in matching colors from Metal Sales. It is recommended that a small brush be used to apply touch-up paint to those areas that are in need of repair. Touch-up paint does not have the superior chalk and fade resistance of the factory applied paint finish and will normally discolor at an accelerated rate. Aerosol paint should not be used because of the overspray that may occur.



SPRAY PAINT



TOUCH-UP PAINT

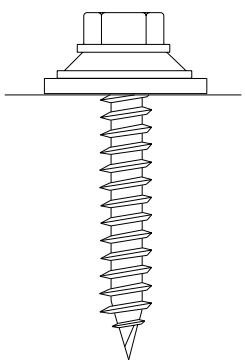
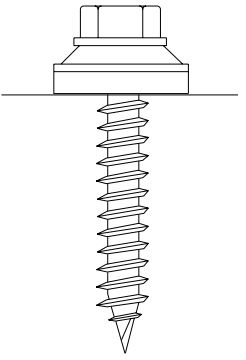
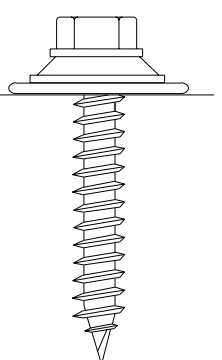
POP RIVET	SIZE	TYPE	FINISH	APPLICATION
	1/8" x 3/16"	A	Unpainted	Flashing to Panel or Flashing
	1/8" x 3/16"	A	Painted	
PANCAKE HEAD DRILLER	SIZE	TYPE	FINISH	APPLICATION
	#10-16 x 1" (# 2 Point)	Driller	Plated	Panel/clip/flushing to metal framing or decking
PANCAKE HEAD WOODSCREW	SIZE	TYPE	FINISH	APPLICATION
	#10-12 x 1"	A	Plated	Panel/clip/flushing to wood substructure
WOODSCREW	SIZE	TYPE	FINISH	APPLICATION
	#10-14 x 1"	A	Painted	Panel or Flashing to wood substructure
	#10-14 x 1 1/2"	A	Painted	
	#10-14 x 2"	A	Painted	
TRUSS HEAD WOODSCREW	SIZE	TYPE	FINISH	APPLICATION
	#8-15 x 3/4"	A	Plated	Attaching Panels and Flashings to wood roof deck
DECK SCREW	SIZE	TYPE	FINISH	APPLICATION
	#14-13 x 2"	Driller	Black	Panel Clip to metal deck and rigid board insulation assembly or wood substructure

### FASTENER INSTALLATION TECHNIQUE

**Recommended Tool Type** - Use depth locating nose or adjustable clutch on screw gun to prevent over-drilling and strip out.

**Do not use impact tools or runners.**

**Seating the washer** - Apply sufficient torque to seat the washer - do not overdrive the fastener.

	<b>CORRECT</b> Sealing material slightly visible at edge of metal washer. Assembly is watertight.	<b>TOO LOOSE</b> Sealing material is not visible; not enough compression to seal properly.	<b>TOO TIGHT</b> Metal washer deformed; sealing material pressed beyond washer edge.
<b>WOODSCREW</b>			

**To prevent wobbling** - Make sure fastener head is completely engaged in the socket. If the head does not go all the way in the socket - tap the magnet deeper into the socket to allow full head engagement. Metal chips will build up from drilling and should be removed from time to time.

**Protect drill point** - Push only hard enough on the screw gun to engage clutch. This prevents excess friction and burn out of the drill point. Correct pressure will allow screw to drill and tap without binding.

**Drilling through sheet and insulation** - Ease up on pressure when drilling through insulation to avoid striking the purlin or girt with the point - apply more pressure after drill point contacts purlin or girt.

**Drilling through purlin overlaps** - Drilling through lapped purlins requires extra care. Excessive voids between purlins sometimes damages drill points and two self-drillers might be necessary to complete the operation. It is sometimes advantageous to pre-drill.

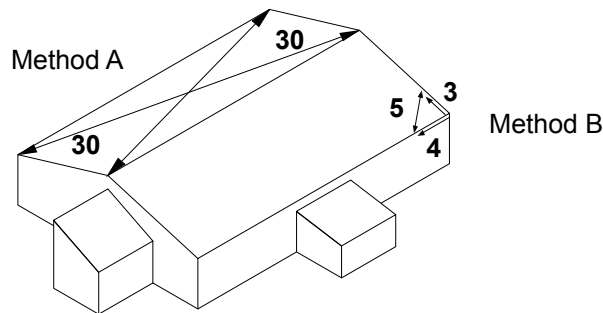
## CONDITION OF SUBSTRUCTURE

When installing over solid substrate, panel distortion may occur if not applied over properly aligned and uniform substructure.

The installer should check the roof deck for squareness before installing Architectural panels. Several methods can be used to verify squareness of the structure for proper installation of the panels.

**METHOD "A"** - One method for checking the roof for squareness is to measure diagonally across one slope of the roof from similar points at the ridge and eave and obtain the same dimension.

**METHOD "B"** - The 3-4-5 triangle system may also be used. To use this system measure a point from the corner along the edge of the roof at a module of three (3). Measure a point from the same corner along another edge at a module of four (4). Then by measuring diagonally between the two points established, the dimension should be exactly a module of five (5) to have a square corner. Multiple uses of this system may be required to determine building squareness. If the endwall cannot be made square, the roof system cannot be installed as shown in these instructions.

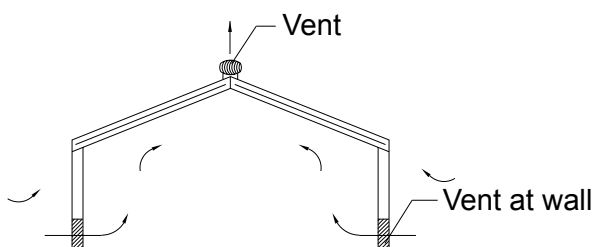


## VENTILATION

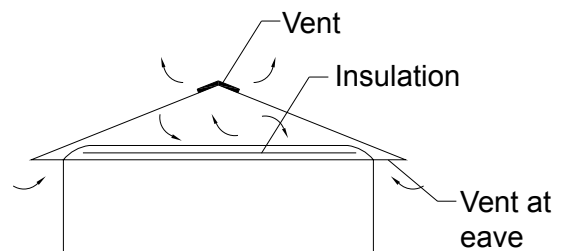
Proper design and installation of vapor barriers and ventilation systems are important to prevent condensation and the resulting problems of moisture damage and loss of insulation efficiency.

Condensation occurs when moisture laden air comes in contact with a surface temperature equal to or below the dew point of the air. This phenomenon creates problems that are not unique with metal roofing; these problems are common to all types of construction.

The underside of the metal roof on a typical Architectural building should be protected from condensation by installing panels directly over a minimum 30 lb moisture barrier and uniform solid substrate. This reduces airspace and the potential of condensation forming on the underside of the panels.



**TYPICAL METAL BUILDING (NO ATTIC)**



**BUILDING WITH ATTIC OR RETROFITTED**

## PANEL APPLICATIONS

The following chart highlights UL 580 Class 90 for clip installation on the selected applications. (See Fastener Selection Guide page 20 for other fasteners available.) For more information on UL Construction numbers, refer to UL Roofing Materials and System Directories. Panel gauges and clip spacing should be determined by a professional engineer according to the governing building code.

PANEL TYPE	APPLICATION	INSTALLATION REQUIREMENTS		CLIP SPACING	FASTENER	NUMBER REQUIRED
MINI-BATTEN	CLIPS OVER 5/8" WOOD DECK CONST. #460 <sup>1</sup>	UL-90	24 GA	2'-0" O.C.	#10-12 x 1" PANCAKE WOODSCREW	1 FASTENER
		UL-90	22 GA	2'-0" O.C.	#10-12 x 1" PANCAKE WOODSCREW	1 FASTENER
	CLIPS OVER RIGID INSULATION / METAL DECK CONST. #397A	UL-90	24 GA	2'-0" O.C.	#10-12 x 1" PANCAKE WOODSCREW	1 FASTENER
		UL-90	22 GA	2'-0" O.C.	#10-12 x 1" PANCAKE WOODSCREW	1 FASTENER
MAXI-BATTEN	CLIPS OVER 5/8" WOOD DECK CONST. # 398	UL-90	24 GA	1'-6" O.C.	#10-12 x 1" PANCAKE WOODSCREW	1 FASTENER
		UL-90	22 GA	1'-6" O.C.	#10-12 x 1" PANCAKE WOODSCREW	1 FASTENER
	CLIPS OVER 5/8" WOOD DECK CONST. # 398A	UL-90	24 GA	1'-6" O.C.	#10-12 x 1" PANCAKE WOODSCREW	1 FASTENER
		UL-90	22 GA	1'-6" O.C.	#10-12 x 1" PANCAKE WOODSCREW	1 FASTENER
PANEL TYPE	APPLICATION	INSTALLATION REQUIREMENTS		FASTENER SPACING	FASTENER	
IMAGE II <sup>2</sup>	OVER WOOD DECK	7/16" OSB	26 GA	2'-0" O.C.	#10-12 x 1" PANCAKE WOODSCREW	
		1/2" plywood	26 GA	2'-0" O.C.	#10-12 x 1" PANCAKE WOODSCREW	
		5/8" plywood	26 GA	2'-0" O.C.	#10-12 x 1" PANCAKE WOODSCREW	

\* Length of Deck Screw will vary depending on the total thickness of the rigid insulation and metal decking. (See page 20.)

\*\*Contact your local Metal Sales branch representative for more information. (See pages 2 and 3.)

1. For 1" Mini-Batten over 5/8" plywood deck only.
2. Subject to project loading, closer fastener spacing may be required.
3. Maxi-Batten Cap from Fontana, CA branch only meets UL Construction Numbers shown.

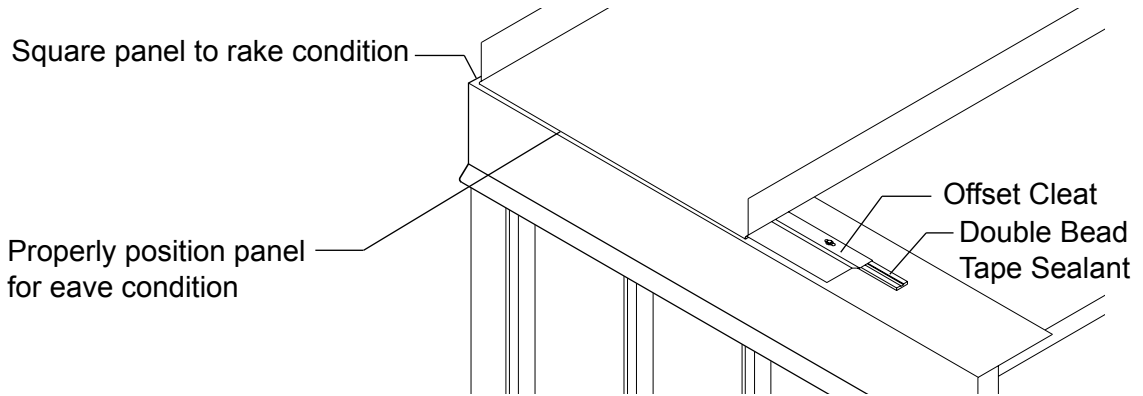
## INSTALLING FIRST PANEL

### STEP 1

**Note: Moisture Barriers, Eave, Gutter, Valley and Offset Cleat flashings must first be installed before panel installation can begin (see pages 33-36).**

**Mini-Batten panels are installed from left to right or right to left.**

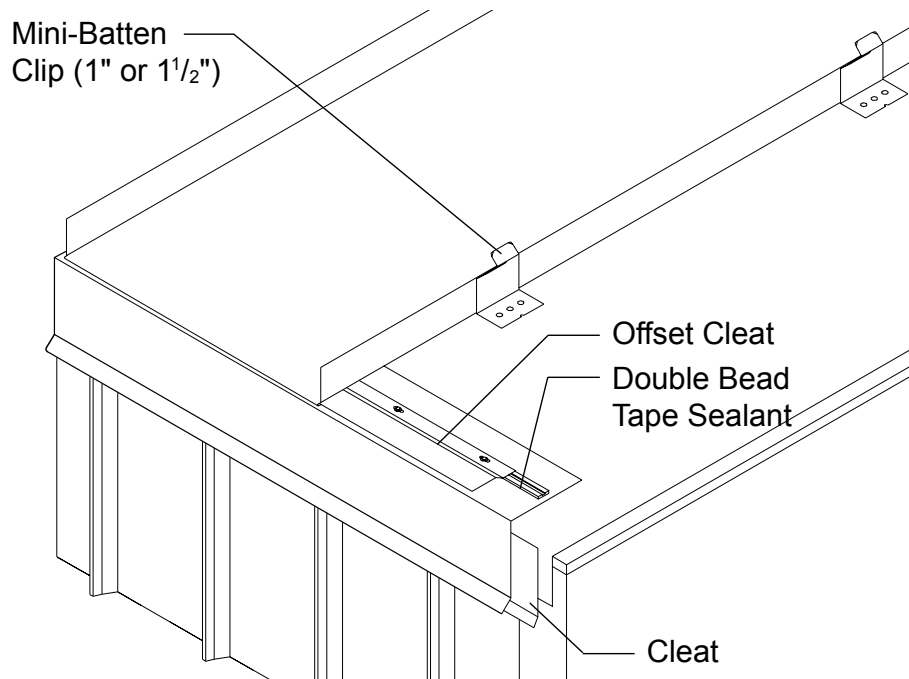
1. Field notch and hem the Mini-Batten panel as shown on page 56. Apply a single bead of tube sealant inside the open hem of the Mini-Batten panel.
2. Install first panel so that eave has proper overhang making sure that panel is square to eave and rake. Slide the panel toward the peak of the roof engaging the panel and the Offset Cleat. Offset Cleat must be fully engaged into the panel. Additional overhang must be considered if using wall panels. **It is critical that the first panel be straight and square with the building as it controls alignment of the following roof panels.**



## INSTALLING CLIPS

### STEP 2

1. Once the first panel has been installed, engage clips at proper spacing along the male leg and fasten with appropriate fastener. Fastener spacing must be designed to meet local building codes (see page 23). If a fastener strips out, you must remove the clip and reposition it so the fastener can drill a new hole at least  $\frac{3}{8}$ " from the stripped hole or install an oversized fastener in the stripped hole. Failure to do so will result in weakening the wind uplift resistance.

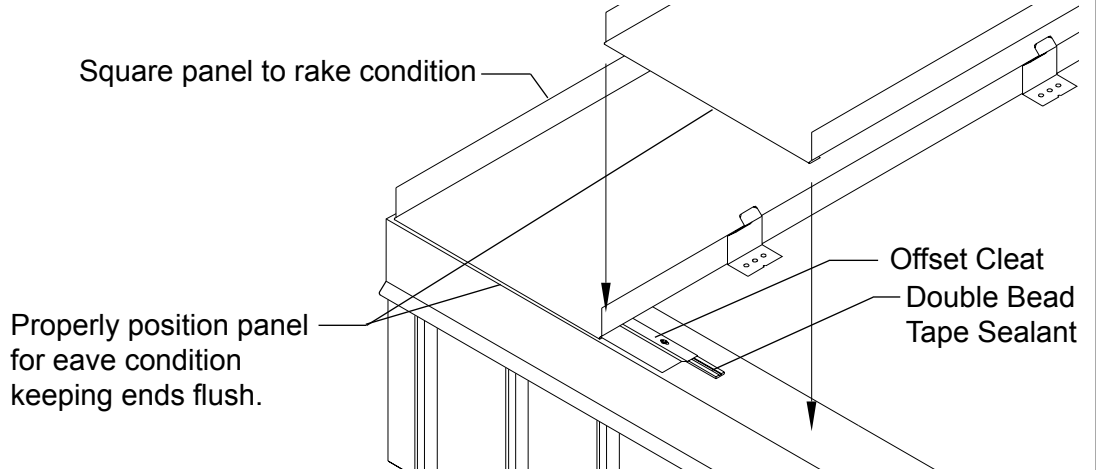




**INSTALLING SECOND PANEL**

**STEP 3**

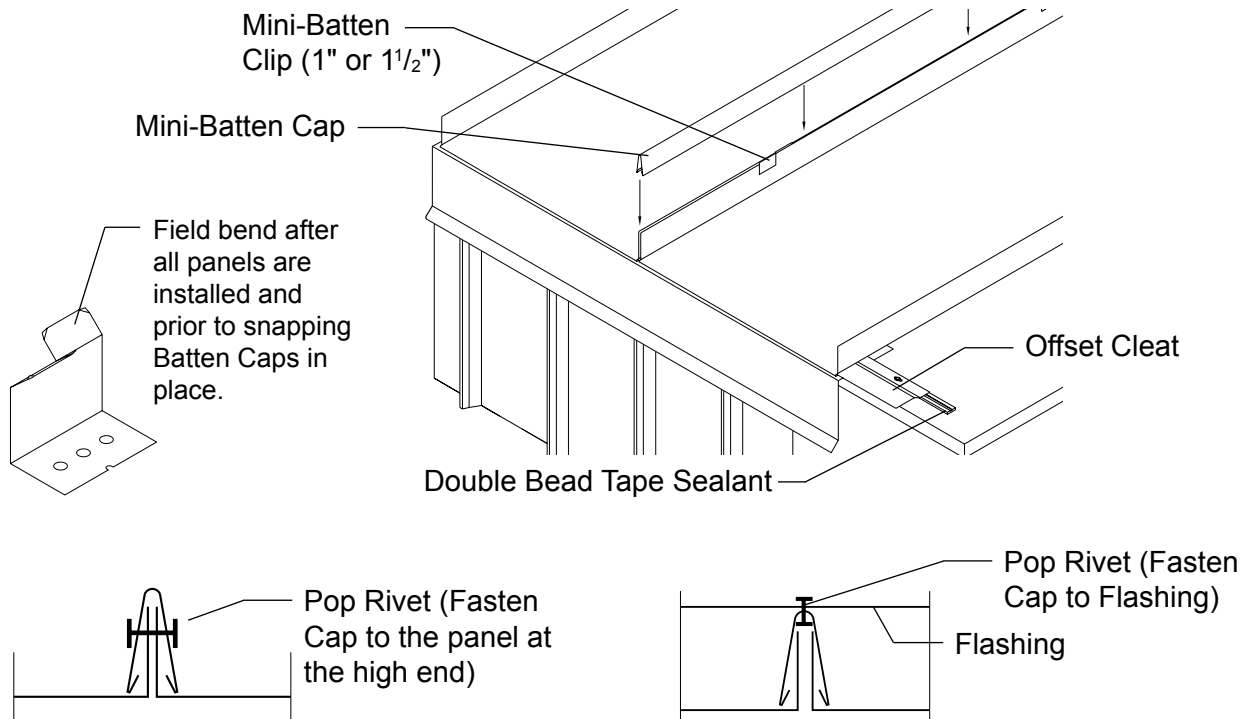
1. Field notch and hem the Mini-Batten panel as shown on page 56. Apply a single bead of tube sealant inside the open hem of the Mini-Batten panel.
2. Install second panel so that eave has proper overhang making sure that panel is square to eave and rake. Slide the panel toward the peak of the roof engaging the panel and the Offset Cleat. Offset Cleat must be fully engaged into the panel. Additional overhang must be considered if using wall panels. Make sure all panels are properly snapped in place.
3. Continue with previous steps until panel installation is complete.



**INSTALLING BATTEN CAP**

**STEP 4**

1. Tabs on Mini-Batten Clip must be field bent down to accept Mini-Batten Cap. Bend tabs over vertical leg of the panel.
2. Install Mini-Batten Cap over the panel rib and Mini-Batten Clip. Snap the Mini-Batten Cap into place working from one end to the other.
3. Once installation is complete, fill each end of batten with proper sealant (see page 28), and clean any debris and excess sealant from the panels.
4. Attach every Batten Cap to the panel or flashing, near the high end of the Batten Cap, with a Pop Rivet as shown below.



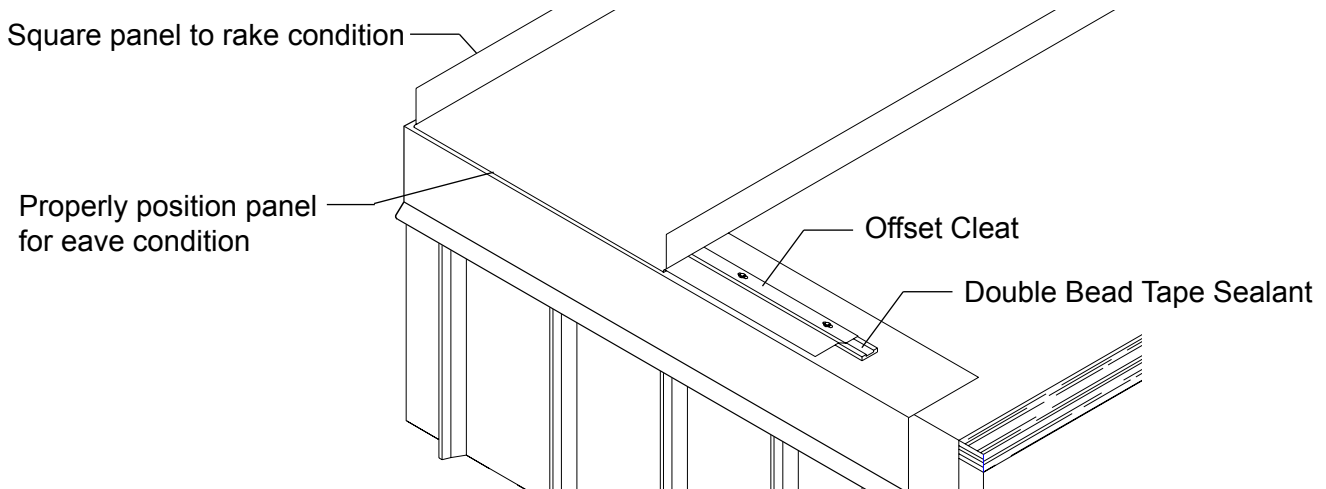
## INSTALLING FIRST PANEL

### STEP 1

**Note: Moisture Barriers, Eave, Gutter, Valley and Offset Cleat flashings must first be installed before panel installation can begin (see pages 33-36).**

**Maxi-Batten panels are installed from left to right or right to left.**

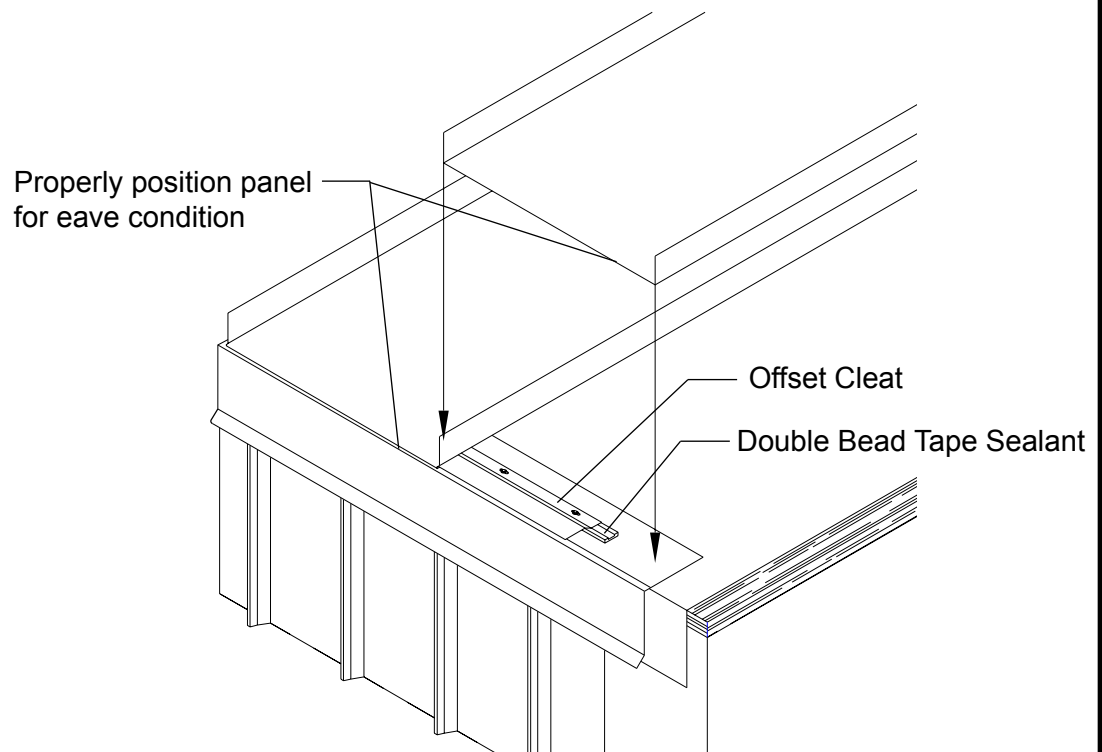
1. Field notch and hem the Maxi-Batten panel as shown on page 56. Apply a single bead of tube sealant inside the open hem of the Maxi-Batten panel.
2. Install first panel so that eave has proper overhang making sure that panel is square to eave and rake. Slide the panel toward the peak of the roof engaging the panel and the Offset Cleat. Offset Cleat must be fully engaged into the panel. Additional overhang must be considered if using wall panels. **It is critical that the first panel be straight and square with the building as it controls alignment of the following roof panels.**



## INSTALLING SECOND PANEL

### STEP 2

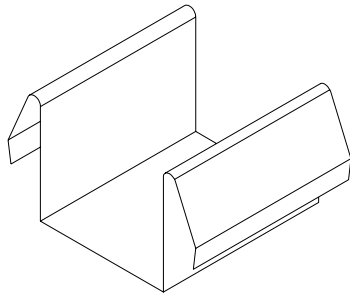
1. Install second panel in place making sure panel is positioned with adequate space to allow for placement of Maxi-Batten Clip. Make sure panel ends at eave are aligned.



## INSTALLING CLIPS

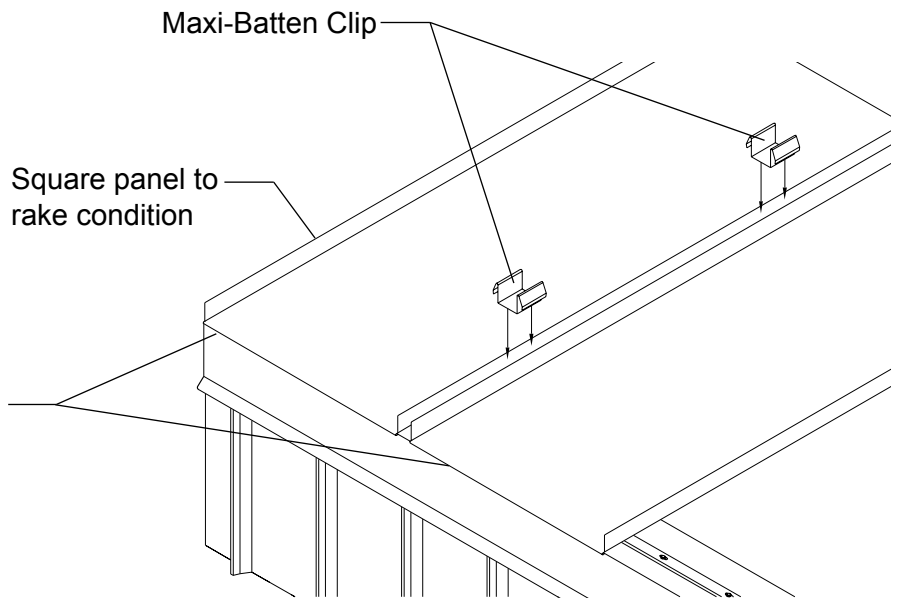
### STEP 3

1. Engage clips at proper spacing along the male legs and fasten with appropriate fastener to meet local building codes (see page 23). If a fastener strips out, you must remove the clip and reposition it so the fastener can drill a new hole at least  $\frac{3}{8}$ " from the stripped hole or install an oversized fastener in the stripped hole. Failure to do so will result in weakening the wind uplift resistance.
2. Continue with previous steps until panel installation is complete.



Maxi-Batten Clip

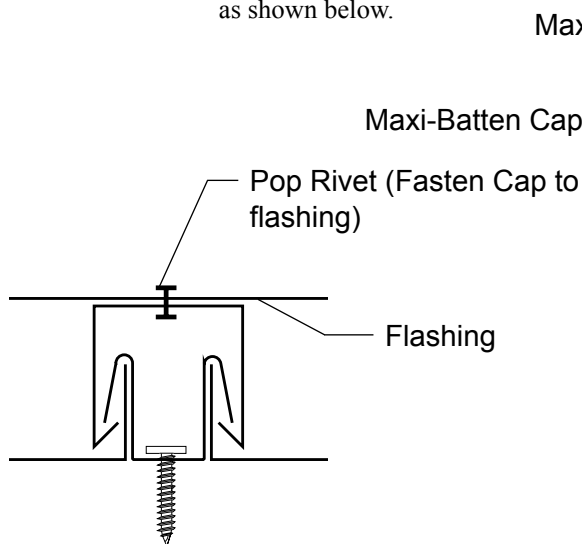
Properly position panel for eave condition



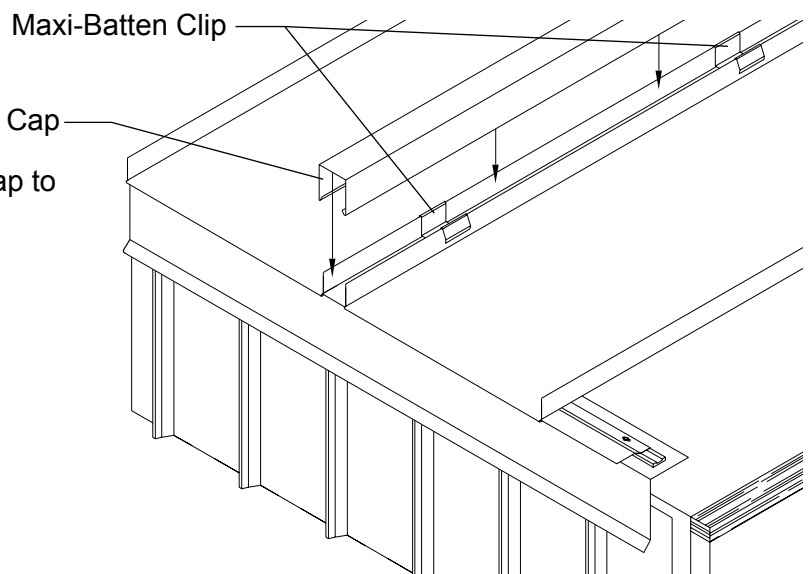
## INSTALLING BATTEN CAP

### STEP 4

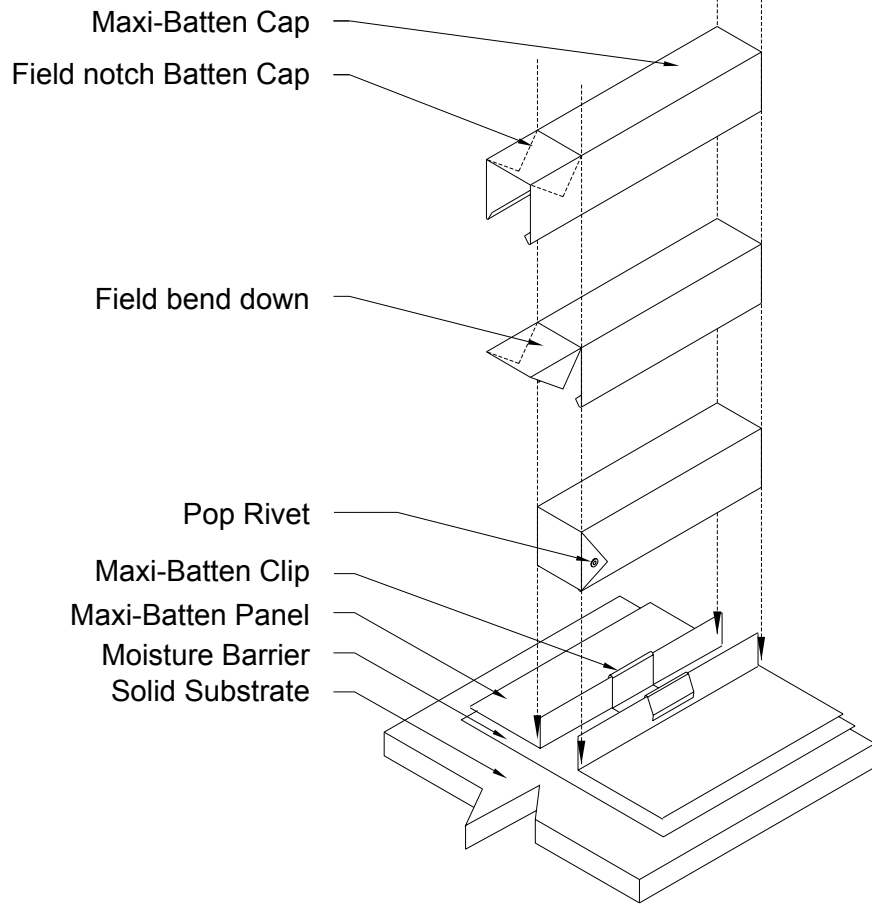
1. Install Maxi-Batten Cap over the panel rib and Maxi-Batten Clip. Snap Maxi-Batten Cap into place working from one end to the other. Make sure all batten caps are properly snapped in place. Clean any debris and excess sealant from the panels.
2. Once installation is complete, close open end of panel with either field fabricated piece or order Batten Cap 1" longer (see detail on page 28).
3. Attach every Batten Cap to the flashing, near the high end of the Batten Cap, with a Pop Rivet as shown below.



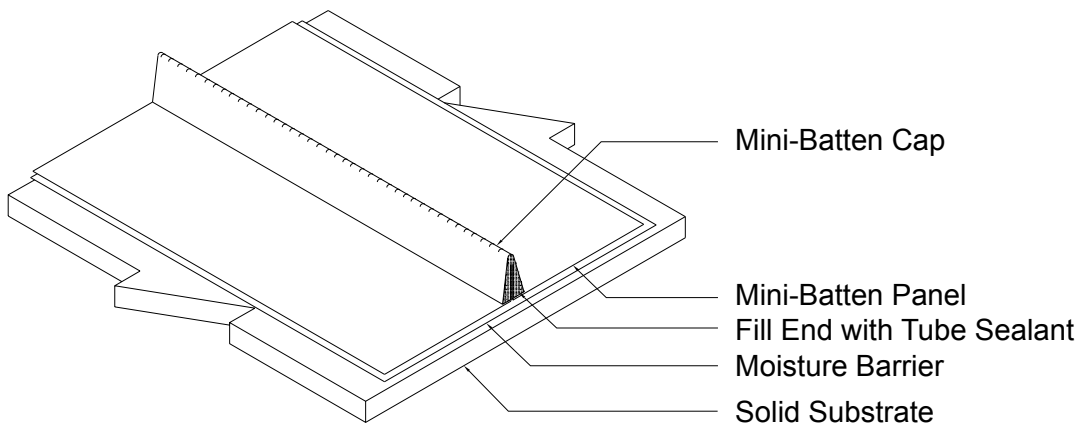
Maxi-Batten Assembly



**MAXI-BATTEN END INSTALLATION**



**MINI-BATTEN END INSTALLATION**



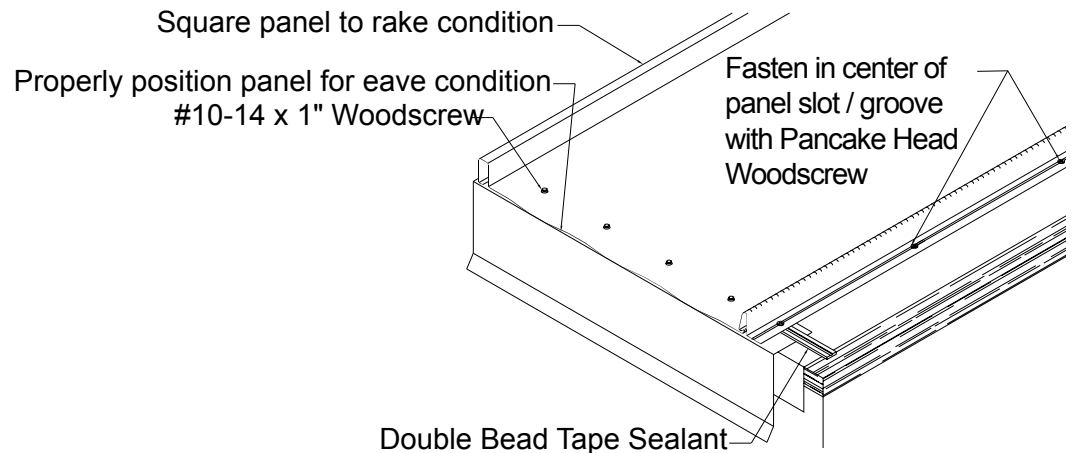
## INSTALLING FIRST PANEL

### STEP 1

**Note: Moisture Barriers, Eave, Gutter and Valley flashings must first be installed before panel installation can begin (see pages 33-36).**

**Image II panels are installed from left to right or right to left.**

1. Apply a row of Double Bead Tape Sealant on the top leg of the Eave Flashing.
2. Install first panel so that the panel end has proper overhang (refer to pages 33-36) making sure that panel is square to eave and rake. **It is critical that the first panel be straight and square with the building as it controls alignment of the following roof panels.**
3. Fasten panel to substrate with (1) #10-12 x 1" Pancake Head Woodscrew in **center** of the fastening groove located along the male leg of the panel. Fastener spacing must be designed to meet local building codes (see page 23). **It is important that the fastener be placed in the center of the fastening groove and make sure not to over tighten screws.**
4. Fasten Image II panel with (4) #10-14 x 1" Woodscrews through Double Bead Tape Sealant, flashing, and into the solid substrate as shown below.

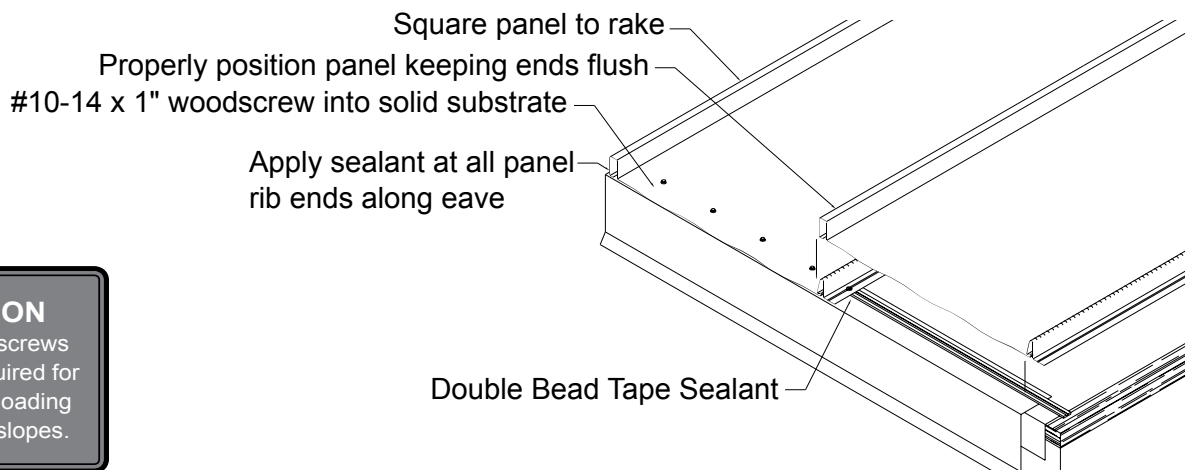


**CAUTION**  
Additional screws may be required for high snow loading and steep slopes.

## INSTALLING SECOND PANEL

### STEP 2

1. Snap second panel in place making sure panel ends are aligned. Snap panel in place working from one end to the other.
2. Fasten Image II panel with (4) #10-14 x 1" Woodscrews through Double Bead Tape Sealant, flashing and into the solid substrate as shown below.
3. Continue with previous step until installation is complete.
4. Fasten panel to substrate with (1) #10-12 x 1" Pancake Head Woodscrew in **center** of the fastening groove located along the male leg of the panel. Fastener spacing must be designed to meet local building codes (see page 23). **It is important that the fastener be placed in the center of the fastening groove and make sure not to over tighten screws.**
5. Once installation is complete, fill each lower end of panel rib with Tube Sealant and clean any debris and excess sealant before continuing next area.



**CAUTION**  
Additional screws may be required for high snow loading and steep slopes.

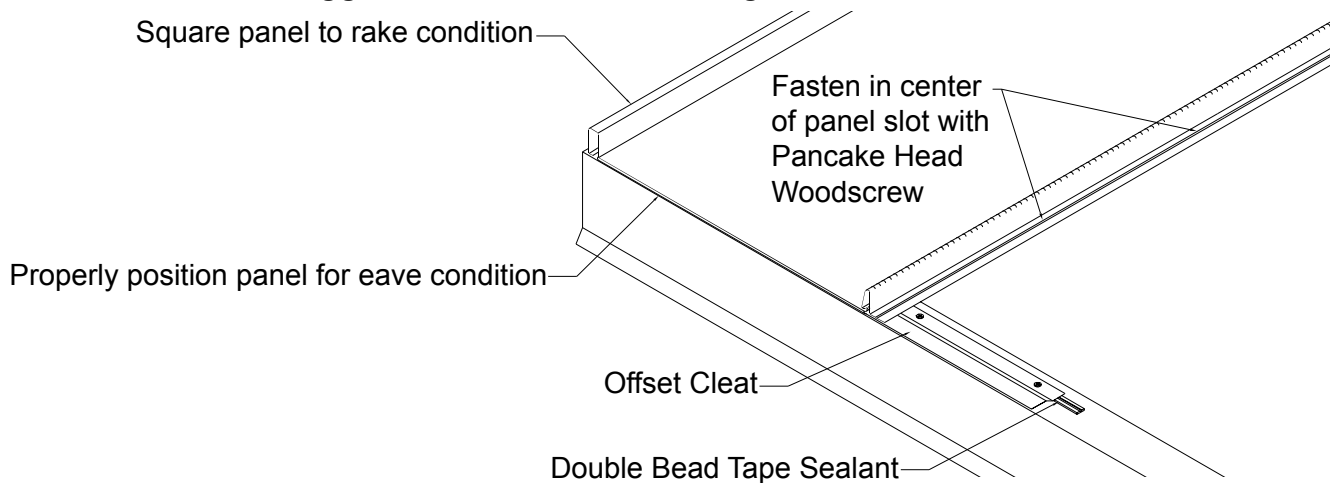
## INSTALLING FIRST PANEL

### STEP 1

**Note: Moisture Barriers, Eave, Gutter, Valley and Offset Cleat flashings must first be installed before panel installation can begin.**

**Image II panels are installed from left to right or right to left.**

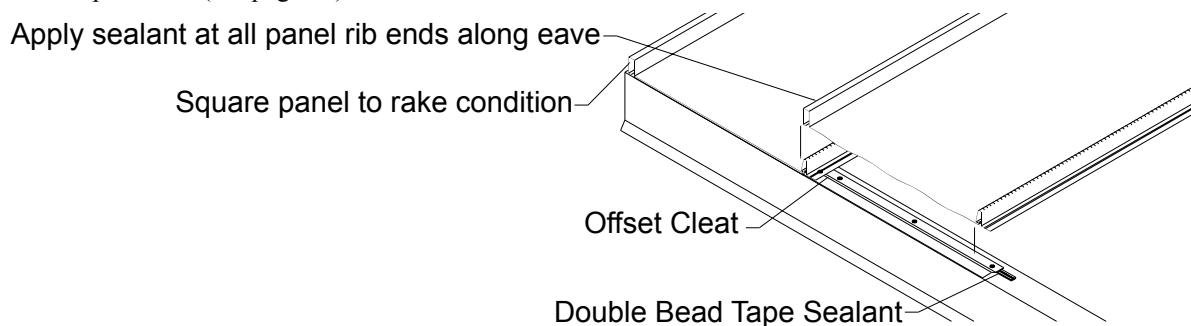
1. Field notch and hem the Image II panel as shown on page 55. Apply a single bead of Tube Sealant inside the open hem of the Image II panel.
2. Install first panel so that eave has proper overhang making sure that panel is square to eave and rake. Slide the panel toward the peak of the roof engaging the panel and the Offset Cleat. Offset Cleat must be fully engaged into the panel. Additional overhang must be considered if using wall panels. **It is critical that the first panel be straight and square with the building as it controls alignment of the following roof panels.**
3. Fasten panel to substrate with (1) #10-12 x 1" Pancake Head Woodscrew in center of the fastening groove located along the male leg of the panel. Fastener spacing must be designed to meet local building codes (see page 23). **It is important that the fastener be placed in the center of the fastening groove and make sure not to over tighten screws.**



## INSTALLING SECOND PANEL

### STEP 2

1. Field notch and hem the Image II panel as shown on page 55. Apply a single bead of Tube Sealant inside the open hem of the Image II panel.
2. Install second panel so that eave has proper overhang making sure that panel is square to eave and rake. Slide the panel toward the peak of the roof engaging the panel and the Offset Cleat. Offset Cleat must be fully engaged into the panel. Additional overhang must be considered if using wall panels. Make sure all panels are properly snapped in place.
3. Place the second panel on top of previously installed panel so that the second hemmed panel can be engaged with the Offset Cleat.
4. Begin snapping the panels together working from eave to peak. **It is critical that panels only be snapped in one direction.**
5. Repeat steps 3 and 4 for remaining panels.
6. Once installation is complete, fill each lower end of panel rib with sealant. Also, clean any debris and excess sealant before continuing next area. Panels may also be field notched and bent to close off panel end (see page 55).



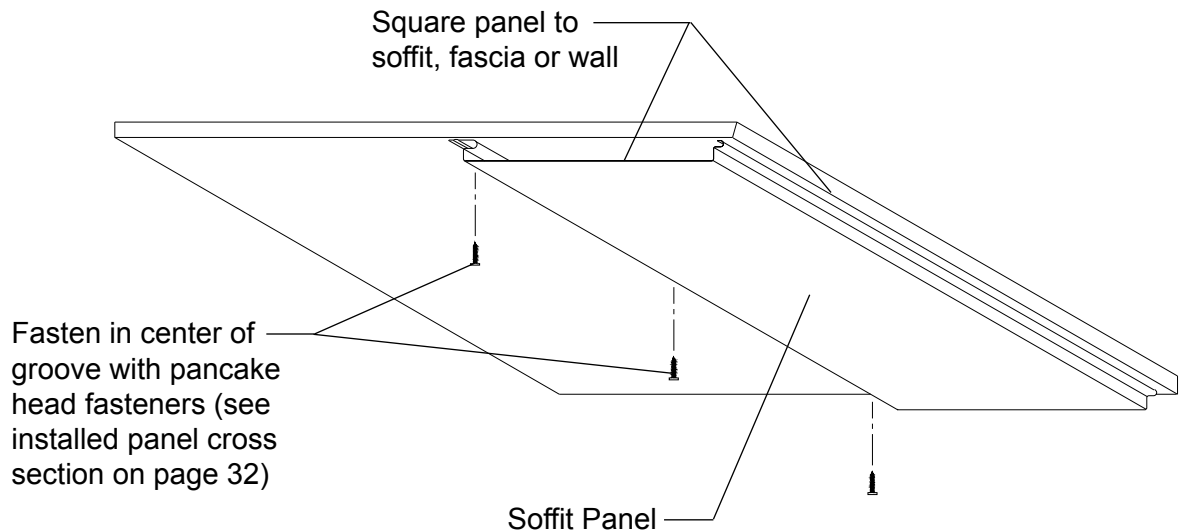
## INSTALLING FIRST PANEL

### STEP 1

**Note: Moisture Barriers and Jamb flashings must first be installed before panel installation can begin (see pages 50-54).**

**Soffit panels are installed from left to right or right to left (see page 32).**

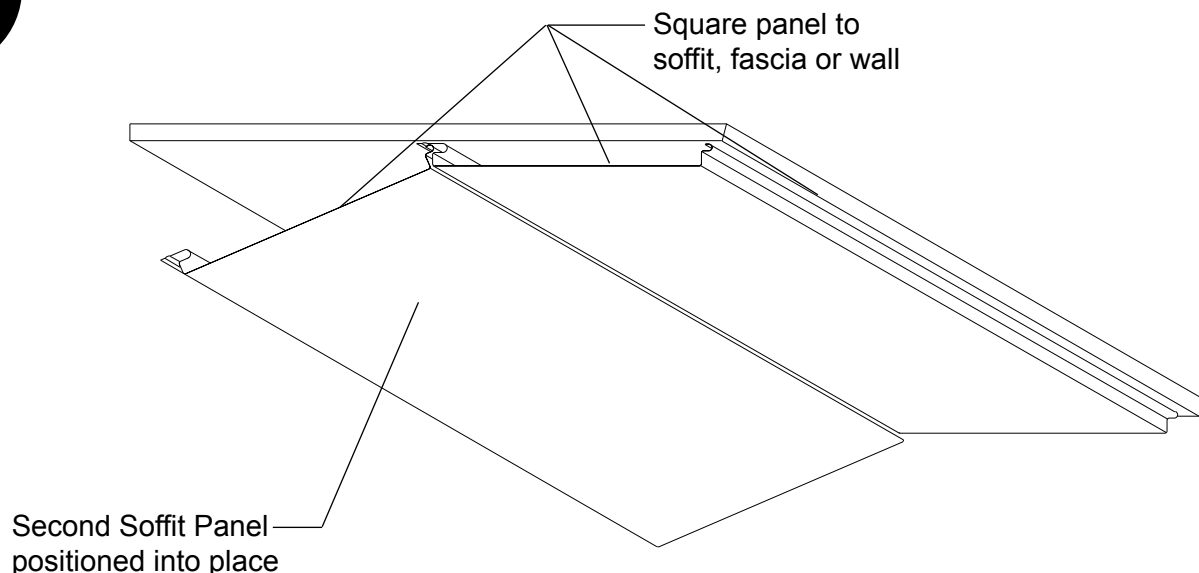
1. Install first panel making sure that panel is square to the soffit, fascia, or wall. **It is critical that the first panel be straight and square with the building as it controls alignment of the following panels.** Fasten panel typically with pancake head woodscrews (12" o.c. typical) in center of the fastening groove and make sure not to overtighten screws. For areas with high wind considerations, closer fastener spacing may be required. Testing indicates that an adhesive in the sidelap is needed to prevent panel disengagement.



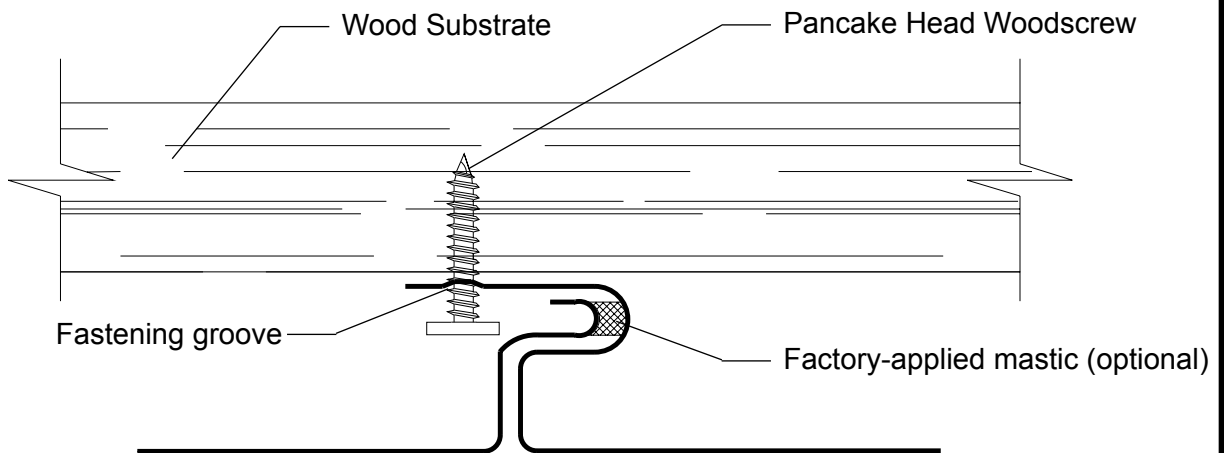
## INSTALLING SECOND PANEL

### STEP 2

1. Position tongue of second panel into the groove of the first, making sure panel ends are aligned and continue with previous steps until installation is complete. Make sure all panels are properly installed, and clean any debris from panel before continuing to next area.

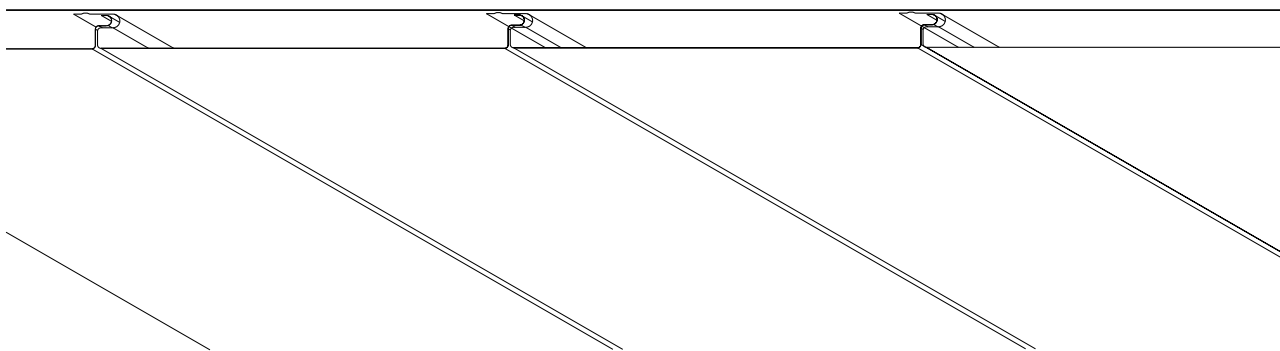


**FASTENING INFORMATION**



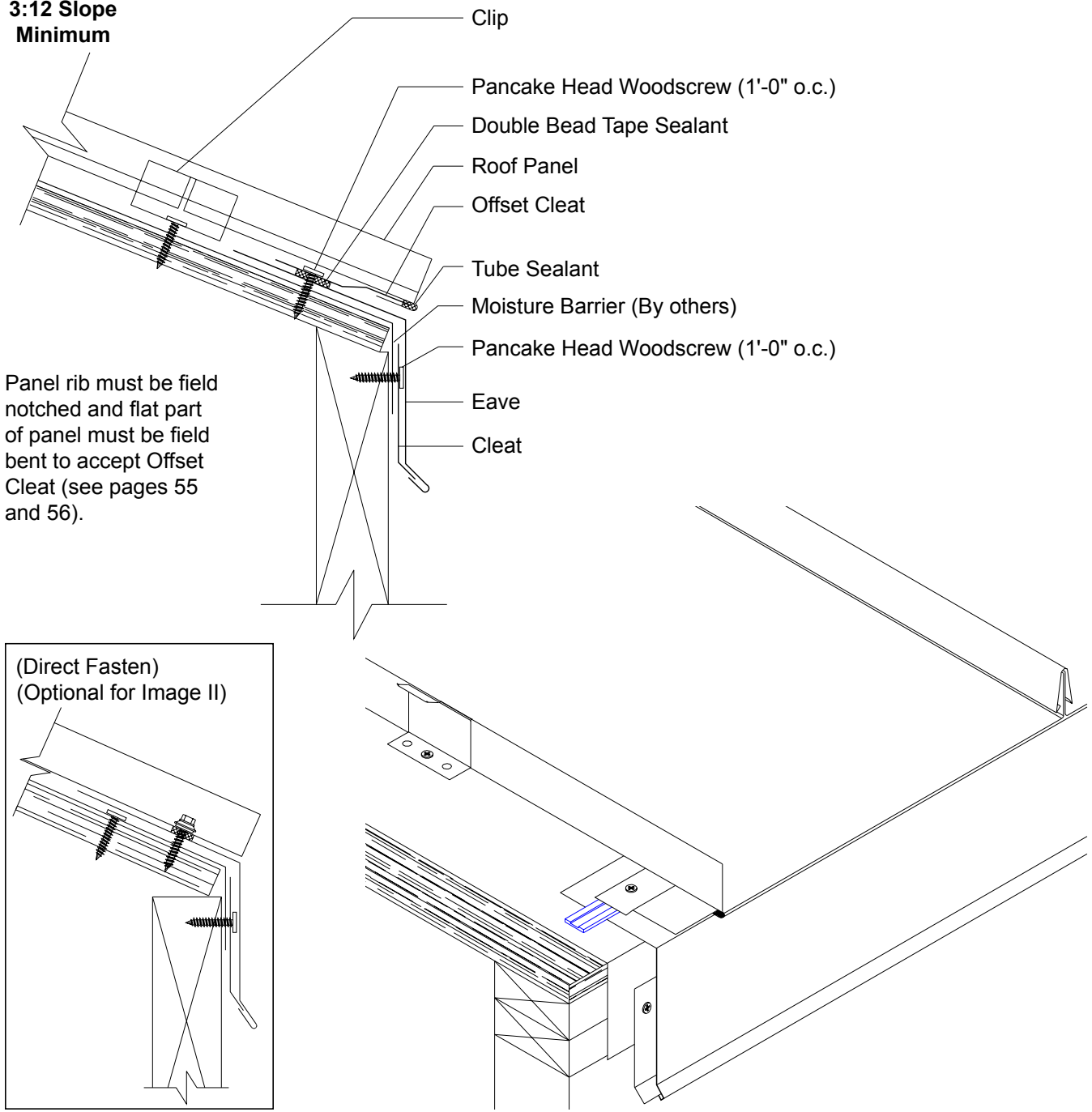
**INSTALLED PANEL CROSS SECTION**

Soffit Panel can be installed in either direction.





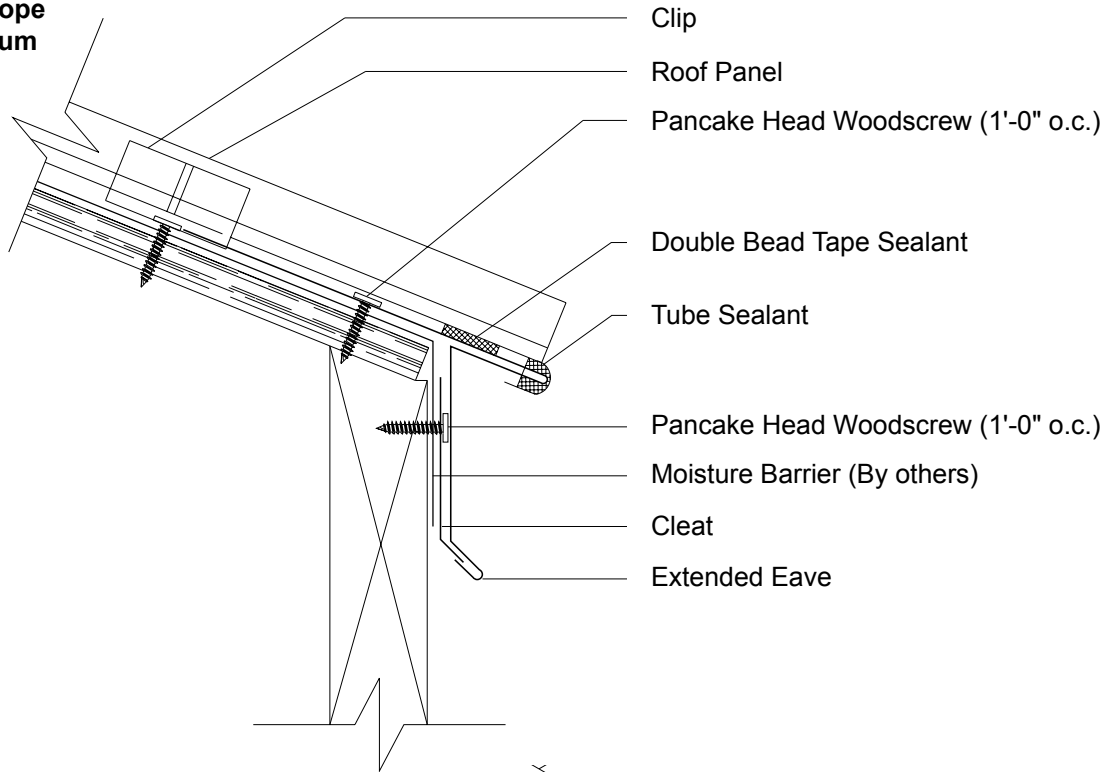
**3:12 Slope  
Minimum**



## INSTALLATION NOTES

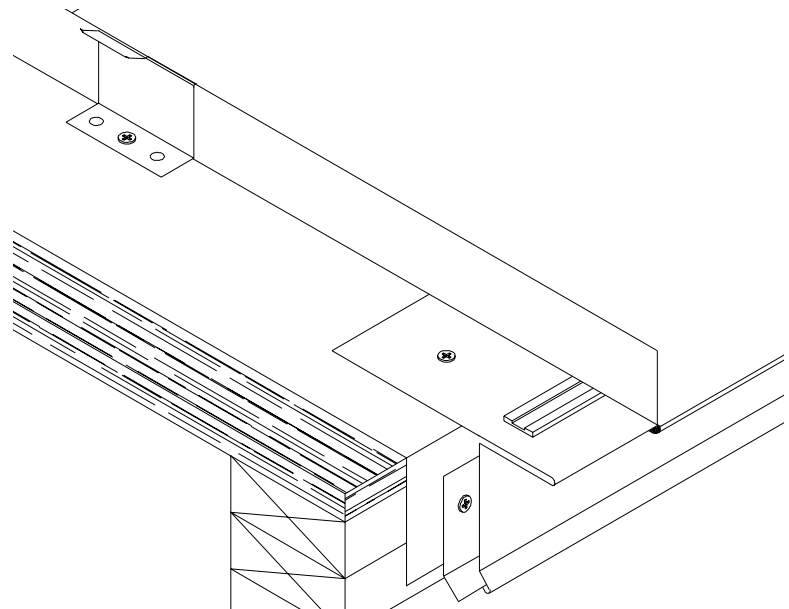
- All Eave flashings must be installed prior to panel installation.**
1. Position and install Cleat to wall with appropriate fastener, 12" o.c. Make sure Cleat allows for proper Eave attachment.
  2. Install Eave flashing by sliding open hem onto Cleat and resting the Eave flashing against the substrate and fasten with #10-12 x 1" Pancake Head Woodscrew (4'-0" o.c.) to hold the Eave Flashing in place during installation.
  3. Apply a row of Double Bead Tape Sealant on the bottom leg of the Offset Cleat and fasten to substrate with #10-12 x 1" Pancake Head Woodscrew through top of Eave flashing and into substrate, 12" o.c. Make sure Offset Cleat is lined up to properly accommodate hemmed panel.
  4. Install panel by engaging field-hemmed end of panel (see pages 55 and 56) to Offset Cleat (See pages 24-30 for panel installation).
  5. If two or more flashings are required, lap the flashing over the previously installed flashing by a minimum of 2" placing a bead of Tube Sealant between the flashings and securing with Pop Rivets 2.5" o.c.

**3:12 Slope  
Minimum**



- Clip
- Roof Panel
- Pancake Head Woodscrew (1'-0" o.c.)
- Double Bead Tape Sealant
- Tube Sealant
- Pancake Head Woodscrew (1'-0" o.c.)
- Moisture Barrier (By others)
- Cleat
- Extended Eave

Panel rib must be field notched and flat part of panel must be field bent to accept Extended Eave (see pages 55 and 56).

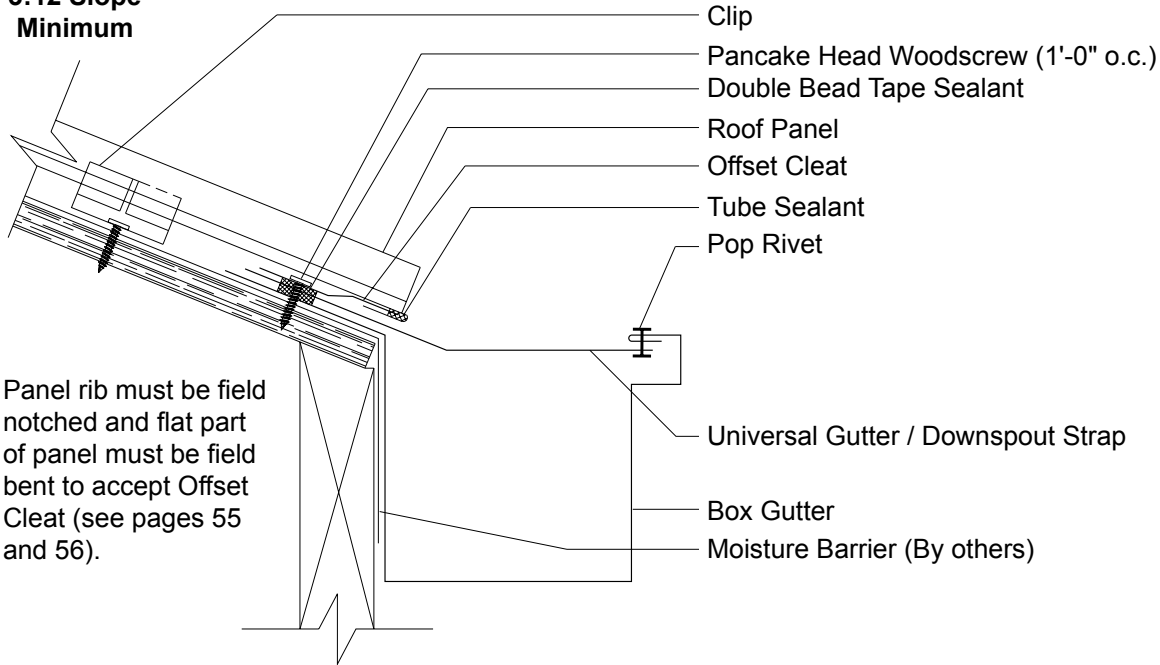


## INSTALLATION NOTES

**All Eave flashings must be installed prior to panel installation.**

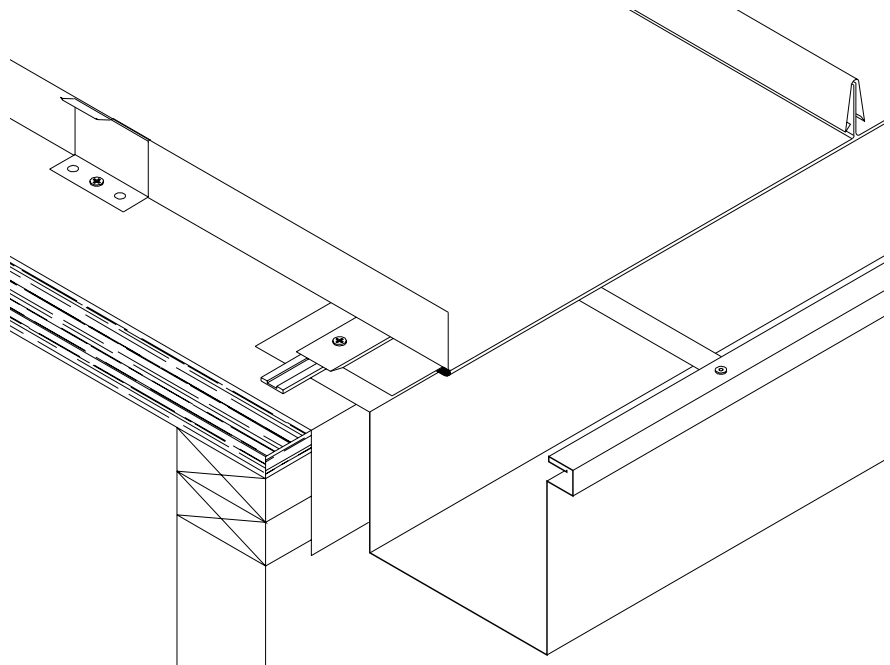
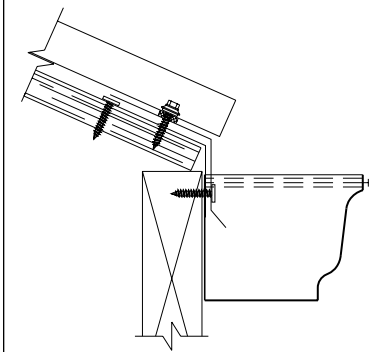
1. Position and install Cleat to wall with appropriate fastener, 12" o.c. Make sure Cleat allows for proper Extended Eave attachment.
2. Install Extended Eave flashing by sliding open hem onto Cleat and resting Extended Eave Flashing back against substrate. Fasten to substrate with #10-12 x 1" Pancake Head Woodscrew, 12" o.c.
3. Apply a row of Double Bead of Tape Sealant to extended leg of the Extended Eave flashing.
4. Install panel by engaging field hemmed-end of panel (see pages 55 and 56) to Extended Eave (see pages 24-30 for panel installation).
5. If two or more flashings are required, lap the flashing over the previously installed flashing by a minimum of 2" placing a bead of Tube Sealant between the flashings and securing with Pop Rivets 2.5" o.c.

**3:12 Slope  
Minimum**



Metal Sales recommends a Gutter Expansion Joint every 50'.

(Direct Fasten)  
(Optional for Image II)

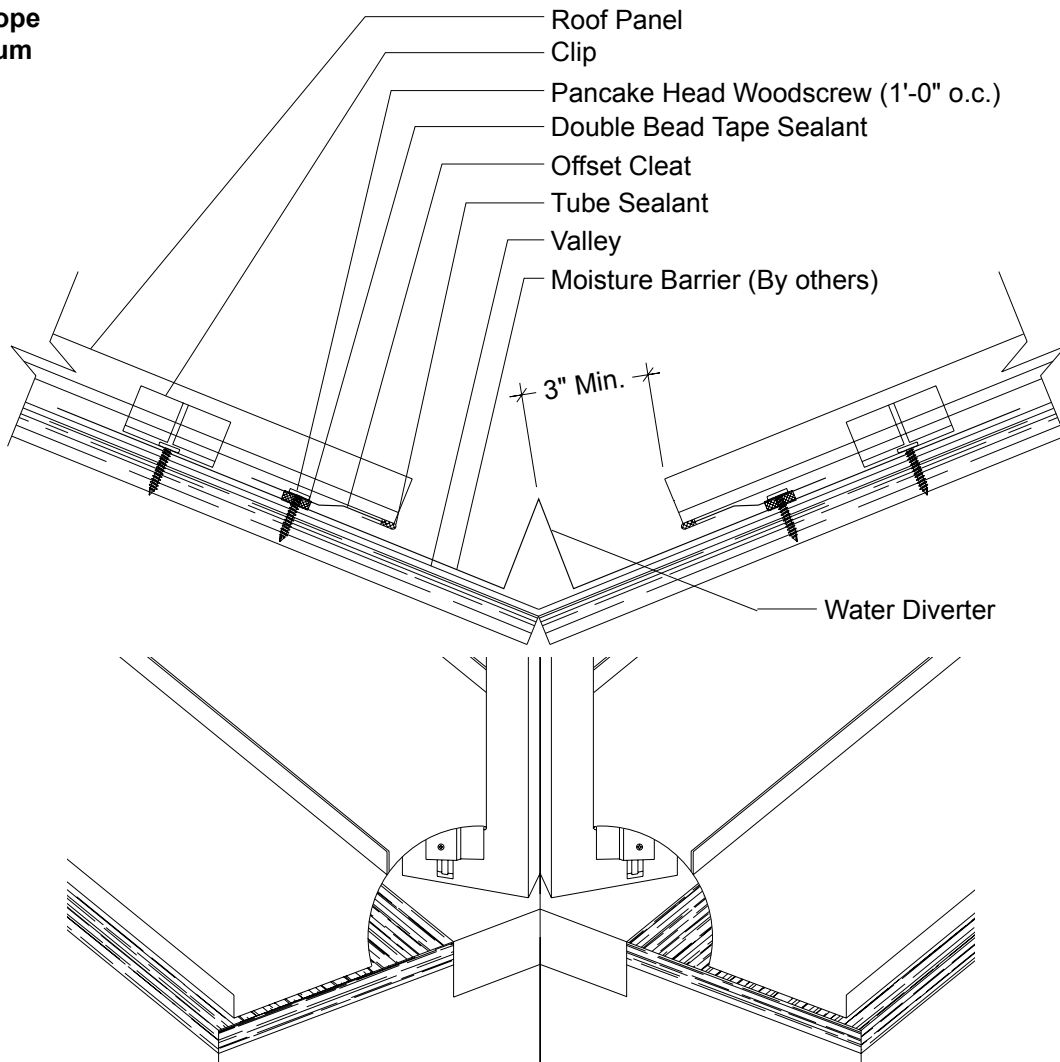


## INSTALLATION NOTES

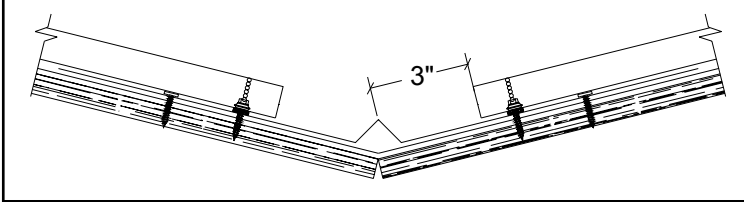
**All Gutter Flashings must be installed prior to panel installation.**

1. Install Box Gutter flashing back against substrate. To hold Box Gutter flashing in place, fasten to substrate with #10-12 x 1" Pancake Head Woodscrew 4'-0" o.c.
2. Install Universal Gutter/Downspout Straps every 3'-0" of gutter length to substrate with #10-12 x 1" Pancake Head Woodscrew, and fasten to Box Gutter with (1) Pop Rivet per Strap.
3. Apply a row of Double Bead of Tape Sealant to bottom leg of Offset Cleat, position on back leg of Box Gutter, and fasten to substrate with #10-12 x 1" Pancake Head Woodscrew, 12" o.c.
4. Install panel by engaging field-hemmed end of panel (see pages 55 and 56) to Offset Cleat (see pages 24-30 for panel installation).
5. If two or more flashings are required, lap the flashing over the previously installed flashing by a minimum of 2" placing a bead of Tube Sealant between the flashings and securing with Pop Rivets 2.5" o.c.
6. Note: Size and gauge of box gutter must be designed to applicable governing building code.

**3:12 Slope  
Minimum**



Direct Fasten (Optional for Image II)



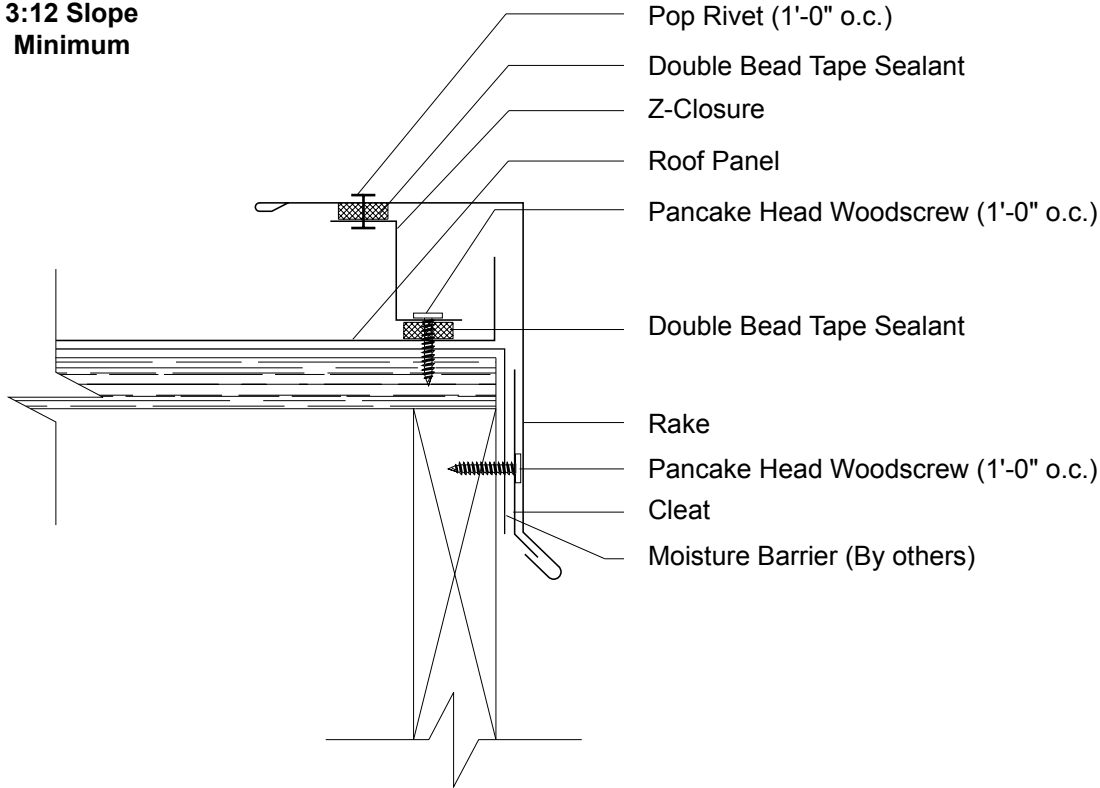
Panel rib must be field notched and flat part of panel must be field bent to accept Offset Cleat (see pages 55 and 56).

## INSTALLATION NOTES

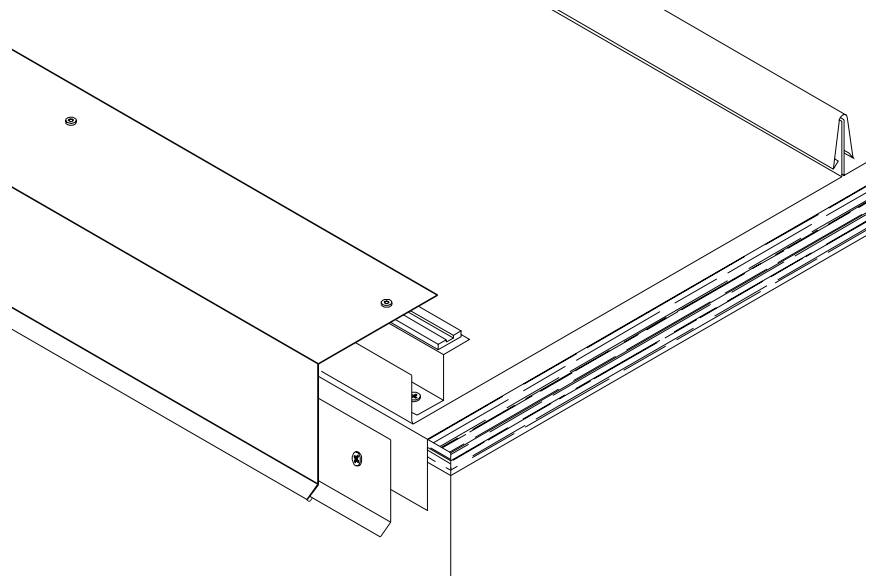
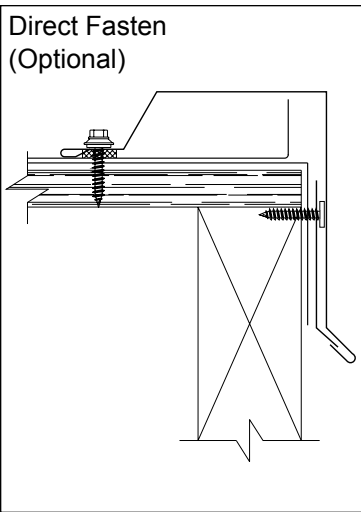
**All Valley flashings must be installed prior to panel installation. If two or more valley flashings are required, valley must be installed working from eave to peak. It is recommended that ms-HT be installed under valley flashing for added moisture protection.**

1. Install Valley flashing against substrate. To hold Valley flashing in place, fasten to substrate with #10-12x1" Pancake Head fastener 4'-0" o.c.
2. Apply a row of Double Bead Tape Sealant across both sides of Valley flashing approximately 5" from center of valley.
3. Properly align and install Offset Cleat on both sides of Valley flashing to accommodate panel hem and fasten to substrate with #10-12x1" Pancake Head fastener 12" o.c..
4. Install panel by engaging field-hemmed end of panel (see pages 55 and 56) to Offset Cleat (see pages 24-30 for panel installation).
5. If two or more flashings are required, lap the flashing over the previously installed flashing by a minimum of 2", placing a bead of Tube Sealant between the flashings and securing with (2) Pop Rivets in the 1" water diverter.

**3:12 Slope  
Minimum**



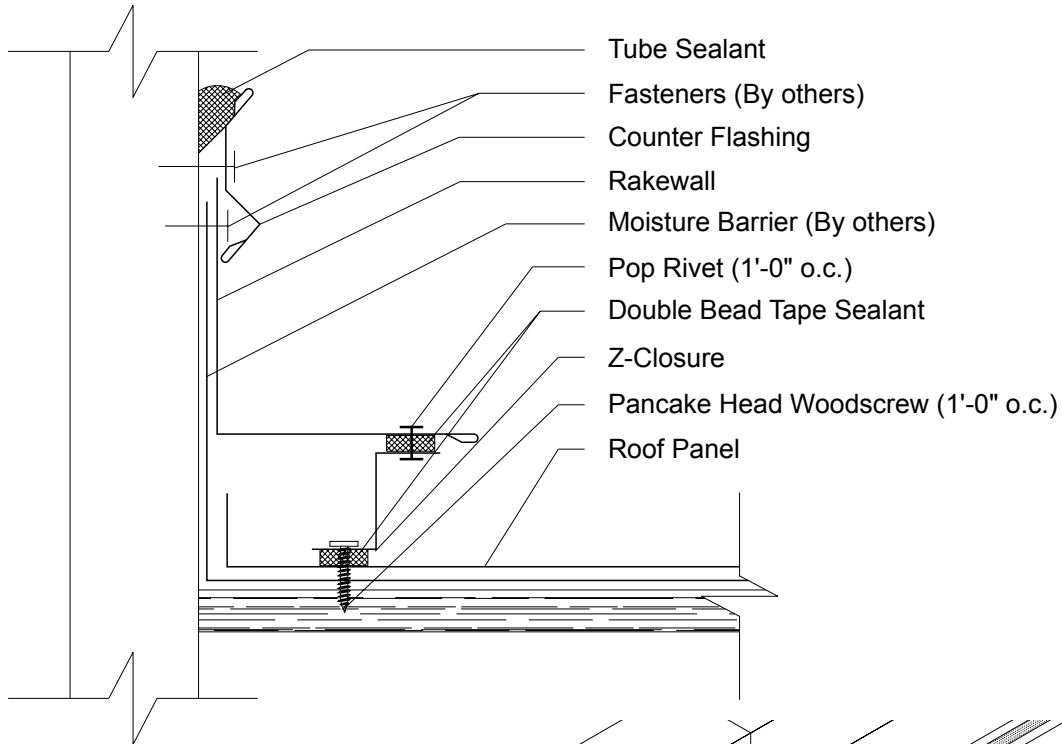
**Direct Fasten  
(Optional)**



## INSTALLATION NOTES

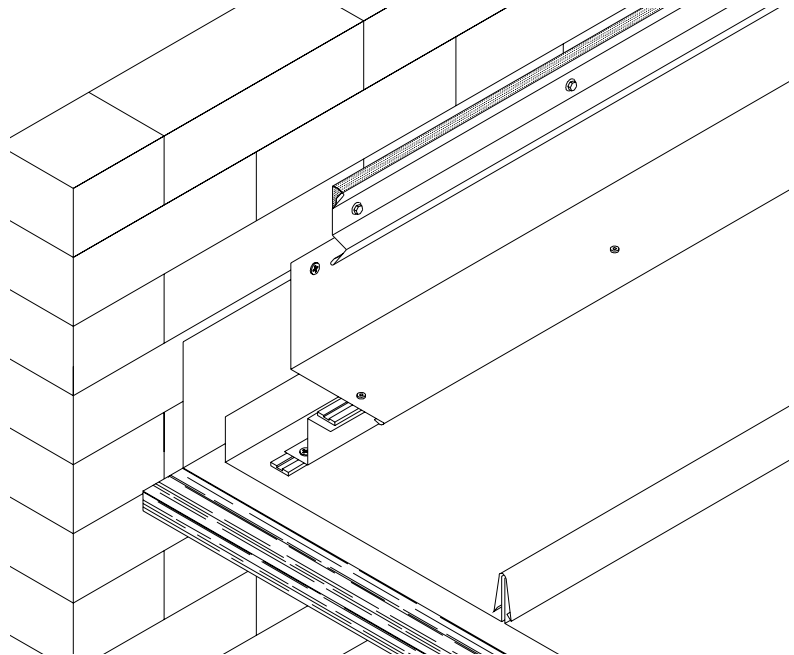
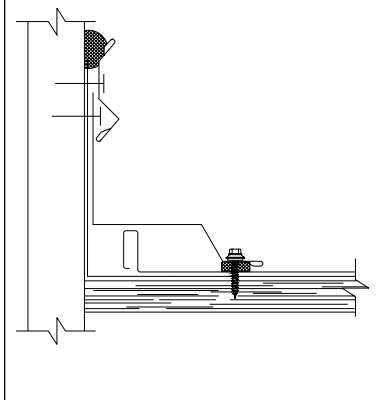
1. If panel ends off module bend flat part of the panel up a minimum of 1", otherwise skip to the next note.
2. Apply a row of Double Bead of Tape Sealant to the flat part of the panel next to the panel rib or vertical, field-bent leg.
3. Position Z-Closure over tape sealant and fasten to wood substrate with #10-12 x 1" Pancake Head Woodscrew, 12" o.c. Fastener must penetrate through the Z-Closure, Tape Sealant and panel.
4. Position and install Cleat to wall with appropriate fastener, 12" o.c. Make sure Cleat installation allows for proper Rake attachment.
5. Apply a row of Double Bead Tape Sealant to top leg of the Z-Closure.
6. Install Rake by sliding the open hem onto the Cleat and then attaching to the Z-Closure with  $\frac{1}{8} \times \frac{3}{16}$ " Pop Rivets at 12" o.c.
7. If two or more flashings are required, lap the flashing over the previously installed flashing by a minimum of 2" placing a bead of Tube Sealant between the flashings and securing with Pop Rivets 2.5" o.c.

3:12 Slope  
Minimum



- Tube Sealant
- Fasteners (By others)
- Counter Flashing
- Rakewall
- Moisture Barrier (By others)
- Pop Rivet (1'-0" o.c.)
- Double Bead Tape Sealant
- Z-Closure
- Pancake Head Woodscrew (1'-0" o.c.)
- Roof Panel

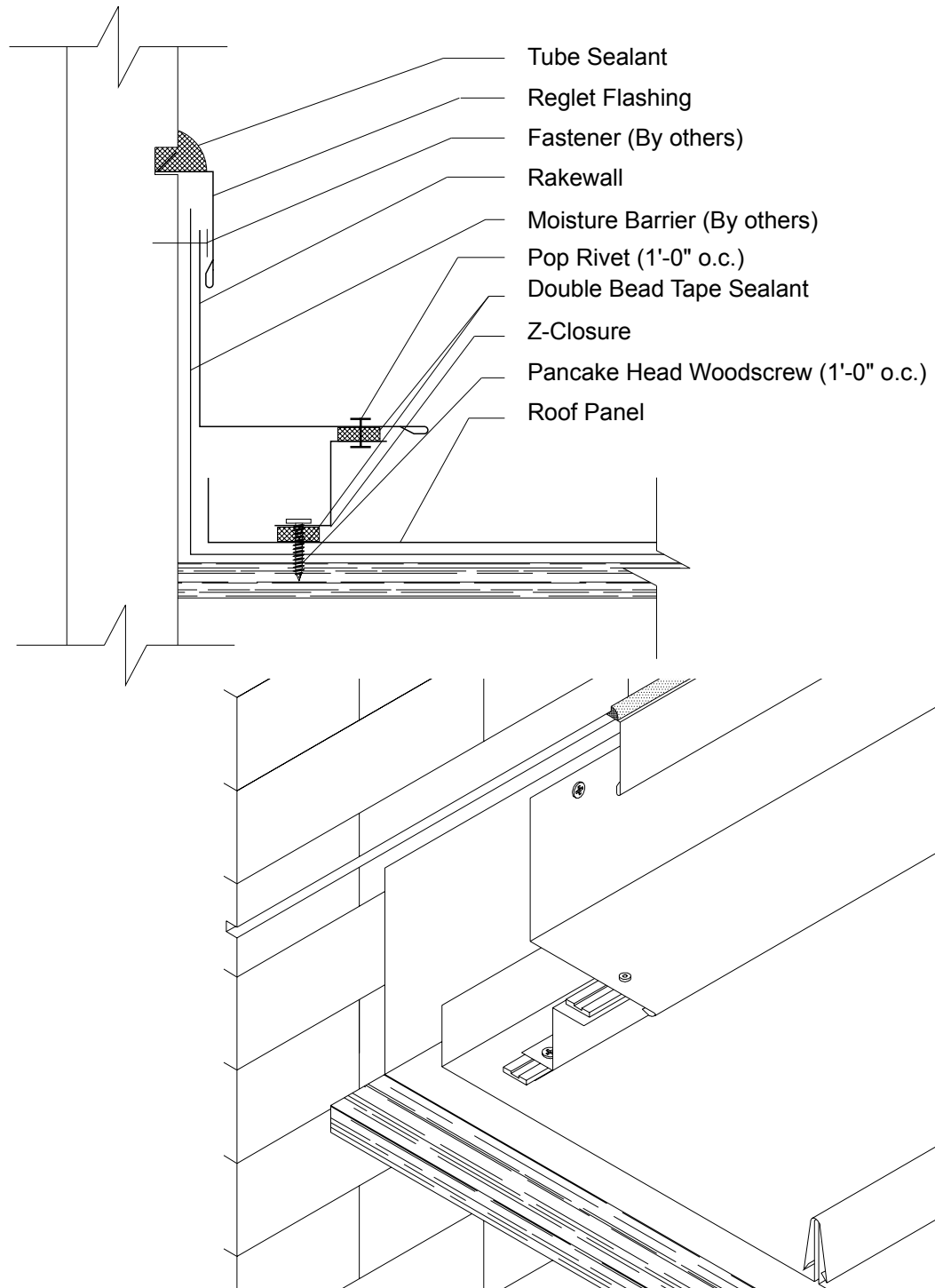
Direct Fasten  
(Optional)



## INSTALLATION NOTES

1. If panel ends off module bend flat part of the panel up a minimum of 1", otherwise skip to the next note.
2. Apply a row of Double Bead of Tape Sealant to the flat part of the panel next to the panel rib or vertical, field-bent leg.
3. Position Z-Closure over tape sealant and fasten to wood substrate with #10-12 x 1" Pancake Head Woodscrew, 12" o.c. Fastener must penetrate through the Z-Closure, Tape Sealant and panel.
4. Install Rakewall to the Floating Z-Closure with 1/8" x 3/16" Pop Rivets at 12" o.c.
5. Install Counter Flashing, and fasten to parapet wall with appropriate fastener 12" o.c. Seal Counter Flashing to parapet wall with Tube Sealant.
6. If two or more flashings are required, lap the flashing over the previously installed flashing by a minimum of 2" placing a bead of Tube Sealant between the flashings and securing with Pop Rivets 2.5" o.c.

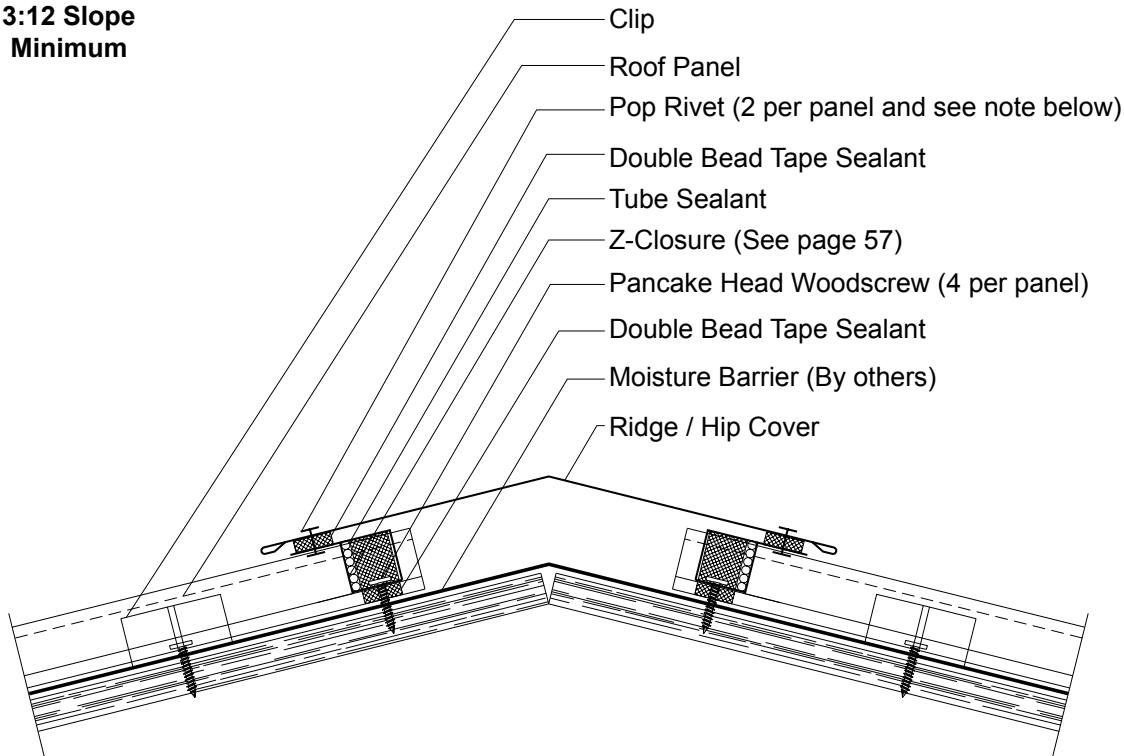
3:12 Slope  
Minimum



### INSTALLATION NOTES

1. If panel ends off module bend flat part of the panel up a minimum of 1", otherwise skip to the next note.
2. Apply a row of Double Bead of Tape Sealant to the flat part of the panel next to the panel rib or vertical, field-bent leg.
3. Position Z-Closure over tape sealant and fasten to wood substrate with #10-12 x 1" Pancake Head Woodscrew, 12" o.c. Fastener must penetrate through the Z-Closure, Tape Sealant and panel.
4. Install Rakewall to the Floating Z-Closure with  $\frac{1}{8}$ " x  $\frac{3}{16}$ " Pop Rivets at 12" o.c.
5. Install Reglet in field-cut groove in the parapet wall. Seal Reglet to parapet wall with Tube Sealant.
6. If two or more flashings are required, lap the flashing over the previously installed flashing by a minimum of 2" placing a bead of Tube Sealant between the flashings and securing with Pop Rivets 2.5" o.c.

**3:12 Slope  
Minimum**



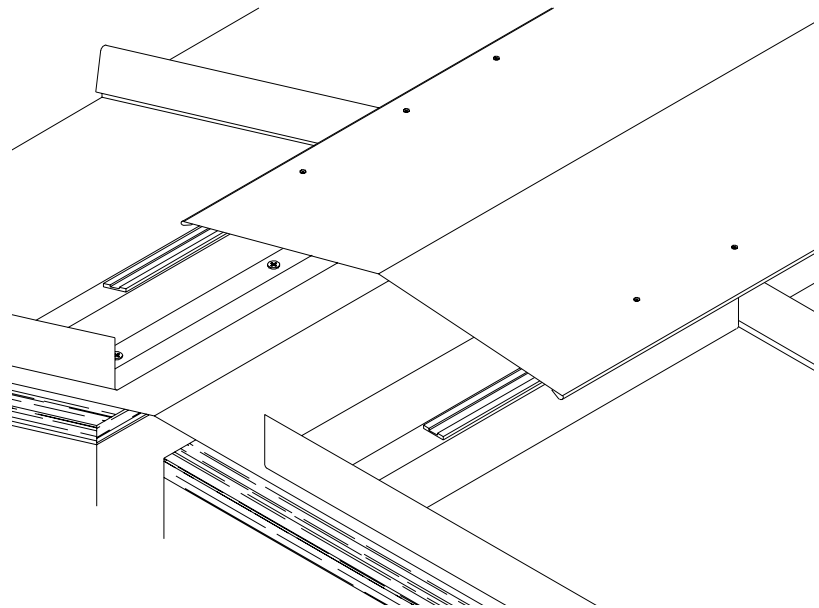
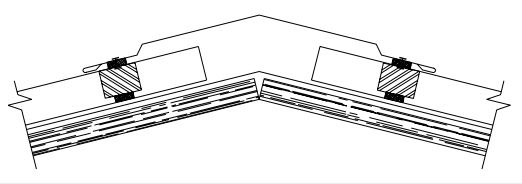
### CAUTION

Additional screws may be required for high snow loading and steep slopes.

### NOTE

For Mini/Maxi Batten Panels, Pop Rivet must attach Ridge/Hip Cover to each Batten Cap

(Optional)

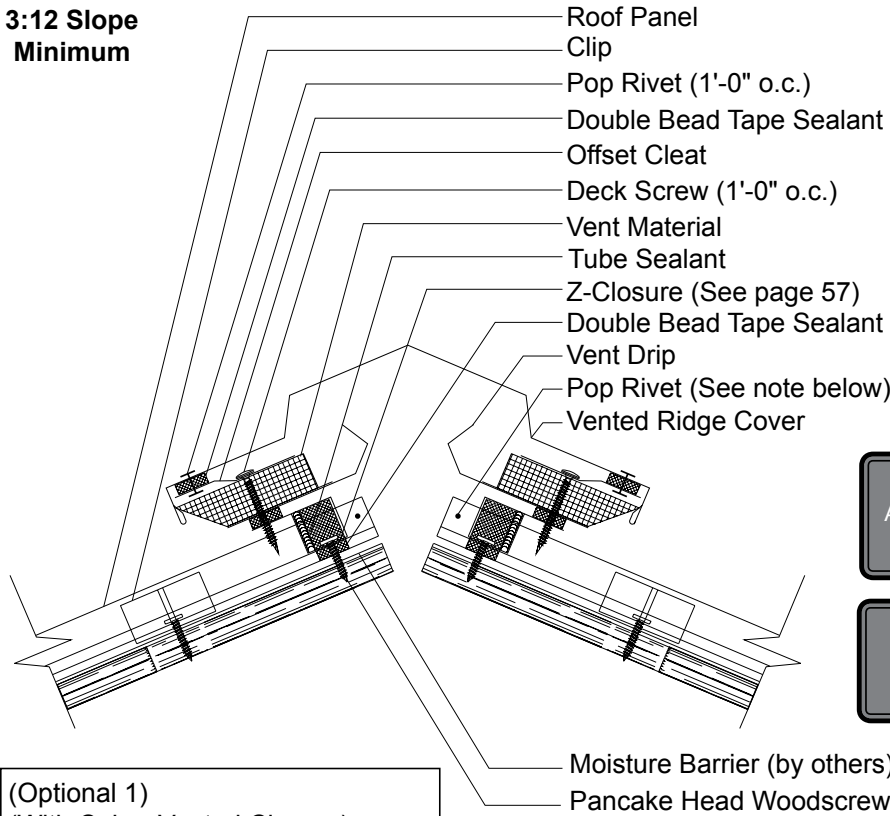


## INSTALLATION NOTES

1. Once panels have been installed, field cut the Architectural Z-Closure (See page 57) to fit between the panel ribs.
2. Place a row of Double Bead Tape Sealant across panel and over each panel rib approximately 2" from panel end. Before proceeding make sure Z-Closure placement will accommodate 11" Ridge/Hip cover.
3. Install field-cut Z-Closure as shown on page 57.
4. Fasten Z-Closure through panel with #10-12 x 1" Pancake Head Woodscrews (4 per panel).
5. Apply a row of Double Bead Tape Sealant across top leg of Z-Closure filling any gaps or openings around panel ribs.
6. Position and install 11" Ridge/Hip Cover flashing to Z-Closure with 1/8" x 3/16" Pop Rivets (as shown).
7. If two or more flashings are required, lap the flashing over the previously installed flashing by a minimum of 2" placing a bead of Tube Sealant between the flashings and securing with Pop Rivets 2.5" o.c.

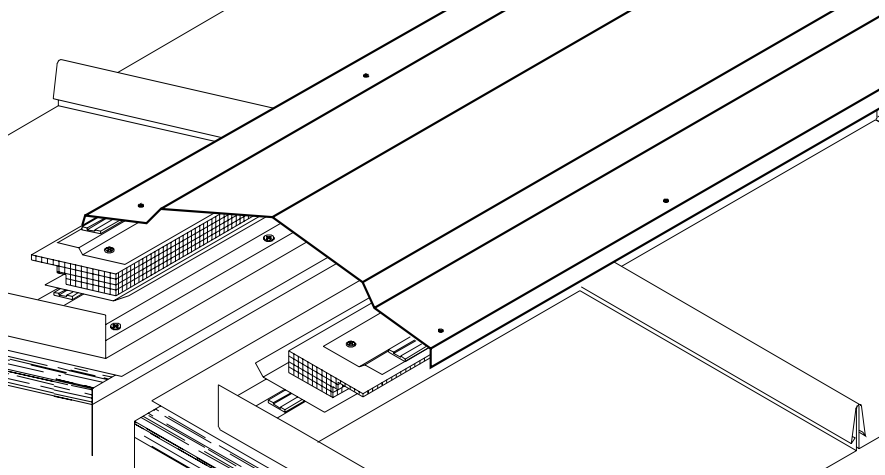
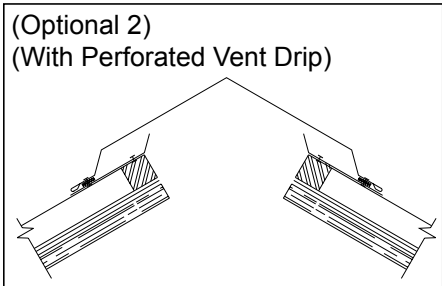
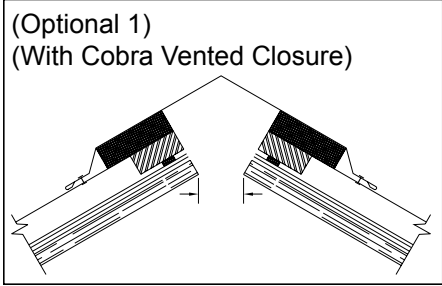


**3:12 Slope  
Minimum**



**CAUTION**  
Additional screws may be required for high snow loading and steep slopes.

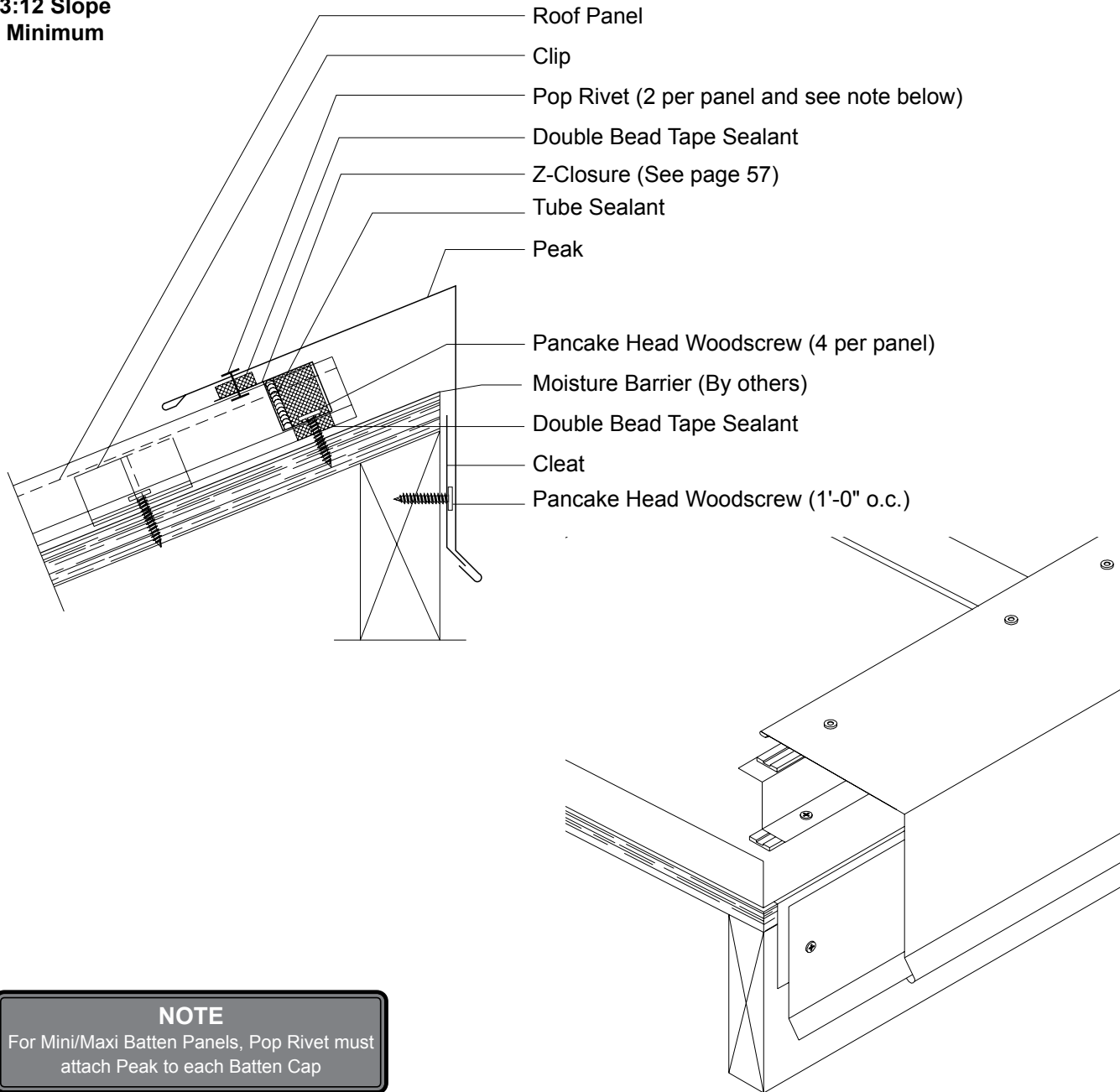
**NOTE**  
For Mini/Maxi Batten Panels, Pop Rivet must attach each Batten Cap to Panel



## INSTALLATION NOTES

1. Once panels have been installed, field cut the Architectural Z-Closure (See page 57) to fit between the panel ribs.
2. Place a row of Double Bead Tape Sealant across panel and over each panel rib approximately 2" from panel end. Before proceeding, make sure Z-Closure placement will accommodate Vented Ridge cover.
3. Install field-cut Z-Closure as shown on page 57.
4. Fasten Z-Closure through panel with #10-12 x 1" Pancake Head Woodscrews (4 per panel).
5. Apply a row of Double Bead Tape Sealant across top leg of Z-Closure filling any gaps or openings around panel ribs.
6. Install Vent Drip, Vent Material, and Offset Cleat, as shown above with #14-13 x 2" deck screws, 12" o.c. and apply a row of Double Bead Tape Sealant to the top leg of the Offset Cleat.
7. Install Vented Ridge Cover to Offset Cleat with 1/8" x 3/16" Pop Rivets at 12" o.c.
8. If two or more flashings are required, lap the flashing over the previously installed flashing by a minimum of 2" placing a bead of Tube Sealant between the flashings and securing with Pop Rivets 2.5" o.c.

**3:12 Slope  
Minimum**



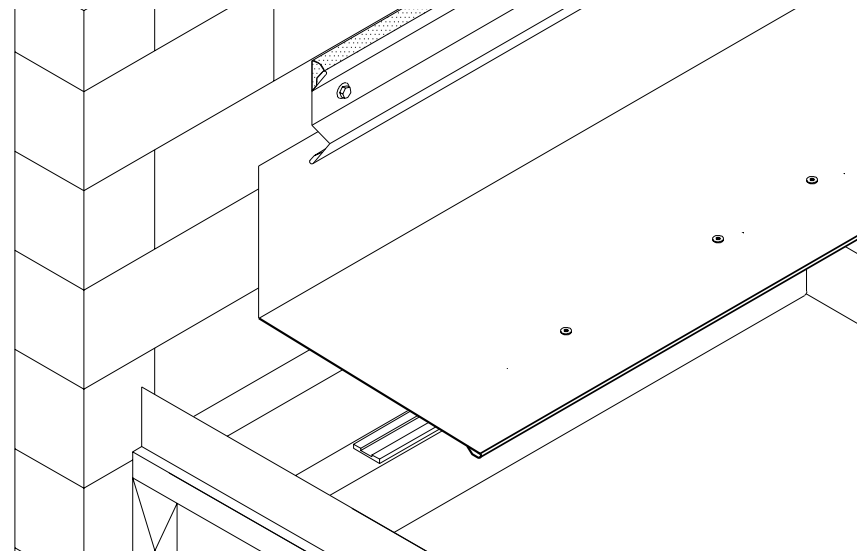
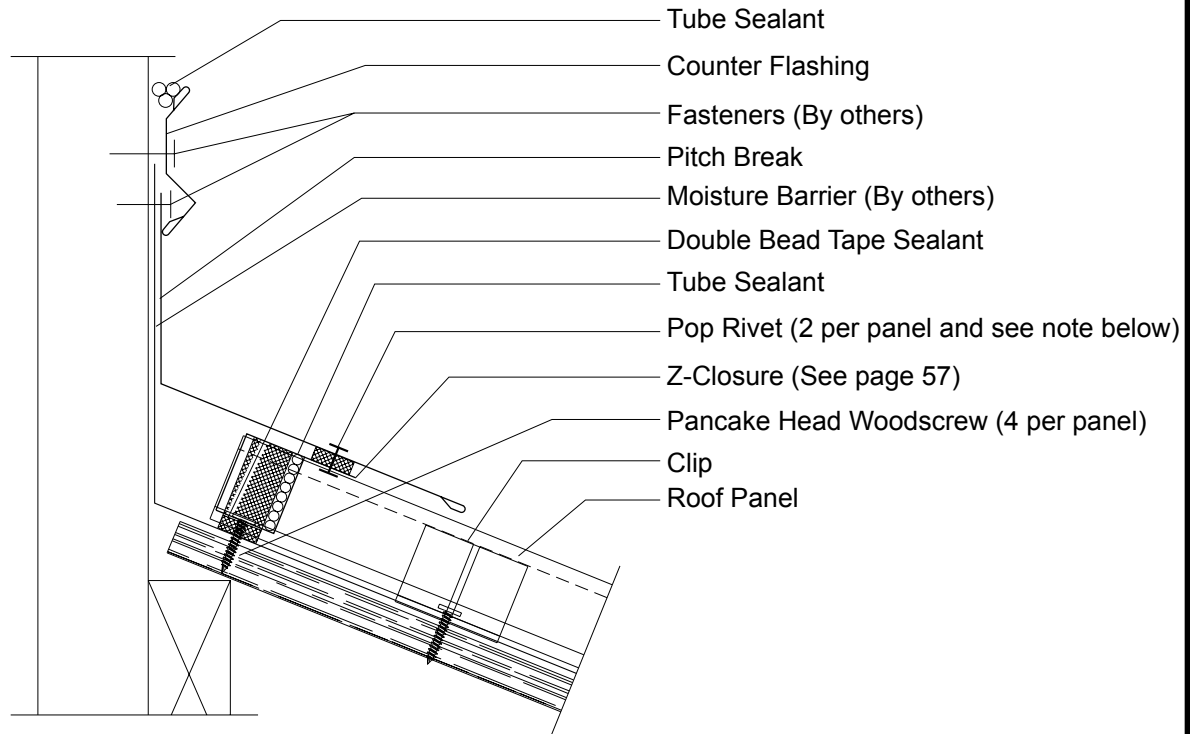
**NOTE**

For Mini/Maxi Batten Panels, Pop Rivet must attach Peak to each Batten Cap

**INSTALLATION NOTES**

1. Once panels have been installed, field cut the Architectural Z-Closure (See page 57) to fit between the panel ribs.
2. Place a row of Double Bead Tape Sealant across panel and over each panel rib approximately 2" from panel end. Before proceeding make sure Z-Closure placement will accommodate Peak cover.
3. Install field-cut Z-Closure as shown on page 57.
4. Fasten Z-Closure through panel with #10-12 x 1" Pancake Head Woodscrews (4 per panel).
5. Apply a row of Double Bead Tape Sealant across top leg of Z-Closure filling any gaps or openings around panel ribs.
6. Position and install Cleat to the wall with the appropriate fastener, 12" o.c. Make sure cleat allows for proper Peak attachment.
7. Install Peak flashing by sliding the open hem onto the Cleat and then attaching to the Z-Closure with 1/8" x 3/16" Pop Rivets, at the spacing shown above.
8. If two or more flashings are required, lap the flashing over the previously installed flashing by a minimum of 2" placing a bead of Tube Sealant between the flashings and securing with Pop Rivets 2.5" o.c.

**3:12 Slope  
Minimum**

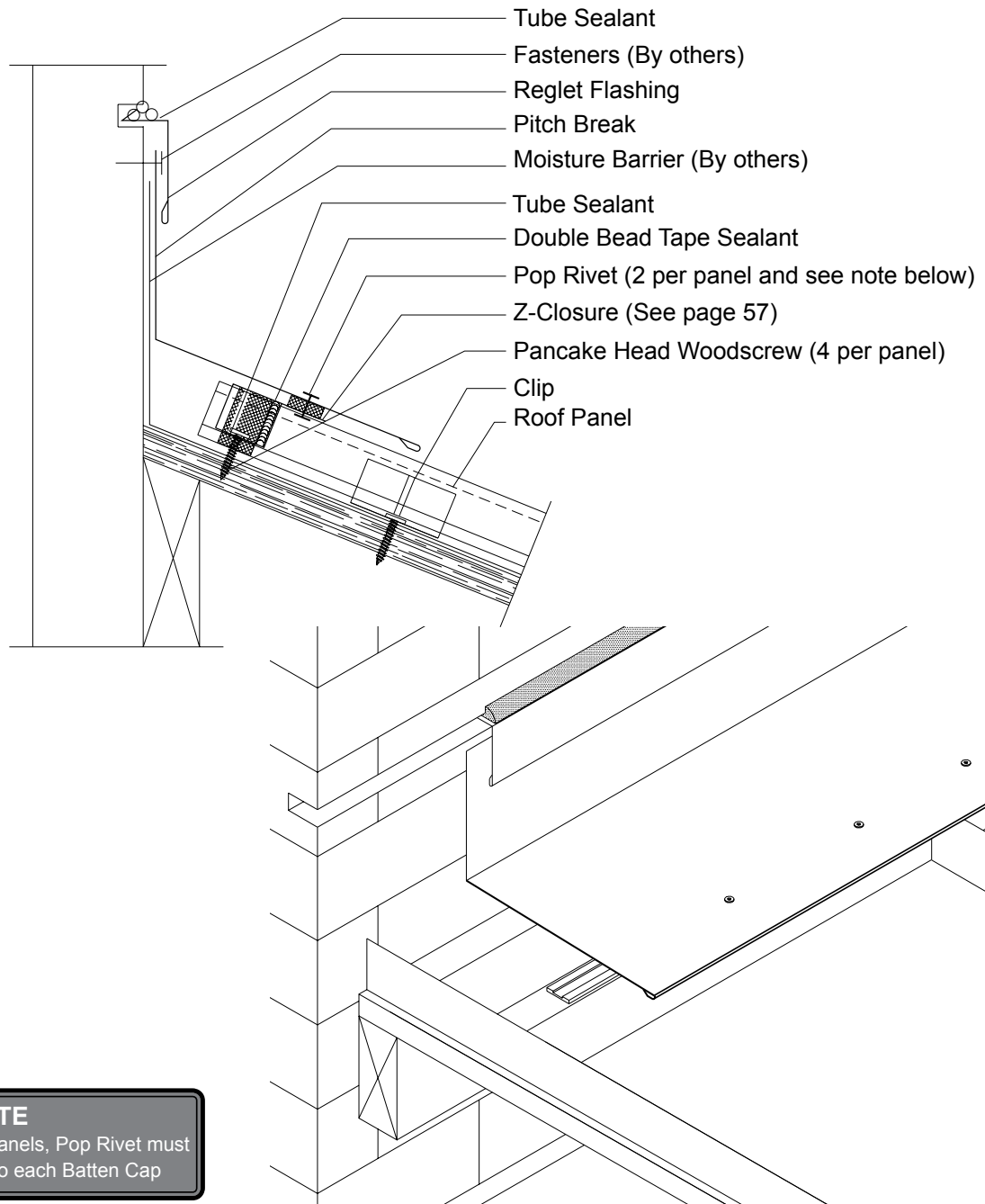


**NOTE**  
For Mini/Maxi Batten Panels, Pop Rivet must attach Pitch Break to each Batten Cap

## INSTALLATION NOTES

1. Once panels have been installed, field cut the Architectural Z-Closure (See page 57) to fit between the panel ribs.
2. Place a row of Double Bead Tape Sealant across panel and over each panel rib approximately 2" from panel end. Before proceeding make sure Z-Closure placement will accommodate Pitch Break flashing.
3. Install field-cut Z-Closure as shown on page 57.
4. Fasten Z-Closure through panel with #10-12 x 1" Pancake Head Woodscrews (4 per panel).
5. Apply a continuous bead of Tube Sealant across top leg of Z-Closure filling any gaps or openings around panel ribs. Position and install Pitch Break flashing to Z-Closure with  $\frac{1}{8}$ " x  $\frac{3}{16}$ " Pop Rivets (as shown).
6. Fasten vertical leg of Pitch Break to the parapet wall with the appropriate fastener (1'-0" o.c.).
7. Install Counter Flashing, and fasten to parapet wall with appropriate fastener 12" o.c. Seal Counter Flashing to parapet wall with Tube Sealant.
8. If two or more flashings are required, lap the flashing over the previously installed flashing by a minimum of 2" placing a bead of Tube Sealant between the flashings and securing with Pop Rivets 2.5" o.c.

**3:12 Slope  
Minimum**



**NOTE**

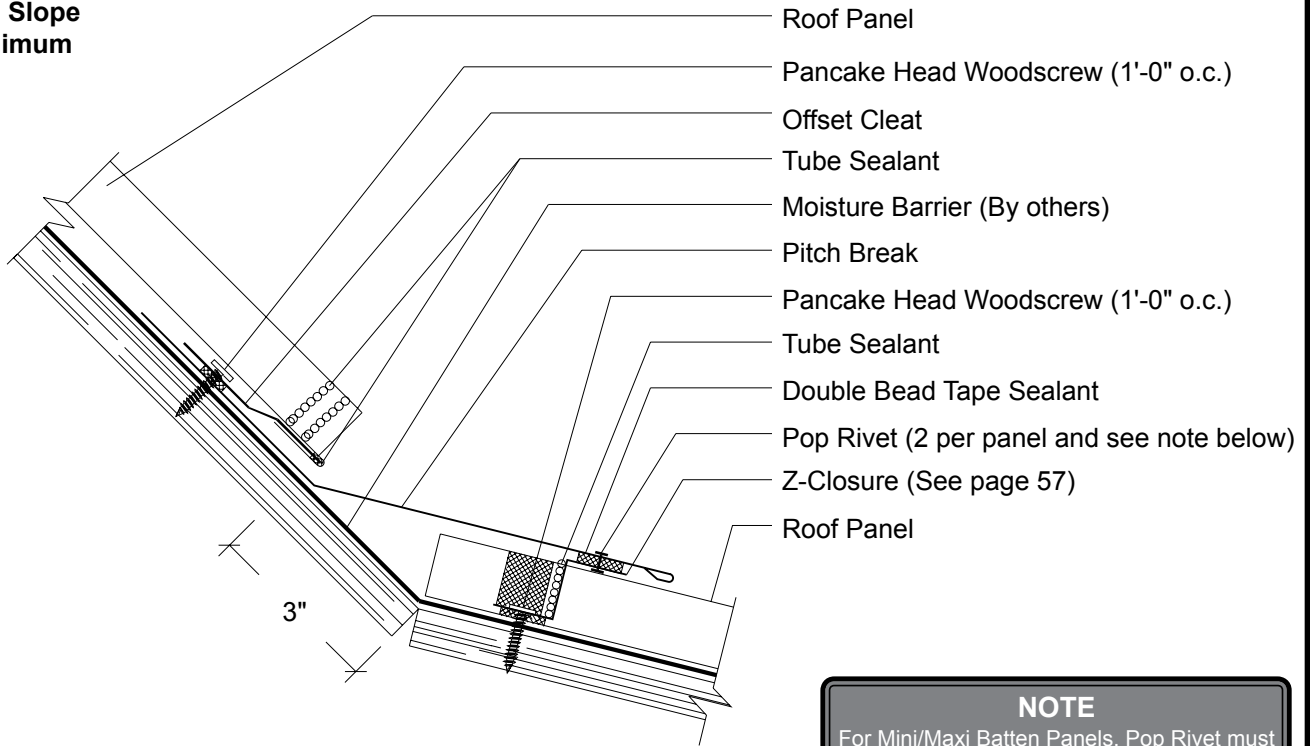
For Mini/Maxi Batten Panels, Pop Rivet must attach Pitch Break to each Batten Cap

**INSTALLATION NOTES**

1. Once panels have been installed, field cut the Architectural Z-Closure (See page 57) to fit between the panel ribs.
2. Place a row of Double Bead Tape Sealant across panel and over each panel rib approximately 2" from panel end. Before proceeding make sure Z-Closure placement will accommodate Pitch Break flashing.
3. Install field-cut Z-Closure as shown on page 57.
4. Fasten Z-Closure through panel with #10-12 x 1" Pancake Head Woodscrews (4 per panel).
5. Apply a continuous bead of Tube Sealant across top leg of Z-Closure filling any gaps or openings around panel ribs. Position and install Pitch Break flashing to Z-Closure with 1/8" x 3/16" Pop Rivets (as shown).
6. Fasten vertical leg of Pitch Break to the parapet wall with the appropriate fastener (1'-0" o.c.).
7. Install Reglet in field-cut groove in the parapet wall. Seal Reglet to parapet wall with Tube Sealant.
8. If two or more flashings are required, lap the flashing over the previously installed flashing by a minimum of 2" placing a bead of Tube Sealant between the flashings and securing with Pop Rivets 2.5" o.c.

## SLOPE CHANGE

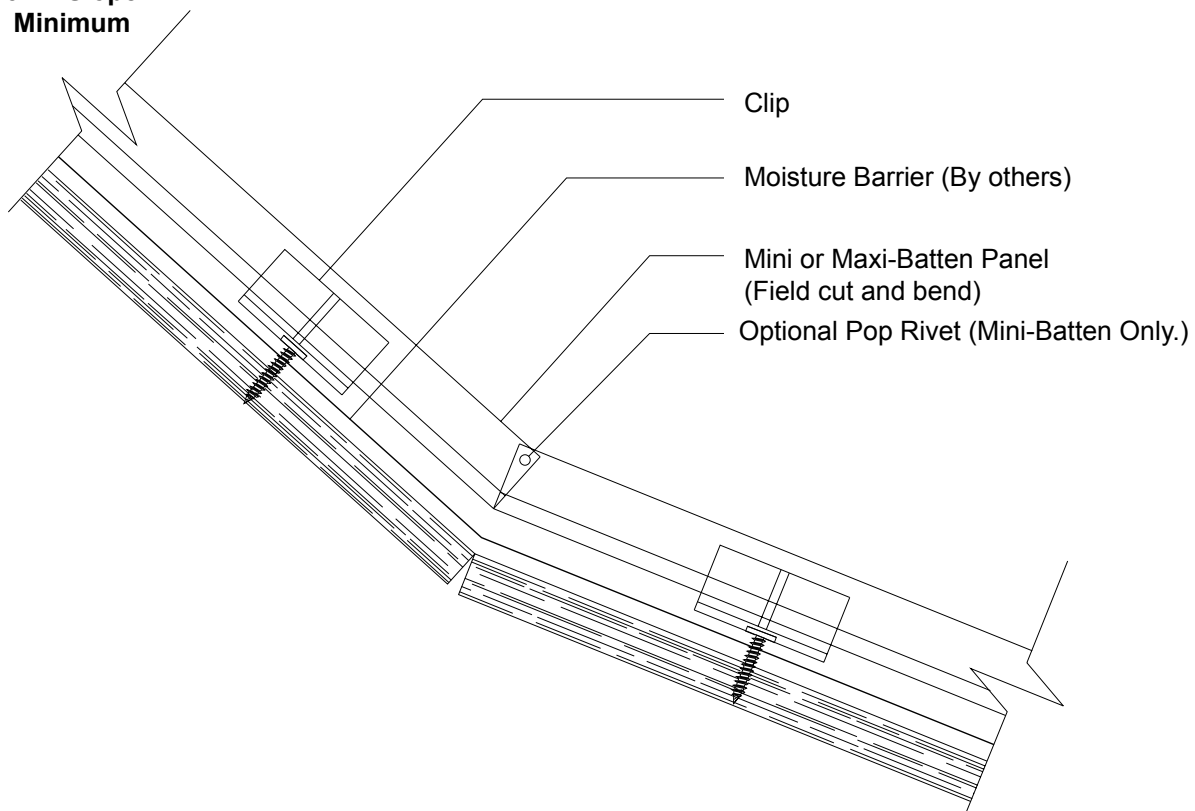
**3:12 Slope  
Minimum**



**NOTE**  
For Mini/Maxi Batten Panels, Pop Rivet must attach Pitch Break to each Batten Cap

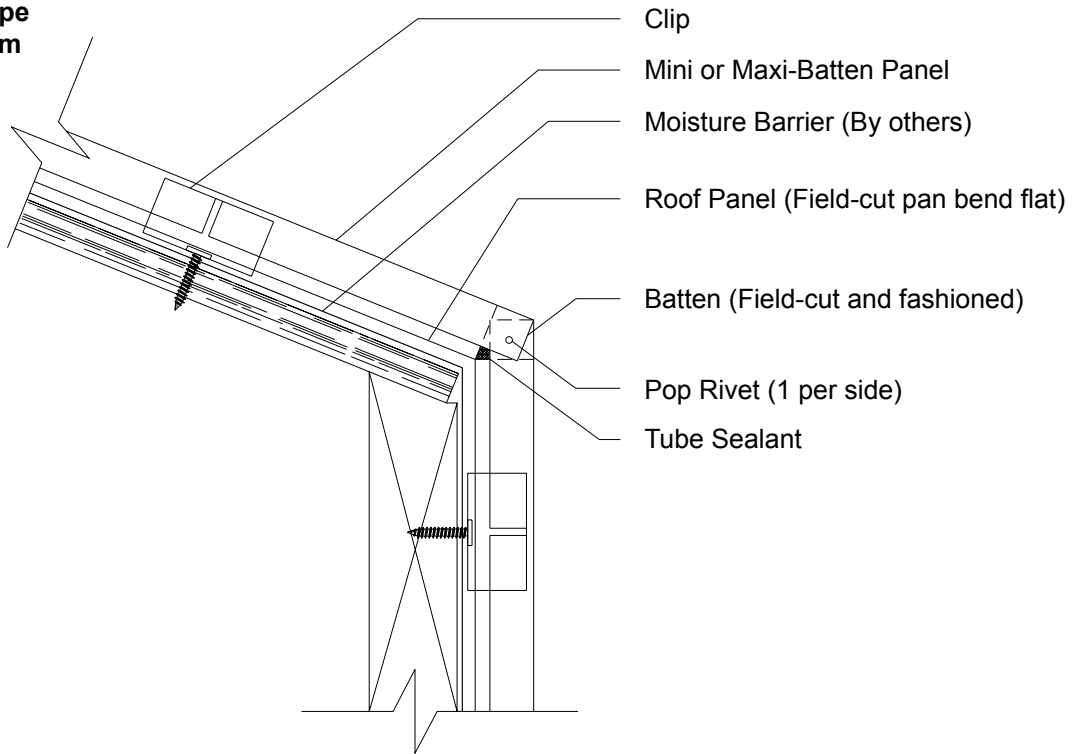
## MINI / MAXI-BATTEN SLOPE CHANGE

**3:12 Slope  
Minimum**

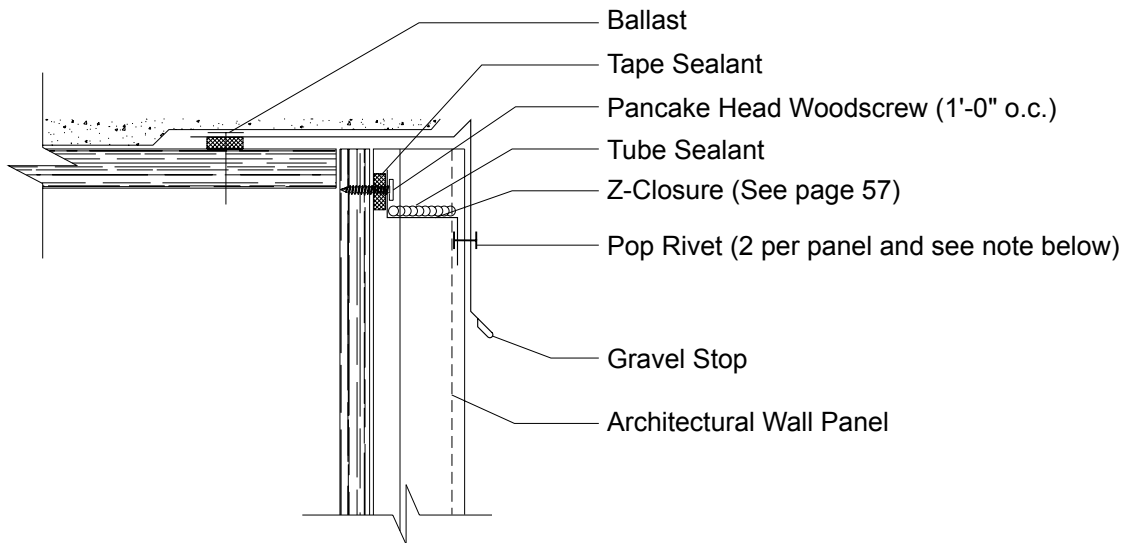


**MINI / MAXI-BATTEN TRANSITION**

**3:12 Slope  
Minimum**



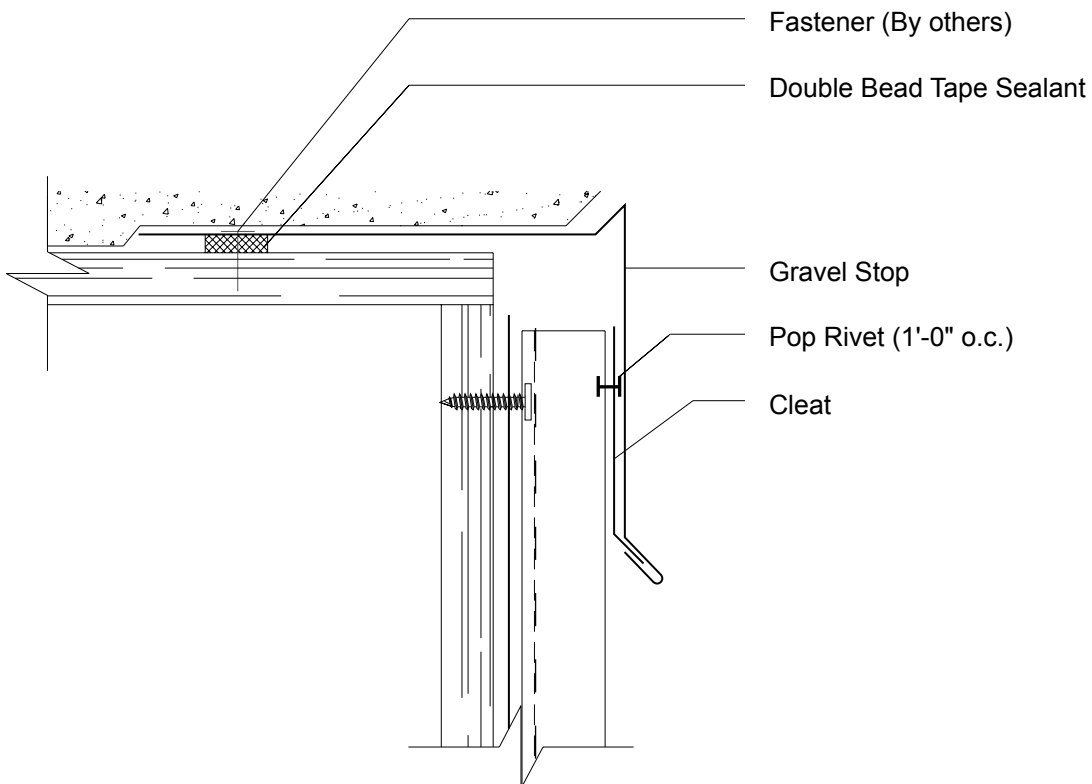
## ARCHITECTURAL PANEL GRAVEL STOP



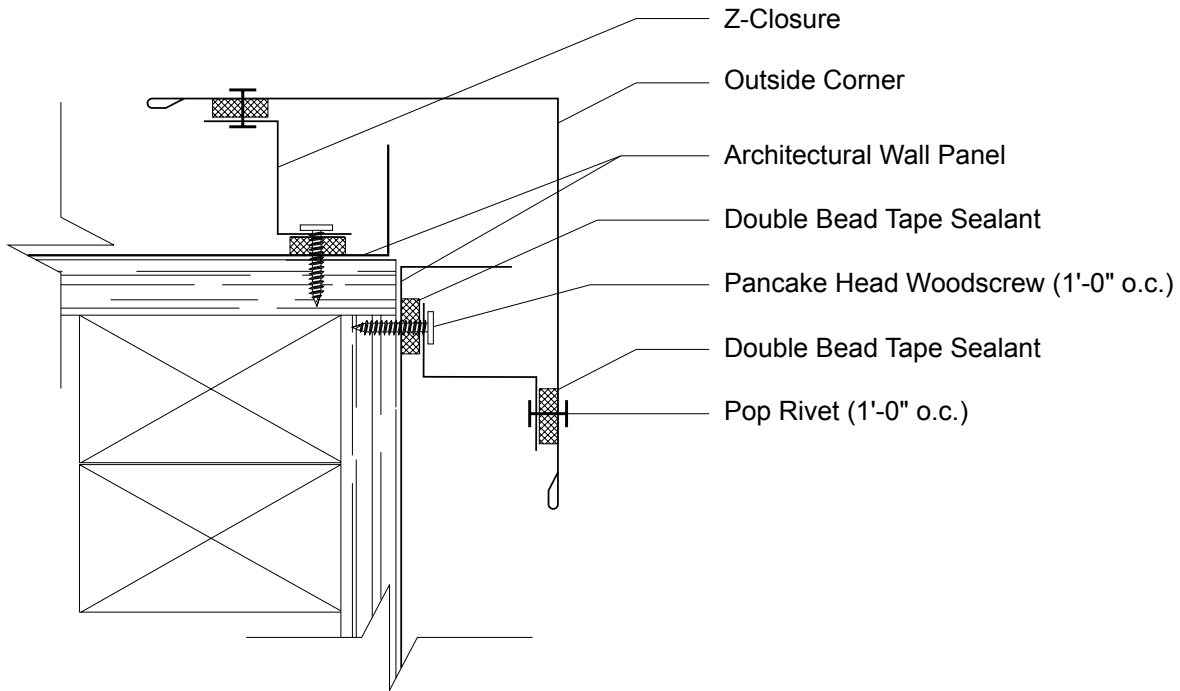
### NOTE

For Mini/Maxi Batten Panels, Pop Rivet must attach Gravel Stop to each Batten Cap

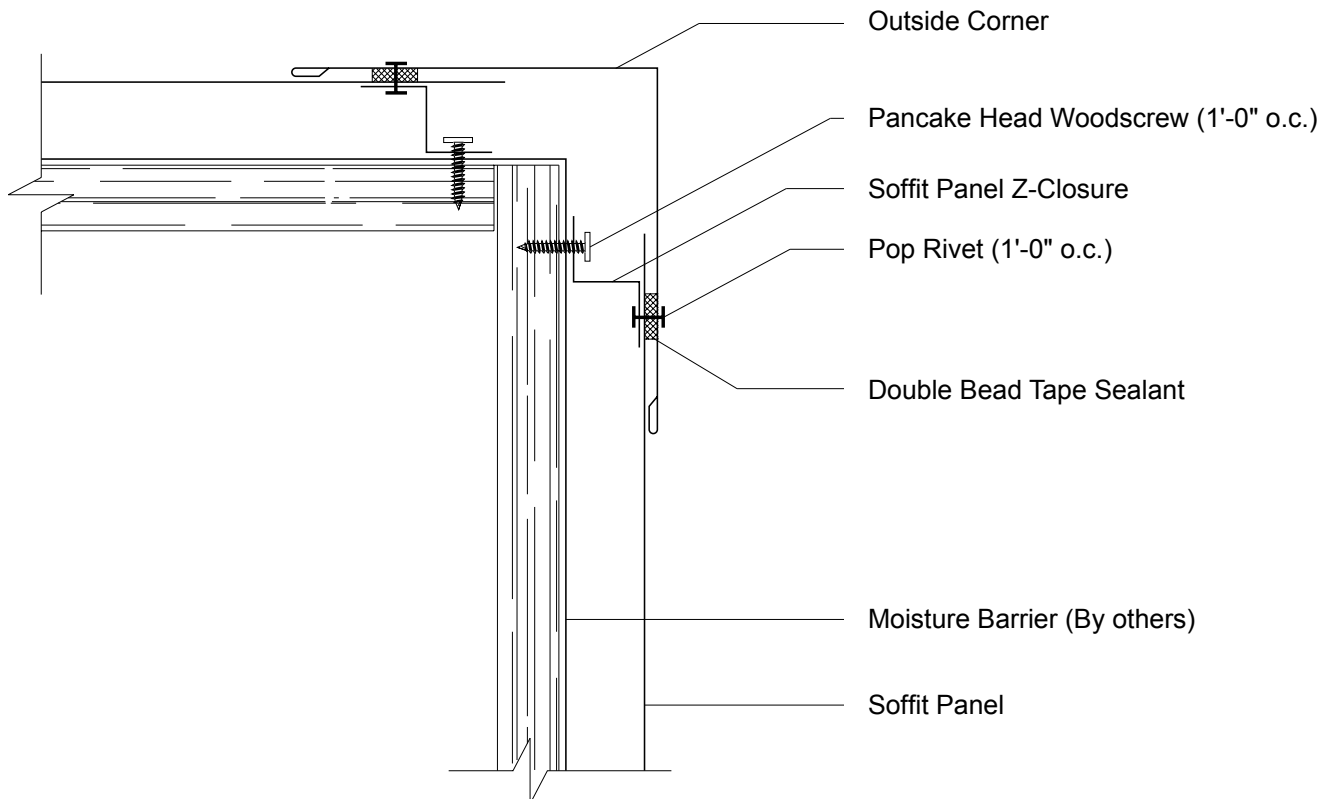
## SOFFIT GRAVEL STOP



**ARCHITECTURAL PANEL OUTSIDE CORNER**

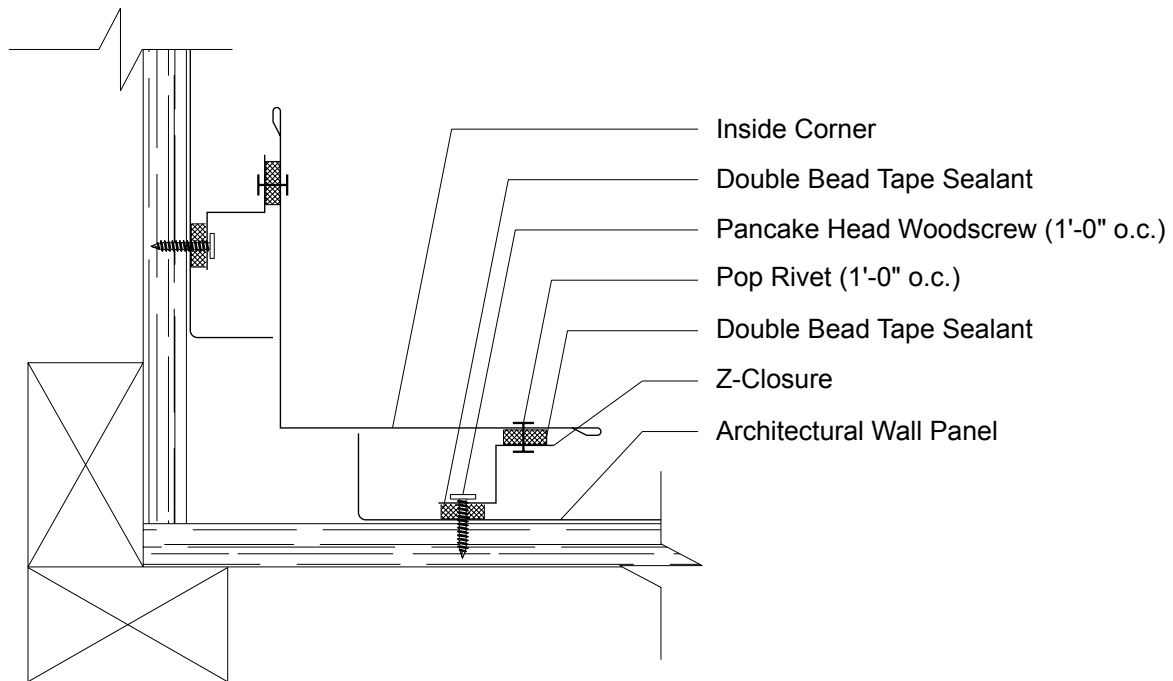


**SOFFIT OUTSIDE CORNER**

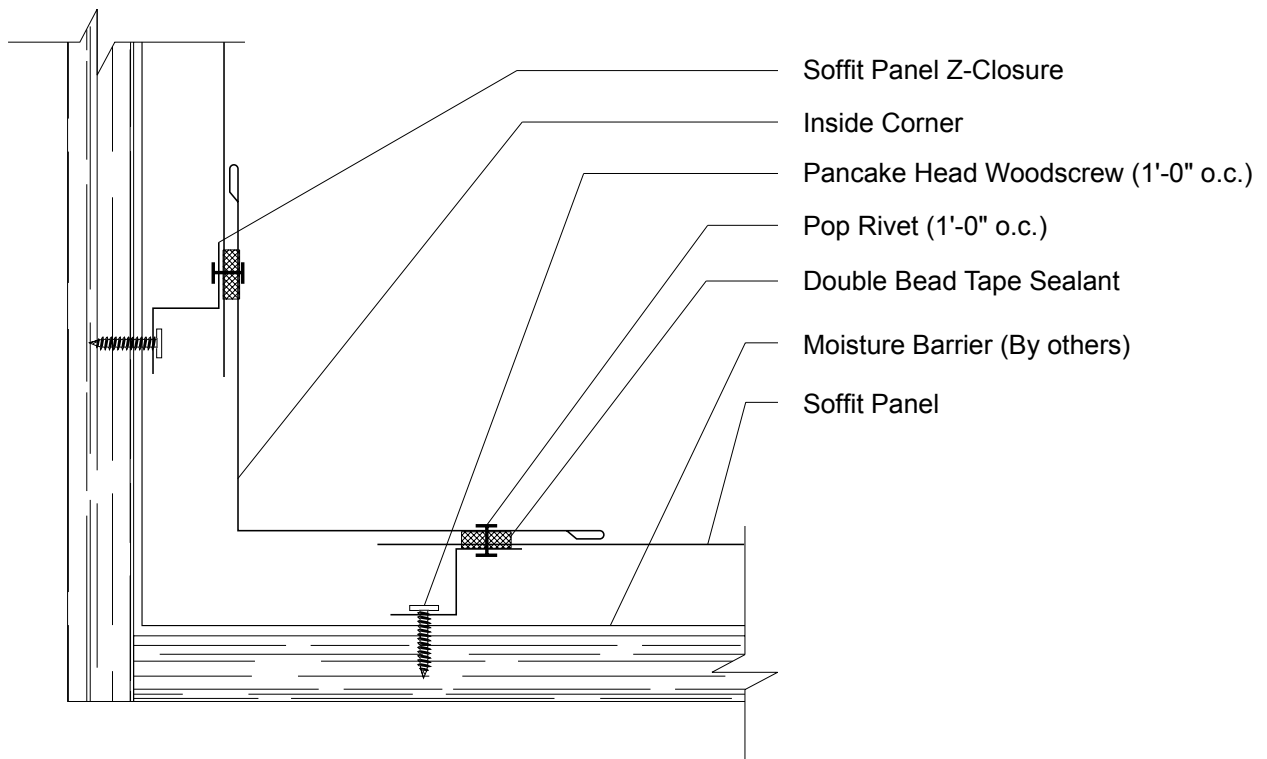




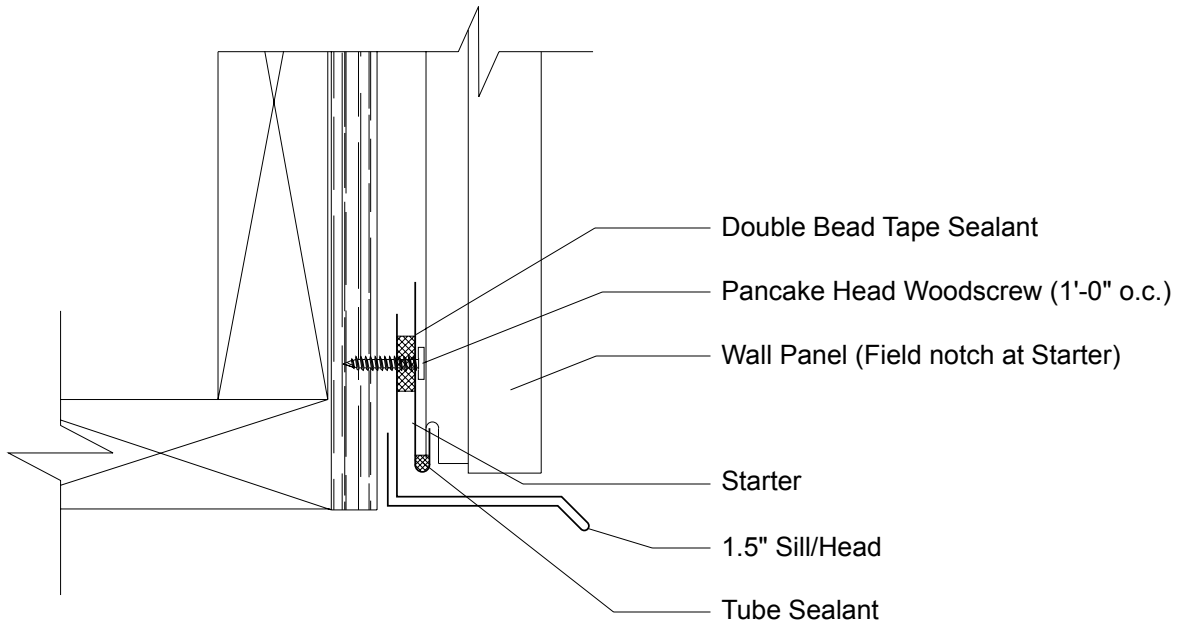
**ARCHITECTURAL PANEL INSIDE CORNER**



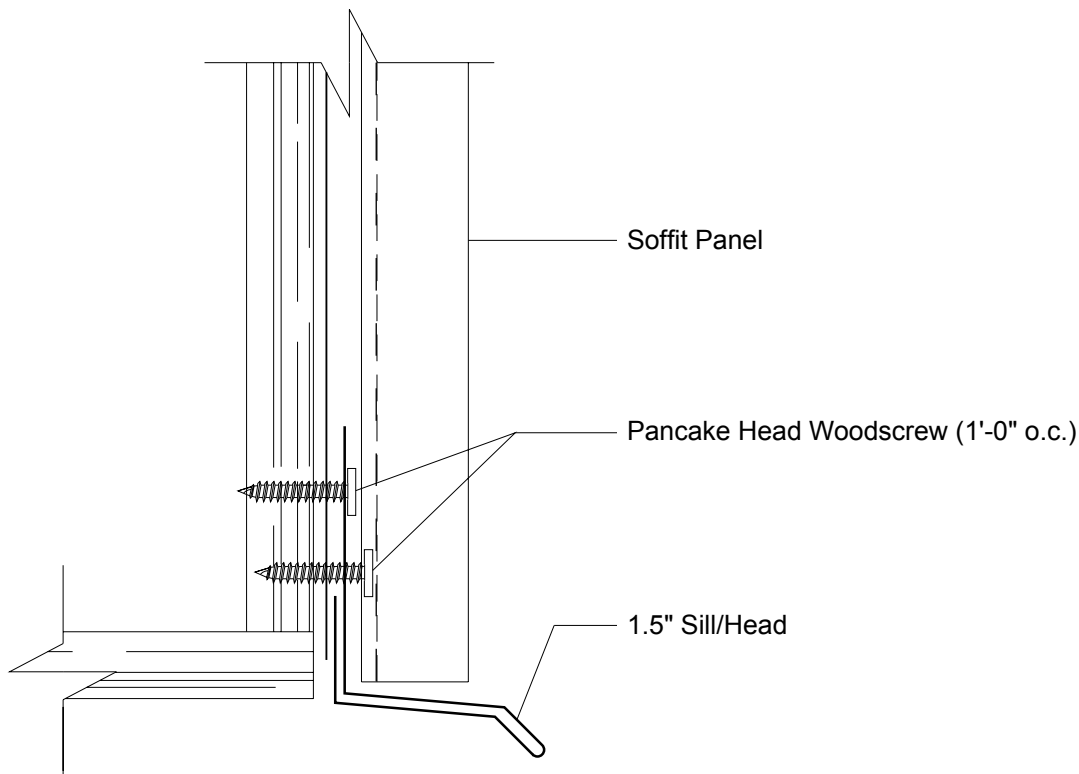
**SOFFIT INSIDE CORNER**



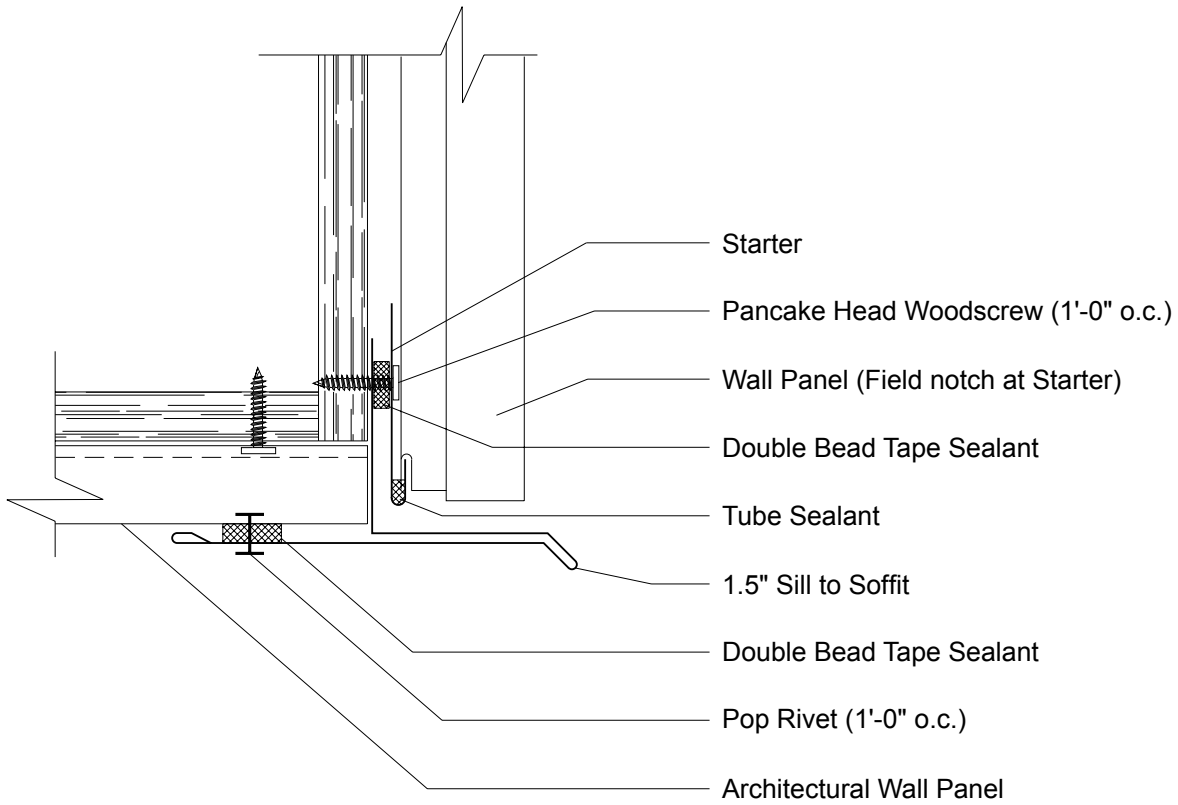
ARCHITECTURAL PANEL SILL/HEAD



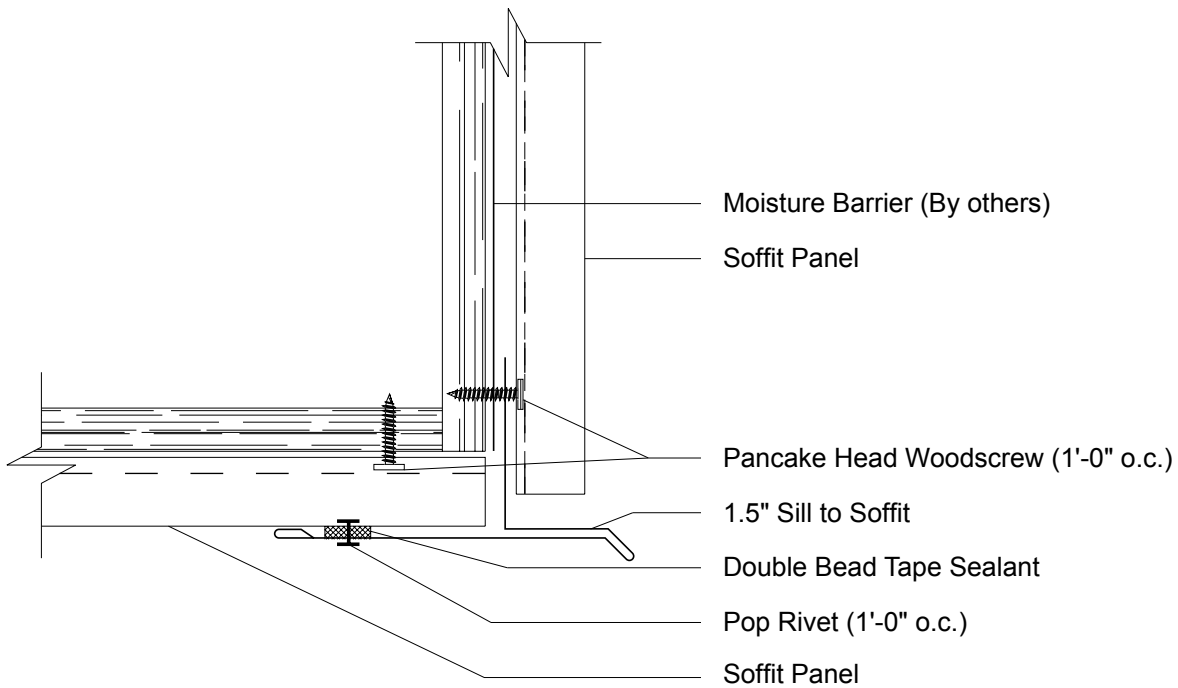
SOFFIT SILL/HEAD



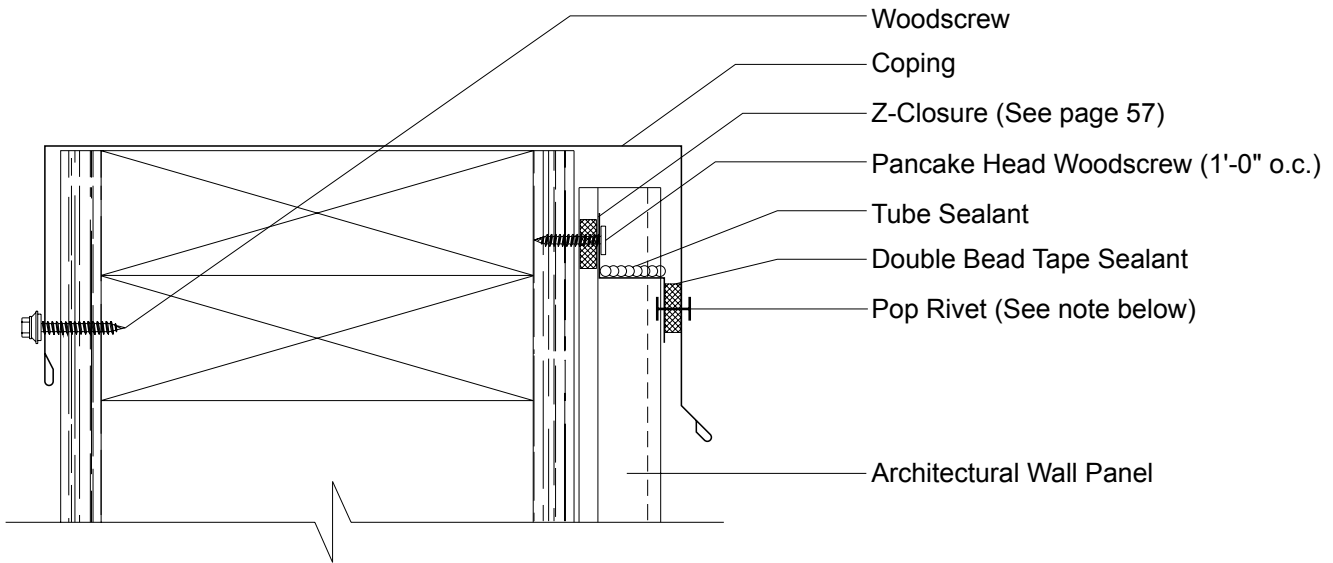
## ARCHITECTURAL PANEL SILL TO SOFFIT



## SOFFIT SILL TO SOFFIT



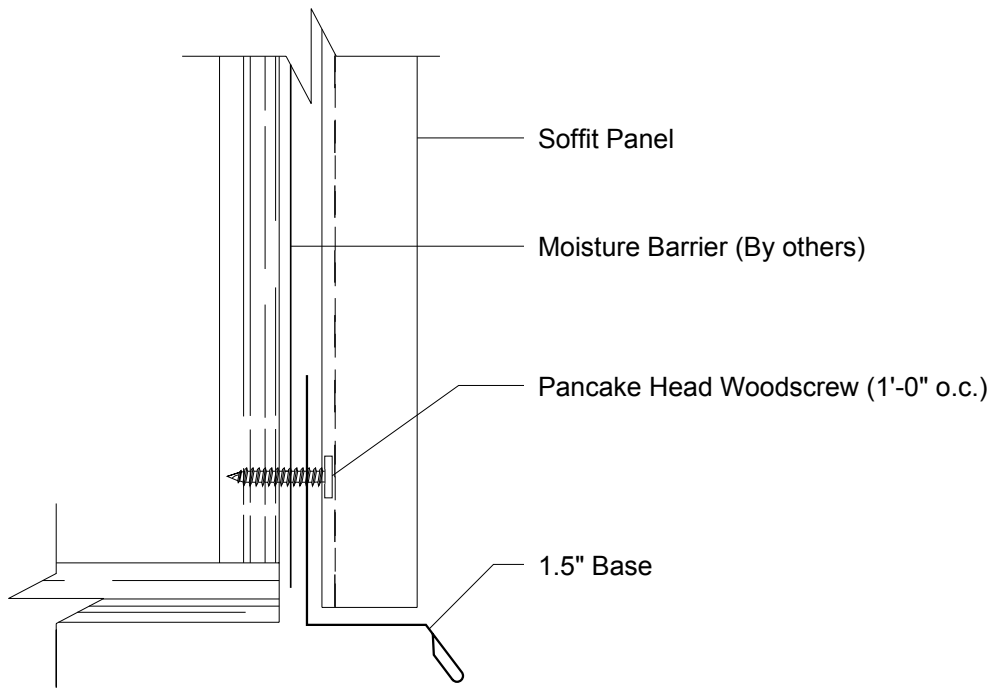
## ARCHITECTURAL PANEL COPING



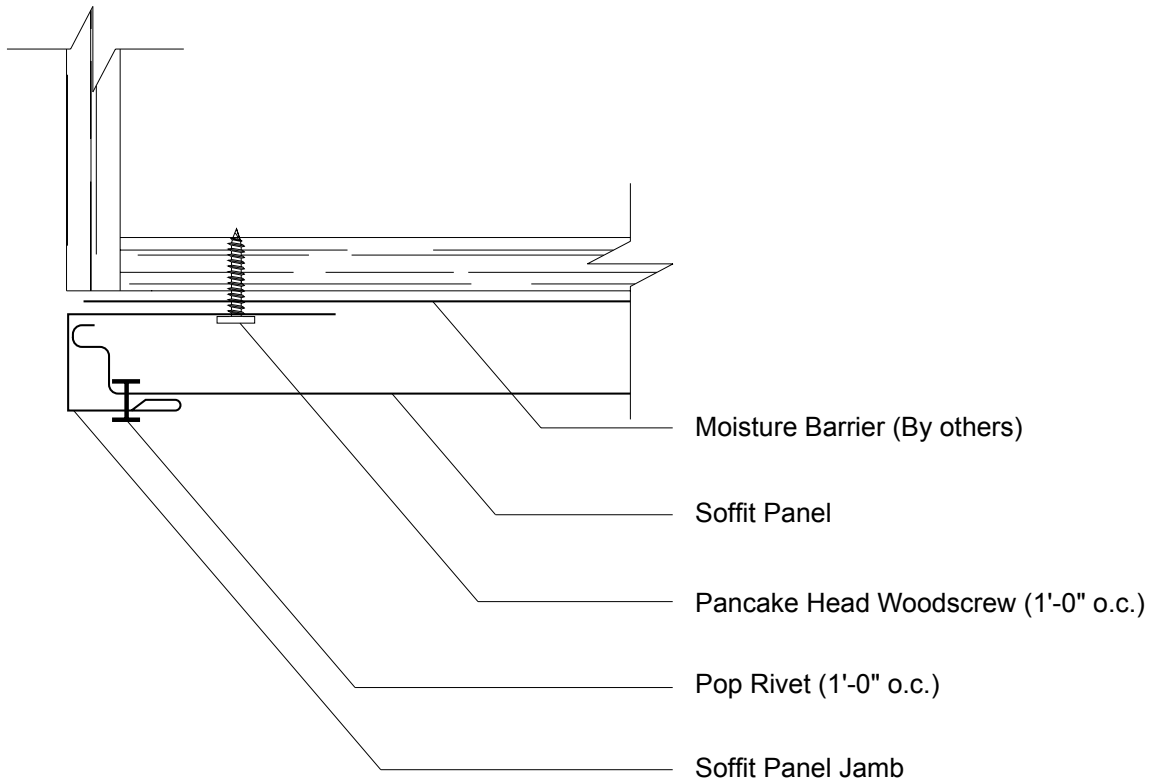
### NOTE

For Mini/Maxi Batten Panels, Pop Rivet must attach Coping to each Batten Cap

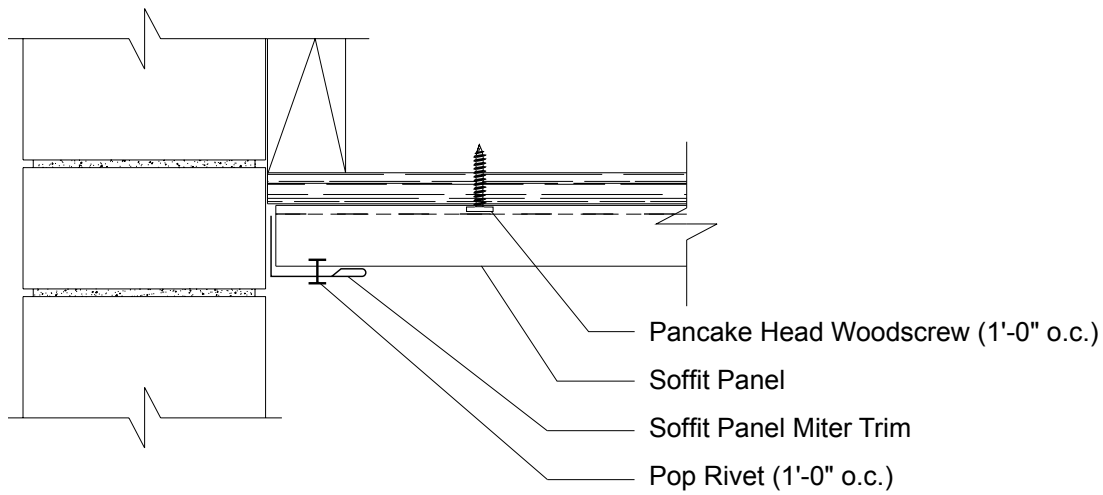
## SOFFIT BASE



**SOFFIT JAMB**

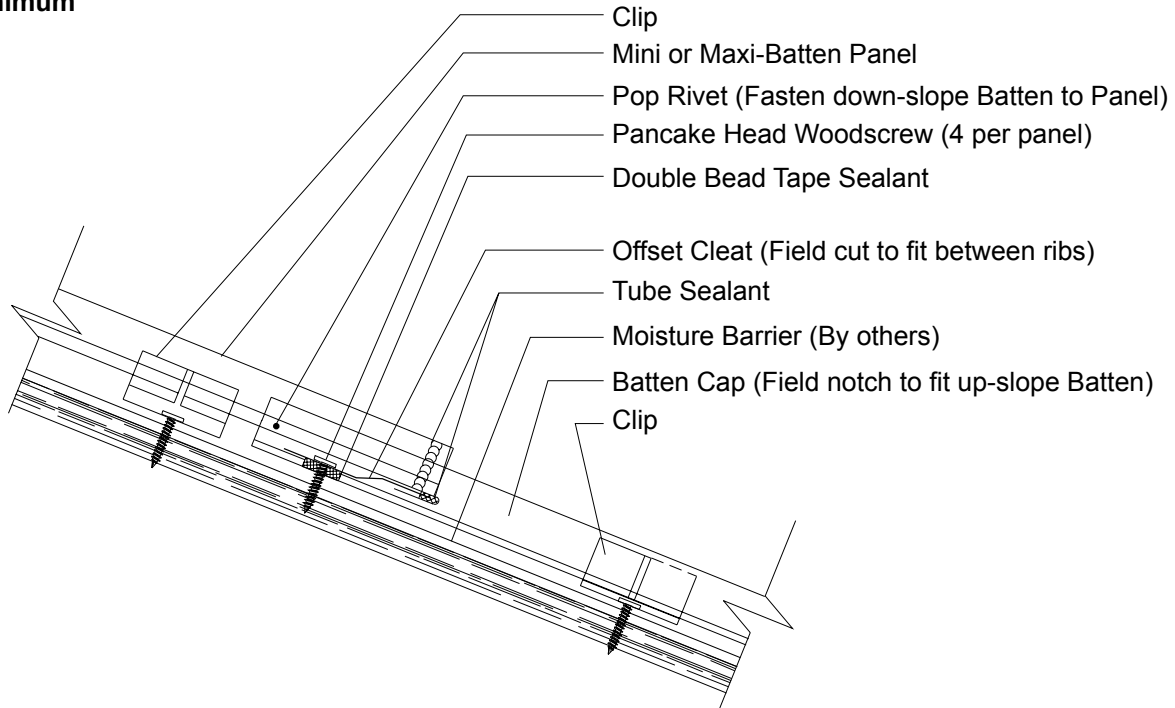


**SOFFIT TO WALL**

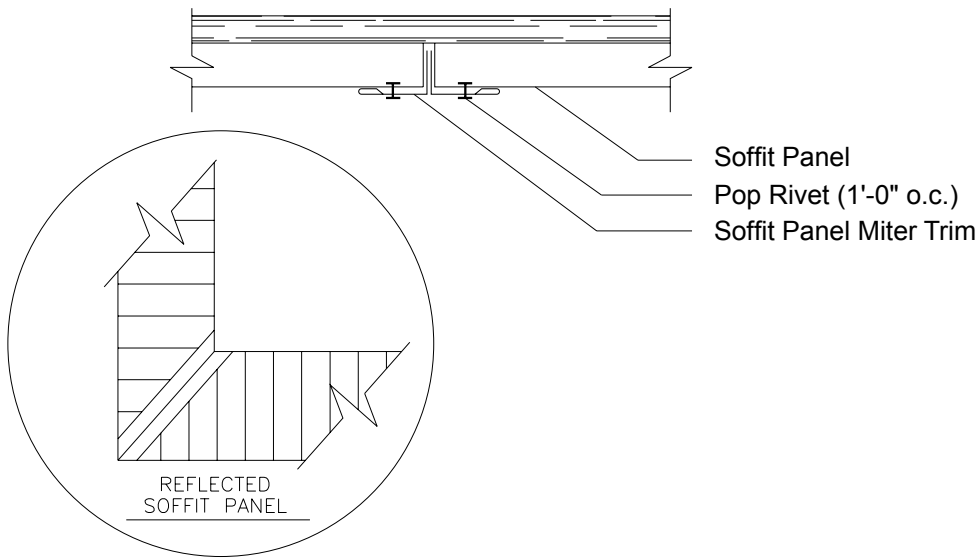


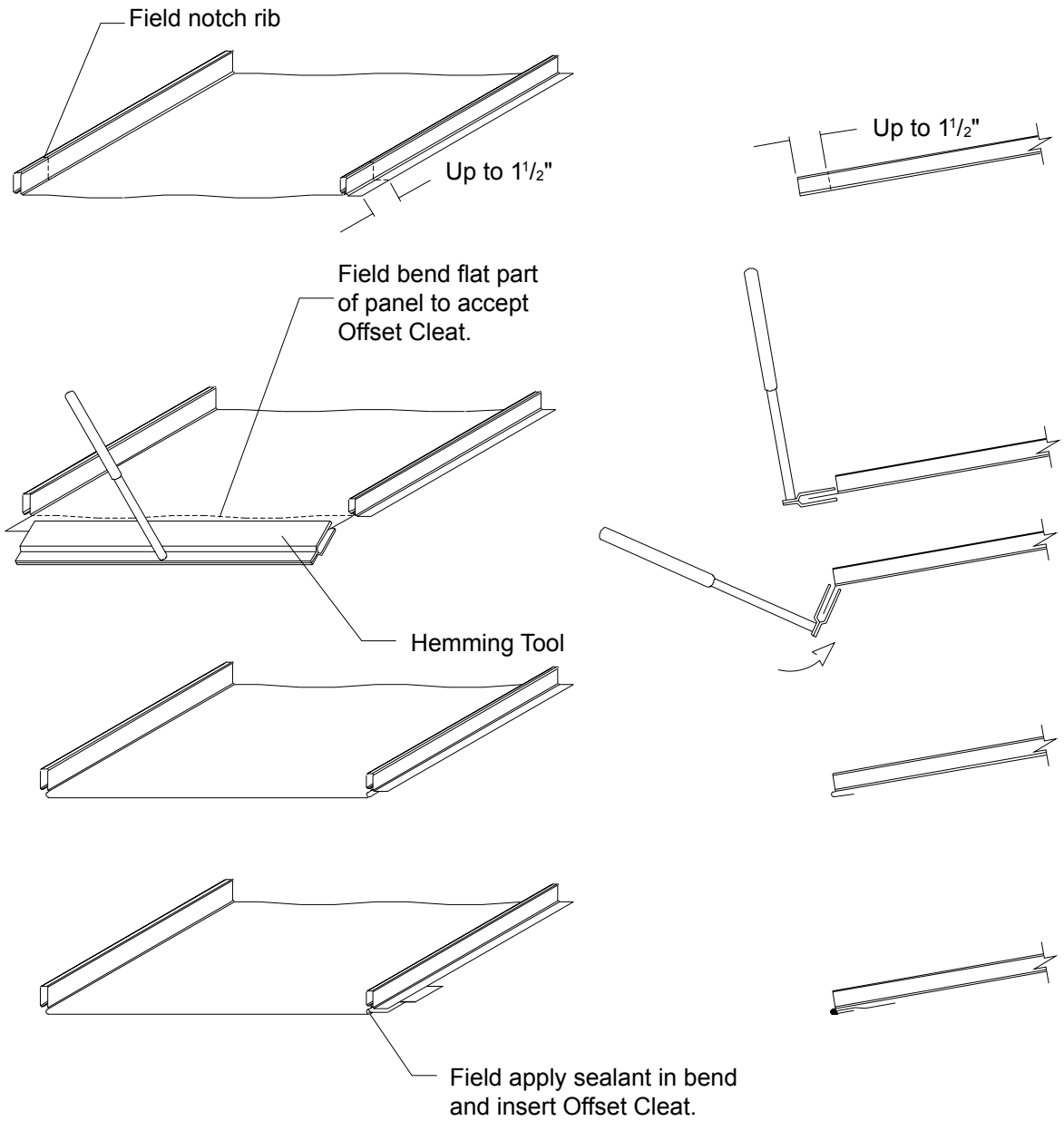
**MINI / MAXI-BATTEN PANEL SPLICE**

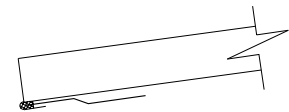
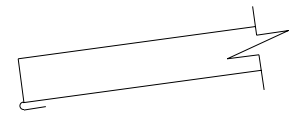
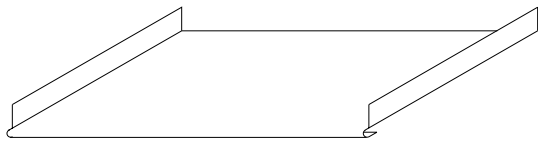
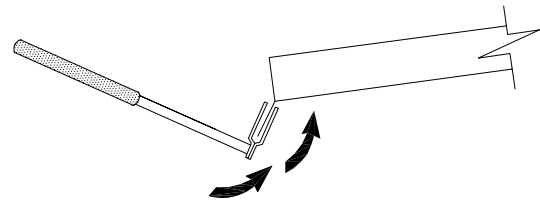
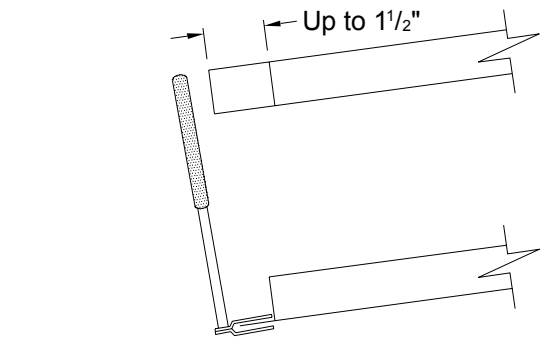
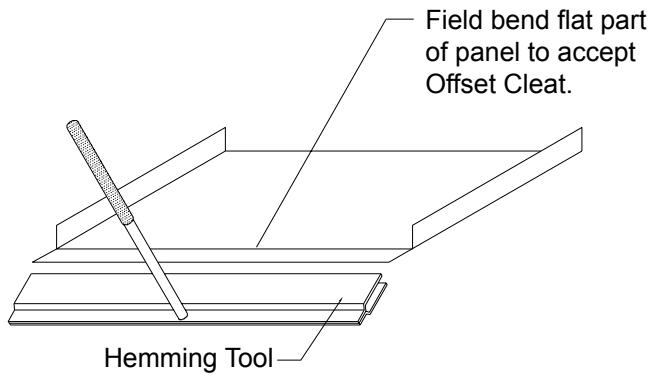
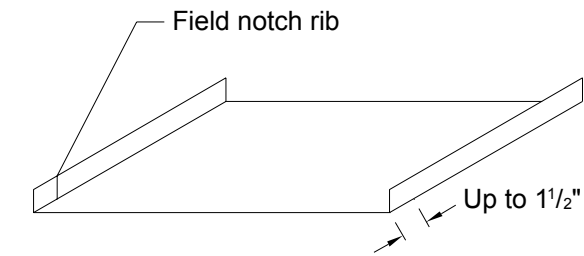
**3:12 Slope  
Minimum**



**SOFFIT SPLICE CORNER**



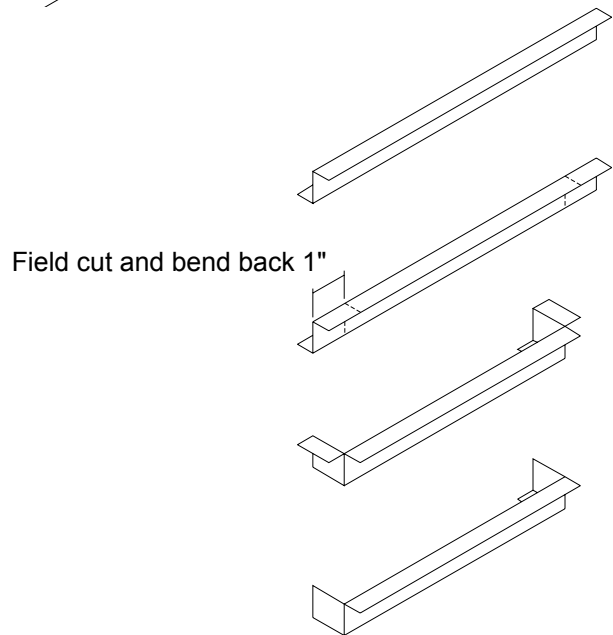
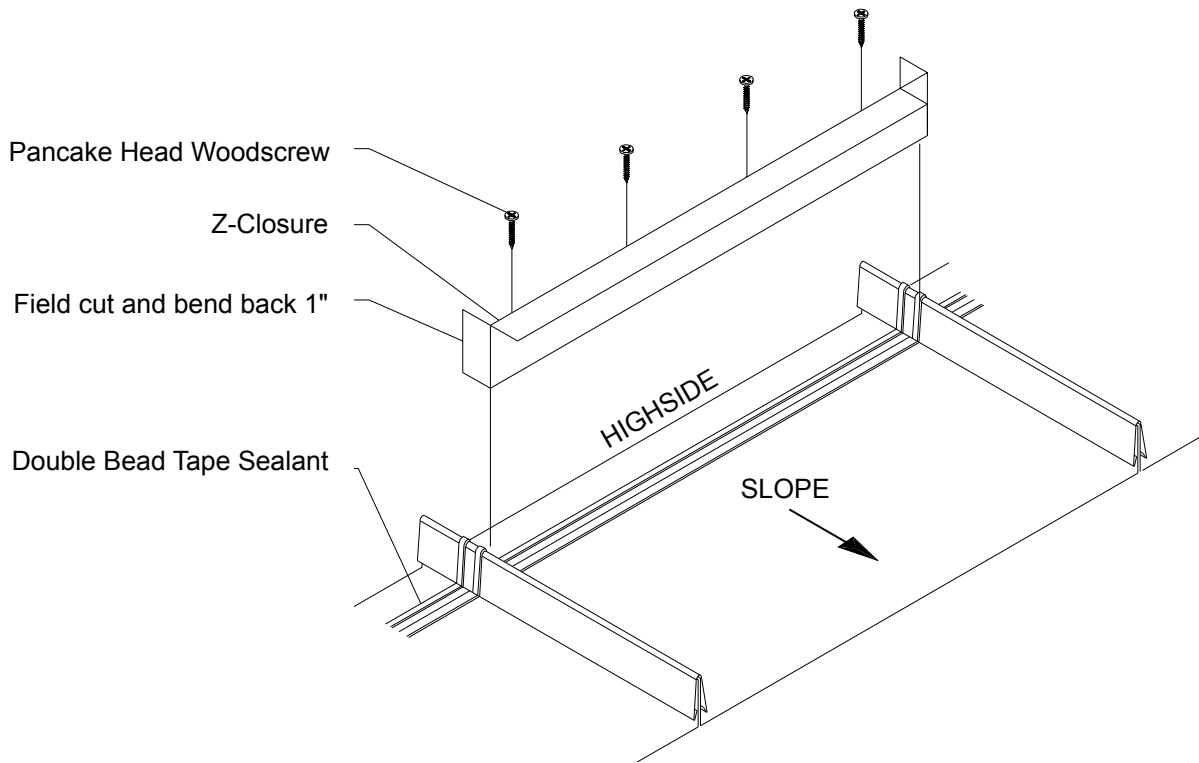




Field-apply sealant in bend and insert Offset Cleat.



**3:12 Slope  
Minimum**



## INSTALLATION NOTES

1. Place a row of Double Bead Tape Sealant across panel and over each rib approximately 4" from panel end. Before proceeding, make sure Z-Closure placement will accommodate flashing.
2. Field cut the Z-Closure 2" longer than the panel width. Snip the top and bottom leg of the Z-Closure and bend both sides back (as shown above).
3. Fasten through the Z-Closure, Tape Sealant, Magna-Loc panel and substrate with appropriate fasteners.
4. Apply a row of Double Bead Tape Sealant across the top of the Z-Closure filling any gaps or openings around the panel ribs. This will be fastened through when the flashing is installed.

Though factory applied prepainted finishes are very durable and will last many years, eventually it may be desirable to thoroughly clean or repaint them.

Dirt pickup may cause apparent discoloration of the paint when it has been exposed in some dirt laden atmospheres for long periods of time. In areas of strong sunlight, slight chalking may cause some change in appearance. A good cleaning will often restore the appearance of these buildings and render repainting unnecessary. An occasional light cleaning will help maintain a good appearance.

In many cases, simply washing the building with plain water using a hose or pressure sprayer will be adequate. In areas where heavy dirt deposits dull the surface, a cloth or soft bristle brush and solution of water and detergent ( $\frac{1}{3}$  cup of laundry detergent per gallon of water for example) may be used. This should be followed by an adequate rinse of water. Do not use wire brushes, abrasives, or cleaning tools which will damage the coating surface.

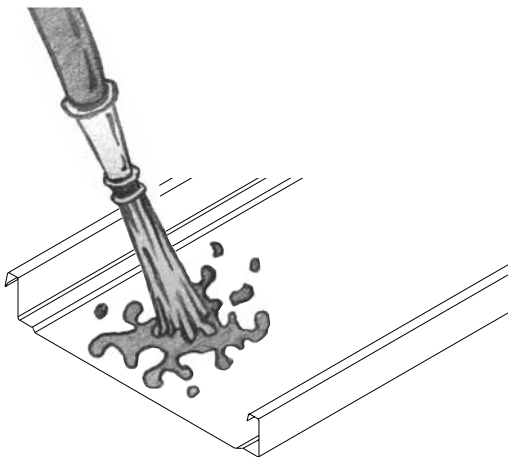
Mildew may occur in areas subject to high humidity but is not normally a problem due to the high inherent mildew resistance of the baked finish that is used. However, mildew can grow on dirt and spore deposits in some cases. To remove mildew along with the dirt, the following solution is recommended.

- $\frac{1}{3}$  cup detergent (Tide® or equivalent)
- $\frac{2}{3}$  cup trisodium phosphate (Solex® or equivalent)
- 1 quart of 5% sodium hypochlorite solution (Clorox® or equivalent)
- 3 quarts of water

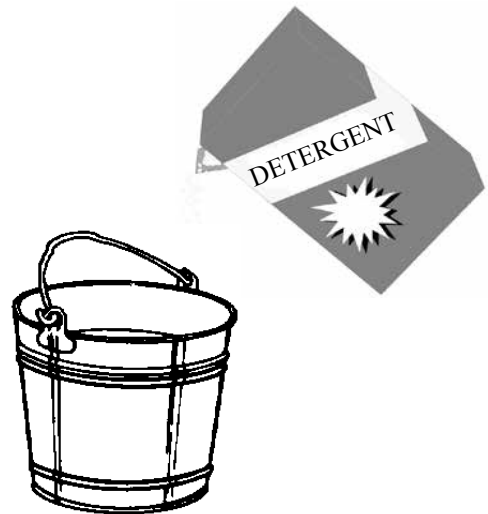
Strong solvents and abrasive type cleaners should be avoided. Most organic solvents are flammable and toxic, and must be handled accordingly. When using a solvent, consult maintenance professionals and label instructions for proper handling and disposal of washings. If required, a mild solvent such as mineral spirits can be used to remove caulking compounds, oil, grease, tars, wax, and similar substances. Use a cloth dampened with mineral spirits and apply only to areas which are contaminated. Follow up the use of this mild solvent with detergent cleaning and rinsing.



**DO NOT USE A  
WIRE BRUSH**



**HOSE OR PRESSURE SPRAY  
FOR ADEQUATE CLEANING**



**USE MILD DETERGENT AND WATER  
FOR HEAVY DIRT DEPOSITS**

A large rectangular area containing 25 horizontal lines for taking notes.