STANDING SEAM INSTALLATION GUIDE

PROPER STORAGE

The panels and trim are crafted with paint and finishes that are specifically engineered to endure heavy rain and wet weather conditions. It is important to note that painted, galvanized, or Galvalume finishes are not intended for prolonged exposure to continuous water contact. If panels or trim are left wet during storage, damage may occur. Therefore, it is essential to store materials, which will not be promptly installed, in a dry location. In the event of wetness, allow the material to air-dry and, if installation is not imminent, restack it appropriately.

TRIMMING AND CUTTING

Trimming and cutting steel panels along their profiles can be effectively done using nibblers, various shear attachments for drills, or hand-operated snips. For optimal results, it is recommended to cut from the bottom side of the panels to minimize any potential issues. After cutting, it is essential to promptly brush off any particles from the roof surface. When cutting panels lengthwise, one approach is to mark the cutting point, then use a straightedge and a sharp-pointed utility knife to score deeply along the length of the panel. Folding the panel along the score mark and, if necessary, bending it back should result in a clean break.

Panel Installation

Standing seam should be installed over a solid deck of OSB or Plywood. Standing Seam has the potential to oil can, or be wavy, on the flat part of the panels. This can occur due to the 16" or 17" flat area between the edges. Using striations or stiffening ribs can reduce the potential for oil canning to occur, but is not guaranteed to eliminate it.
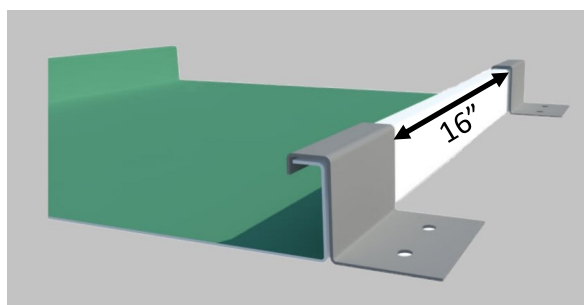
In order to allow the panels to "hover", center fasteners within the nailing flanges. Fasteners should be spaced 16" apart and driven in straight, as driving them in at an angle, can promote the formation of oil canning. Be sure there is an approximate 1/32" gap between the head of the fastener, and the metal nailing flange. (See illustration) Standing seam should be installed over the manufacturer's recommended form of substrate.

When installing standing seam, it is important to ensure there is room for vertical expansion between the panels. DO NOT over-tighten your fasteners! The panels should be fastened loosely, to allow them to "hover" against the substrate.
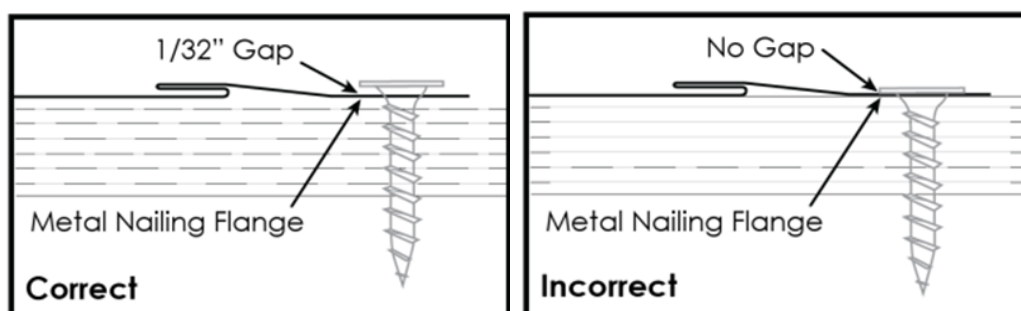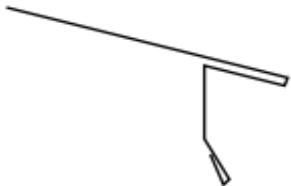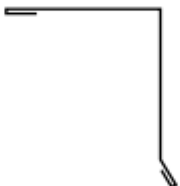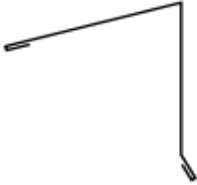
Installation Mechanical Seam Clip

When installing mechanical standing seam, the panels are held down by fixed clips. The clips should be spaced 16" apart and be secured by 2 pancake screws and screwed down

Ridge	Drip Edge	Rake Trim
Valley	Endwall	Transition
Z bar	Cleat	Offset Cleat
Reglet	Shed Ridge	Gambrel
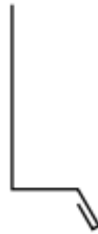
J Channel	Drip Cap	Inside Corner
Outside Corner	Sidewall	Butyl Roofing Tape
Rivet	Caulk	Pancake Screw
Clips		
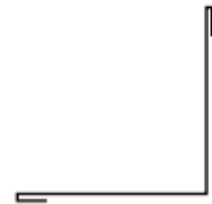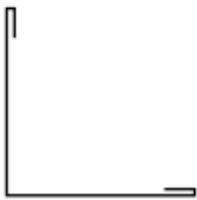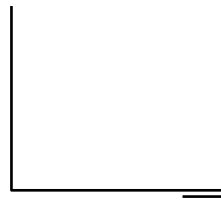
Standing Seam Trim

Endwall flashing

Valley

Ridge cap

Gable trim

Sidewall flashing

Roll Lite Door

Eave drip

Transition Flashing
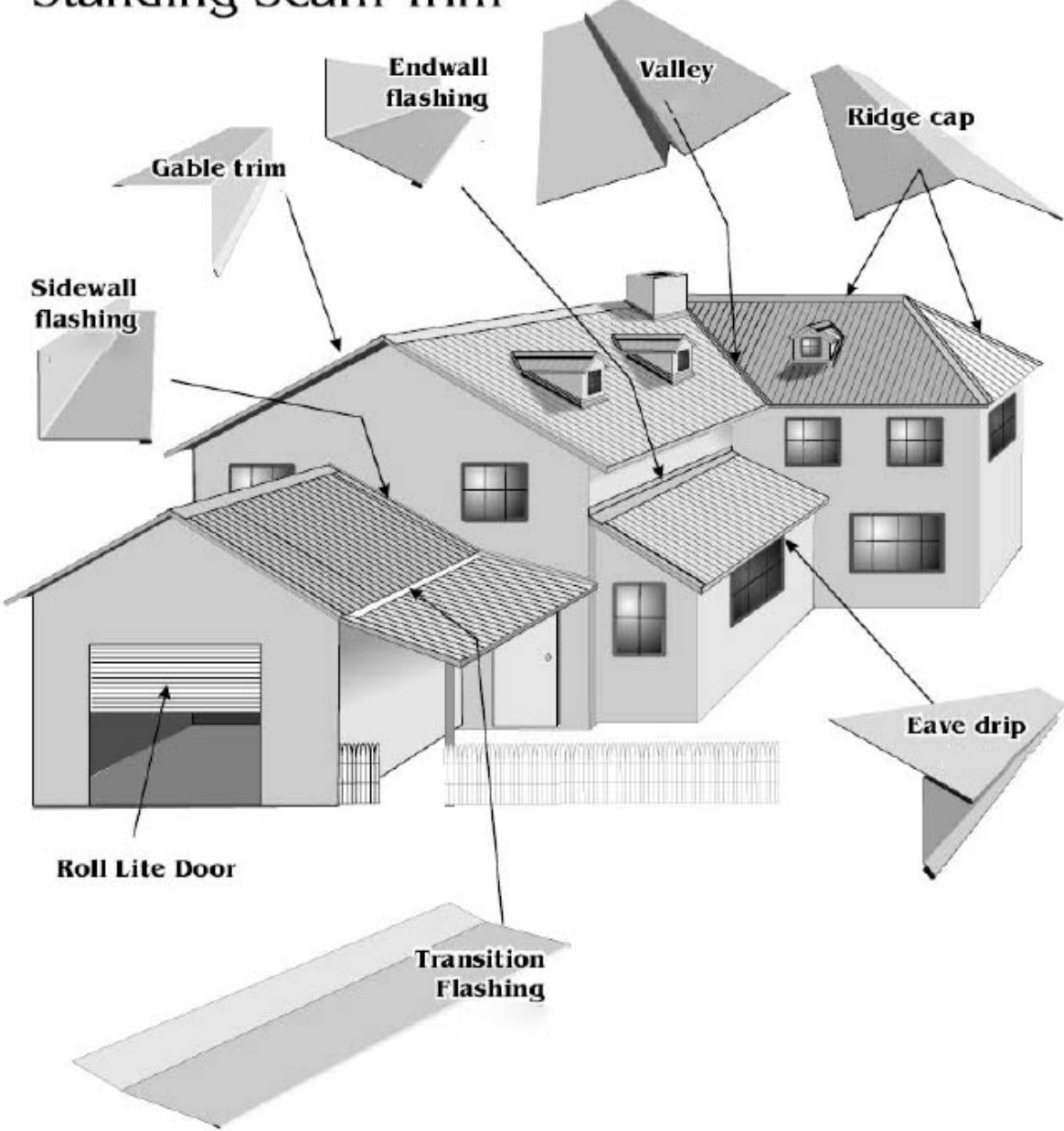
1" Nail/clip
16"& 17" Pan
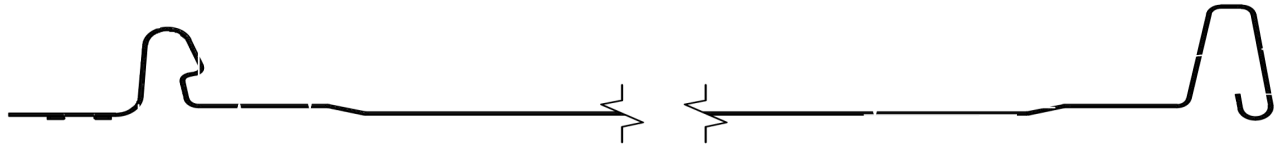
1.5" MECHAINCAL
16" Pan
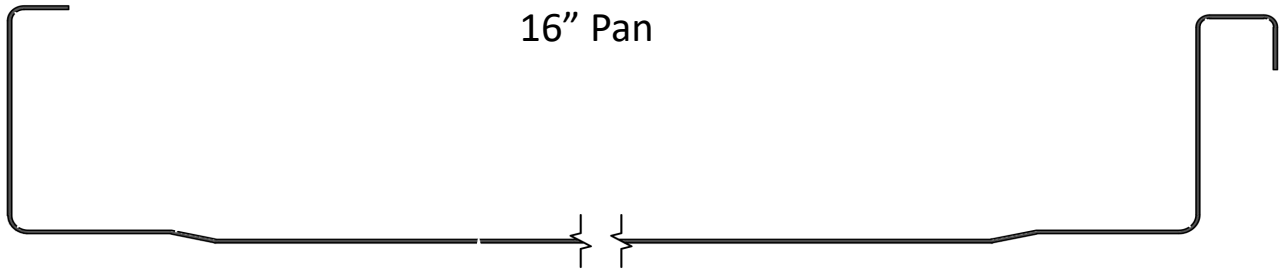
1.5" SNAP-LOCK
16" Pan
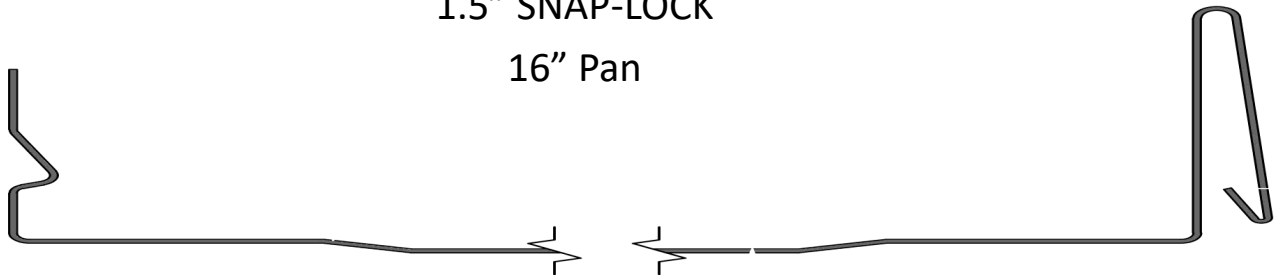
FLAT

STRIATION

STIFF RIB

Warranty: Lifetime (Limited) Film Integrity, 30-Year Chalk, 30-Year Fade (With certain exceptions and limitations, explained in our Warranty Detail)

Gauges: 24G Standard see for available colors, 26G Texture limited colors.

Available Finishes: Akzo-Nobel Ceram-a-Star 1050 Select, HYLAR PVDF, SMP, Akzo Nobel Frost, Galvalume (Other finishes available by request)

HEMMING THE PANEL
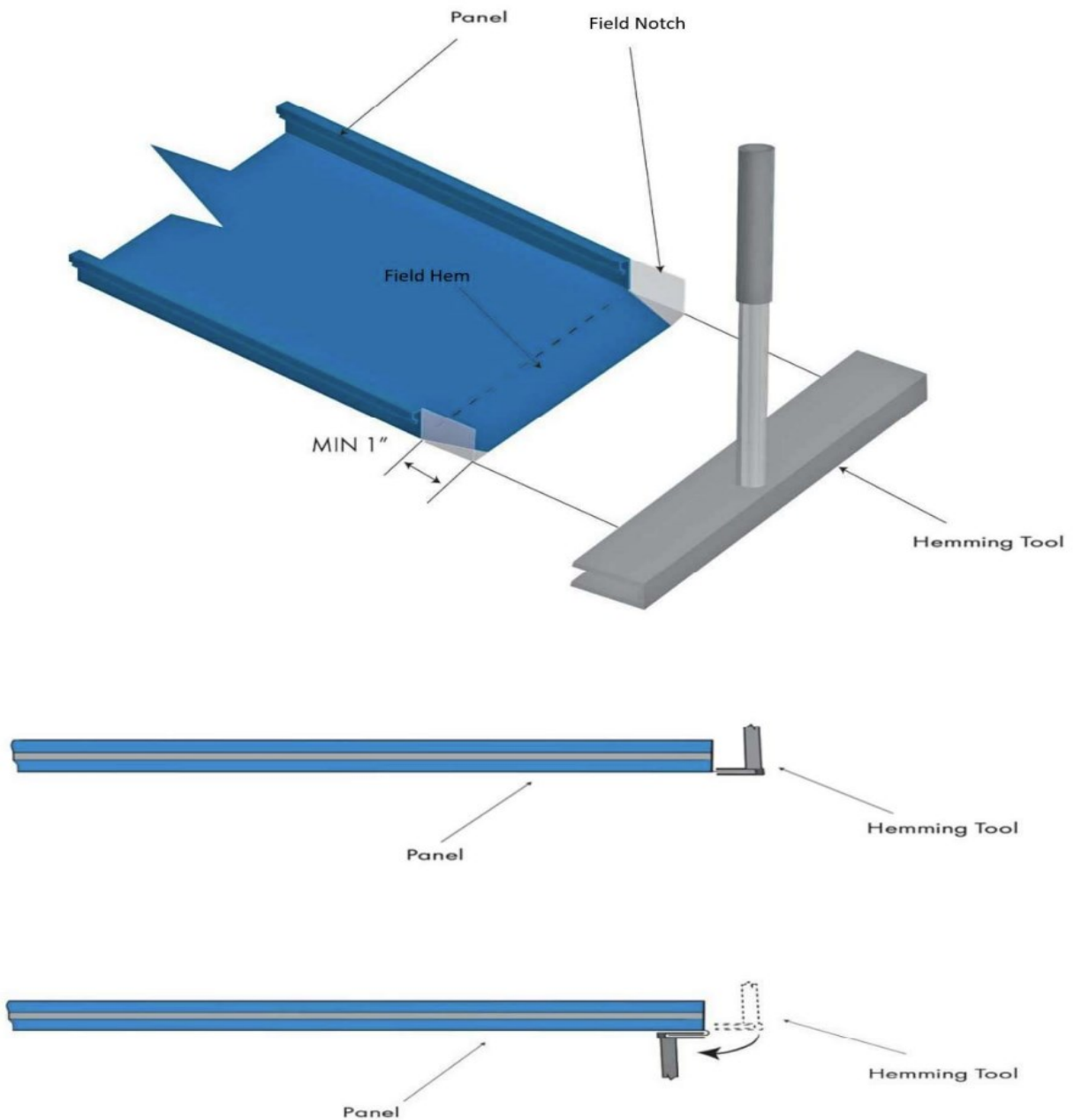
NOTES:

1) Cut through male and female legs/ribs 1" up from panel end as shown.

2) Then cut with metal shears as shown.

3) Place hemming tool over panel tab.

4) Bend down and under to 180° as shown.

RIDGE DETAIL

CONTINUOUS BEAD OF APPROVED SEALANT ADJACENT TO PANEL RIBS

1" PANCAKE HEAD WOOD SCREW, INSTALL MIN. 4 PER ZEE OR 3" ON CENTER

½" BUTYL TAPE CONTINUOUS UNDER Z BAR

RIDGE CAP - HIP CAP, 4" END LAPS
WITH CONTINUOUS APPROVED SEALANT AT LAPS

ZEE CLOSURE, FIELD CUT TO FIT BETWEEN PANEL RIBS

Rivet at 18" ON CENTER

PANEL

1" PANCAKE HEAD WOOD SCREW

SINGLE LAYER OF UNDERLAYMENT

WOOD SUBSTRATE

THERMAL EXPANSION
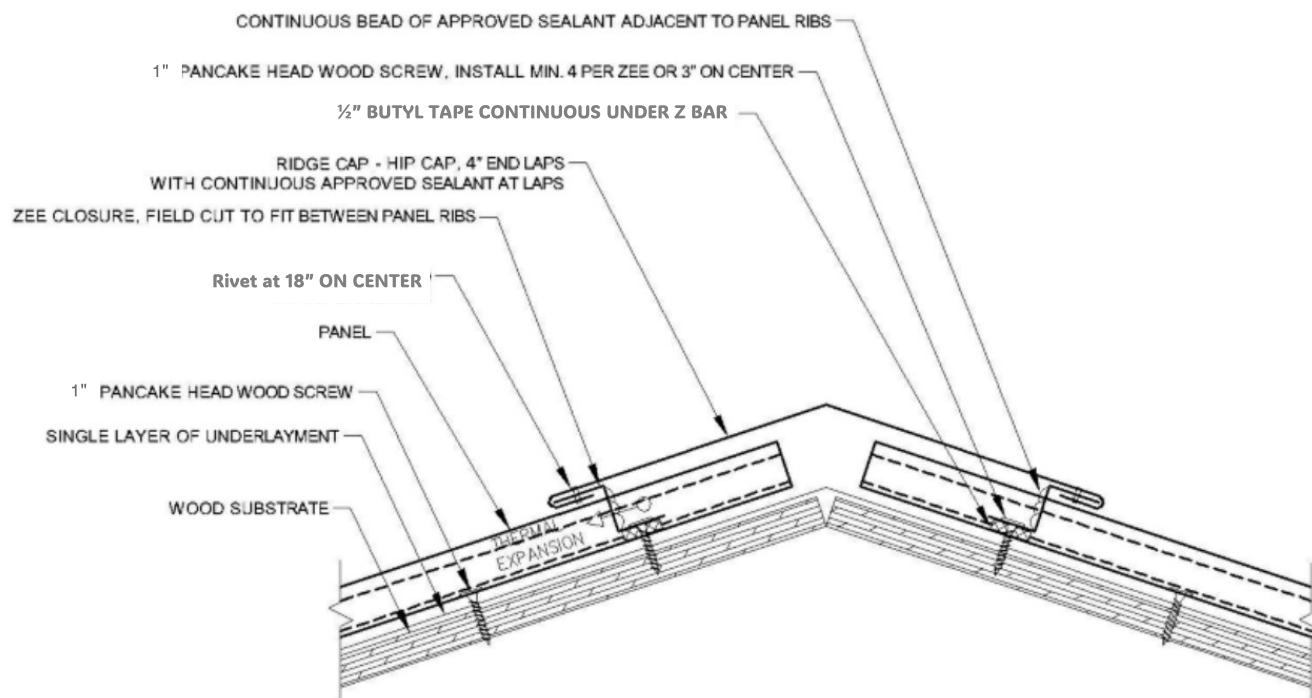
Ensure that the deck is clean and prepared for installation following the manufacturer's instructions for underlayment. Proceed to install the panel, field bending the panel edge at a 45° angle to create a box end without cutting panel ribs. Apply 3/16"x7/8" butyl tape to the Z closure and install it over the panel using 1" pancake head fasteners spaced at 4" intervals through the butyl tape, ensuring a minimum of 5 fasteners per panel. Apply a vertical bead of approved sealant behind the Z closure at the panel rib and tool it in. Install the hip or ridge cap by engaging it onto the Z closures, maintaining a minimum 4" lap on the hip or ridge cap with approved sealant between laps and ensuring a minimum flashing length of 24". Drill holes through the hip or ridge cap hem and Z closure using the correct size drill bit at 18" intervals. Proceed to install stainless steel pop rivets through the hem of the hip or ridge cap, attaching it to the Z closure at 18" intervals.

EAVE DETAIL
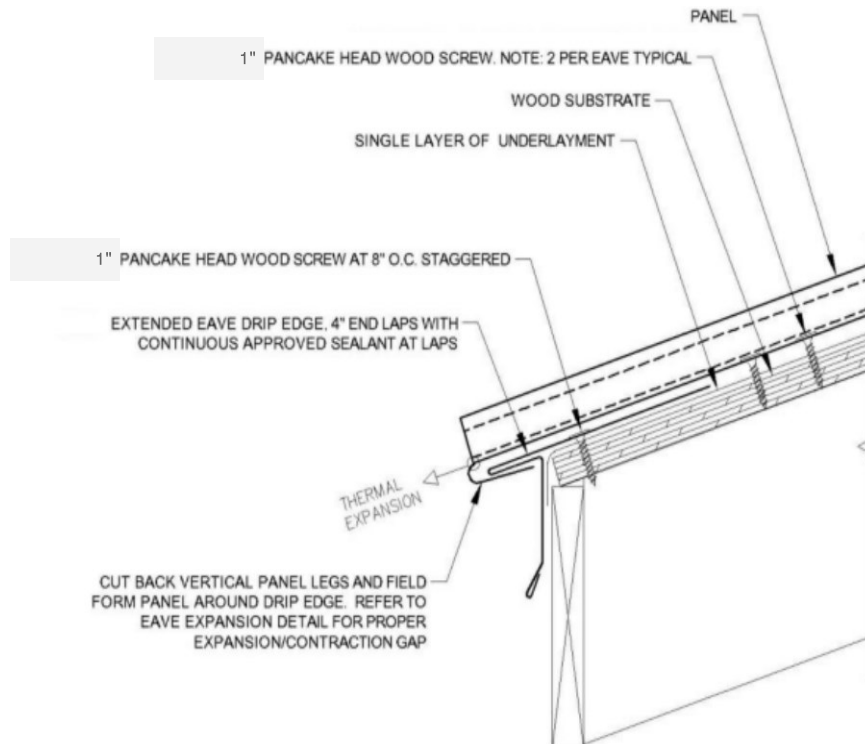
PANEL

1" PANCAKE HEAD WOOD SCREW. NOTE: 2 PER EAVE TYPICAL

WOOD SUBSTRATE

SINGLE LAYER OF UNDERLAYMENT

1" PANCAKE HEAD WOOD SCREW AT 8" O.C. STAGGERED

EXTENDED EAVE DRIP EDGE, 4" END LAPS WITH CONTINUOUS APPROVED SEALANT AT LAPS

THERMAL EXPANSION

CUT BACK VERTICAL PANEL LEGS AND FIELD FORM PANEL AROUND DRIP EDGE. REFER TO EAVE EXPANSION DETAIL FOR PROPER EXPANSION/CONTRACTION GAP

Ensure that the deck is thoroughly cleaned and prepared for installation before proceeding. Follow the manufacturer's instructions to install the underlayment. Place the eave flashing onto the roof deck and securely fasten it using 1" pancake head fasteners at 6" intervals. Ensure a minimum 4" overlap on the eave flashings, sealing between laps with approved sealant, and maintain a minimum flashing length of 24". Strip in the eave flashing with underlayment. Proceed to install the panels, engaging the panel hem onto the nose of the eave flashing while leaving the necessary gap for thermal expansion and contraction. Use hand seamers to carefully crimp the panel hem closed. Do not crimp the panels.
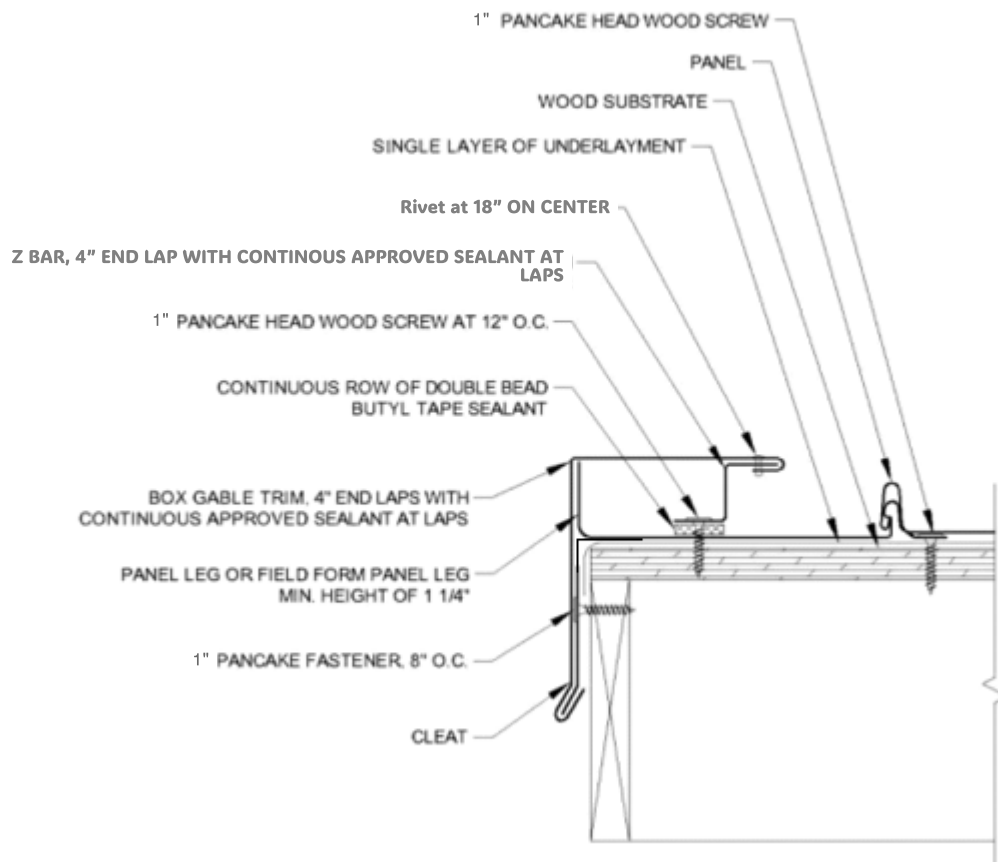
1" PANCAKE HEAD WOOD SCREW

PANEL

WOOD SUBSTRATE

SINGLE LAYER OF UNDERLAYMENT

Rivet at 18" ON CENTER

Z BAR, 4" END LAP WITH CONTINOUS APPROVED SEALANT AT LAPS

1" PANCAKE HEAD WOOD SCREW AT 12" O.C.

CONTINUOUS ROW OF DOUBLE BEAD BUTYL TAPE SEALANT

BOX GABLE TRIM, 4" END LAPS WITH CONTINUOUS APPROVED SEALANT AT LAPS

PANEL LEG OR FIELD FORM PANEL LEG MIN. HEIGHT OF 1 1/4"

1" PANCAKE FASTENER, 8" O.C.

CLEAT

Ensure that the deck is thoroughly cleaned and prepared for installation before proceeding, following the manufacturer's instructions for underlayment installation. Install the panel, bending the panel edge 90° to match the Z closure height. Proceed to install a cleat on the rake face, securing it with 1" pancake head fasteners spaced at 8" intervals. Apply butyl tape to the Z closure and install it over the panel using 1" pancake head fasteners spaced at 4" intervals through the butyl tape. Maintain a minimum 4" lap on the Z closure, sealing between laps with approved sealant. Install the rake flashing by engaging it onto the cleat and Z closure, ensuring a minimum 4" lap on the rake flashing with approved sealant between laps. Stagger the laps between the Z closure and rake flashings by a minimum of 6" and maintain a minimum flashing length of 24". Drill holes in the rake flashing hem and Z closure using the correct size drill bit at 18" intervals. Proceed to install stainless steel pop rivets through the hem of the rake flashing, attaching it to the Z closure at 18" intervals.
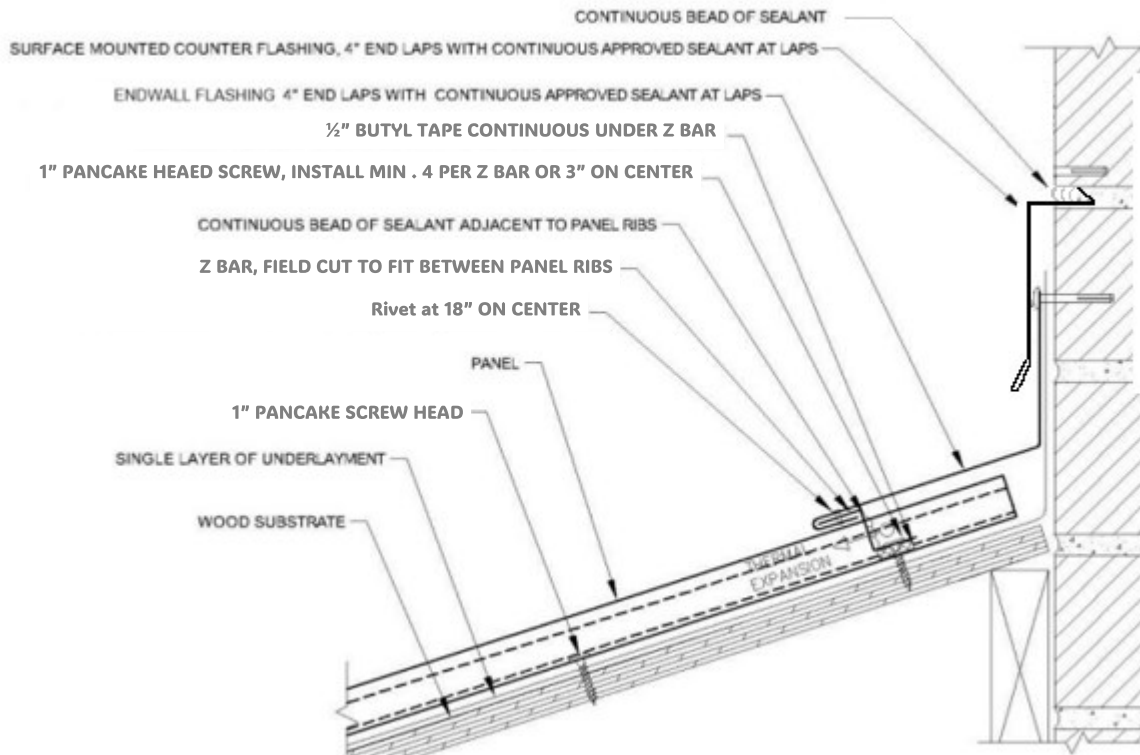
ENDWALL DETAIL

CONTINUOUS BEAD OF SEALANT
SURFACE MOUNTED COUNTER FLASHING, 4" END LAPS WITH CONTINUOUS APPROVED SEALANT AT LAPS
ENDWALL FLASHING 4" END LAPS WITH CONTINUOUS APPROVED SEALANT AT LAPS
½" BUTYL TAPE CONTINUOUS UNDER Z BAR
1" PANCAKE HEAED SCREW, INSTALL MIN . 4 PER Z BAR OR 3" ON CENTER
CONTINUOUS BEAD OF SEALANT ADJACENT TO PANEL RIBS
Z BAR, FIELD CUT TO FIT BETWEEN PANEL RIBS
Rivet at 18" ON CENTER
PANEL
1" PANCAKE SCREW HEAD
SINGLE LAYER OF UNDERLAYMENT
WOOD SUBSTRATE
THERMAL EXPANSION

Ensure the deck is thoroughly cleaned and prepared for installation, adhering to the manufacturer's instructions for underlayment installation with the underlayment extending a minimum of 3 inches up the wall. Install the panel, field bending the panel edge at a 45° angle to create a box end without cutting panel ribs. Apply butyl tape to the Z bar and install it over the panel using 1" pancake head fasteners spaced at 4" intervals through the butyl tape, ensuring a minimum of 5 fasteners per panel. Apply a vertical bead of approved sealant behind the Z closure at the panel rib and tool it in. Apply butyl tape on the backside vertical leg of the headwall flashing. Engage the headwall flashing over the Z closure and attach it to the wall using threaded anchor screws at 16" intervals through the butyl tape. Drill holes through the headwall flashing hem and Z closure using the correct size drill bit at 18" intervals. Proceed to install pop rivets through the hem of the headwall flashing, attaching it to the Z closure at 18" intervals. Apply butyl tape on the backside of the counter flashing and attach it using self-sealing threaded fasteners at 24" intervals. Apply approved sealant above the counter flashing caulk edge and tool it in. Maintain a minimum 4" lap on all flashings with approved sealant between laps and ensure a minimum flashing length of 24". Stagger the laps between headwall and counter flashings by a minimum of 6 inches.

SIDEWALL DETAIL

LAP SIDING

SIDEWALL FLASHING, 4" END LAPS WITH CONTINUOUS SEALANT AT LAPS

PANEL LEG OR FIELD FORM PANEL LEG (MIN. 1-1/4")

Rivet at 18" ON CENTER

Z BAR FASTENED WITH
1" PANCAKE HEAD SCREW

CONTINUOUS ROW OF BUTYL TAPE
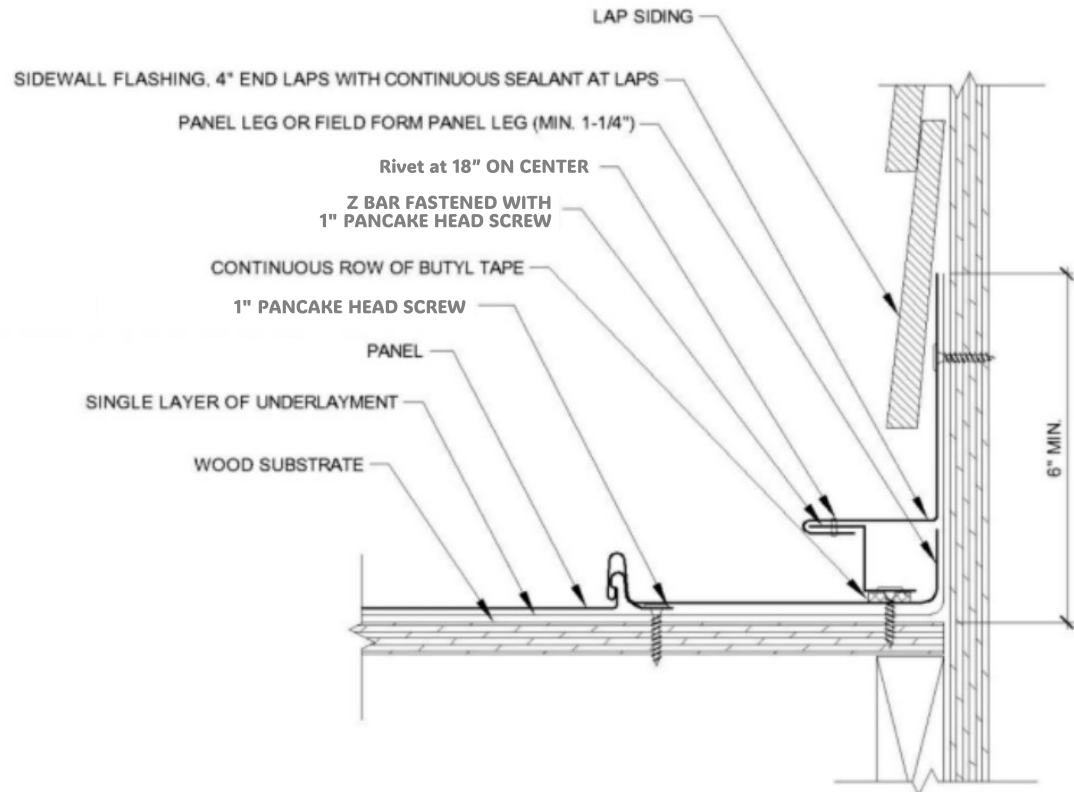
1" PANCAKE HEAD SCREW

PANEL

SINGLE LAYER OF UNDERLAYMENT

WOOD SUBSTRATE

6" MIN.

Ensure that the deck is clean and prepared for installation, adhering to the manufacturer's instructions for underlayment installation, ensuring that the underlayment extends up the wall a minimum of 3 inches. Proceed to install the panel, field bending the panel edge 90° to match the Z closure height. Apply butyl tape to the Z closure and install it over the panel using 1" pancake head fasteners spaced at 4" intervals through the butyl tape. Then, apply butyl tape on the backside vertical leg of the sidewall flashing. Engage the sidewall flashing over the Z closure and attach it to the wall using threaded anchor screws at 16" intervals through the butyl tape. Drill holes through the sidewall flashing hem and Z closure using the correct size drill bit at 18" intervals. Proceed to install stainless steel pop rivets through the hem of the sidewall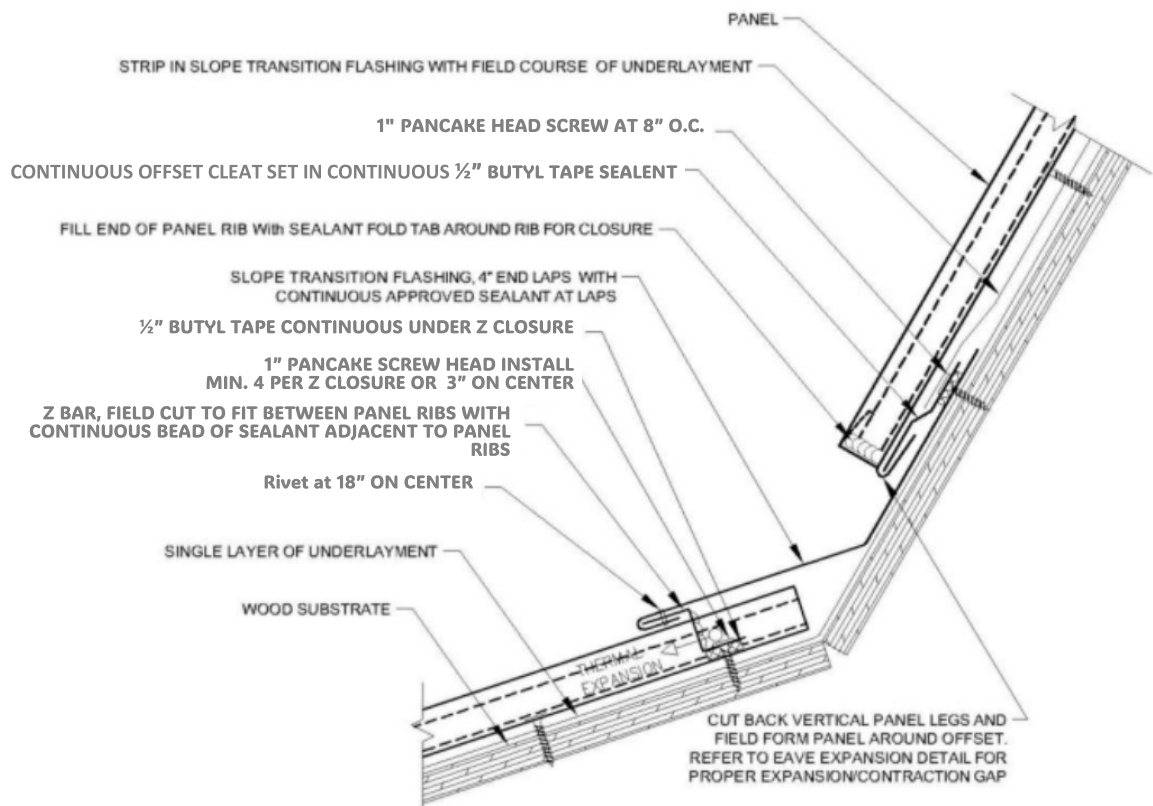 flashing, attaching it to the Z closure at 18" intervals. Apply butyl tape on the backside of the counter flashing and attach it using self-sealing threaded fasteners at 24" intervals. Apply approved sealant above the counter flashing caulk edge and tool it in. Maintain a minimum 4" lap on all flashings with approved sealant between laps and ensure a minimum flashing length of 24". Stagger the laps between Z closure, sidewall, and counter flashings by a minimum of 6 inches.
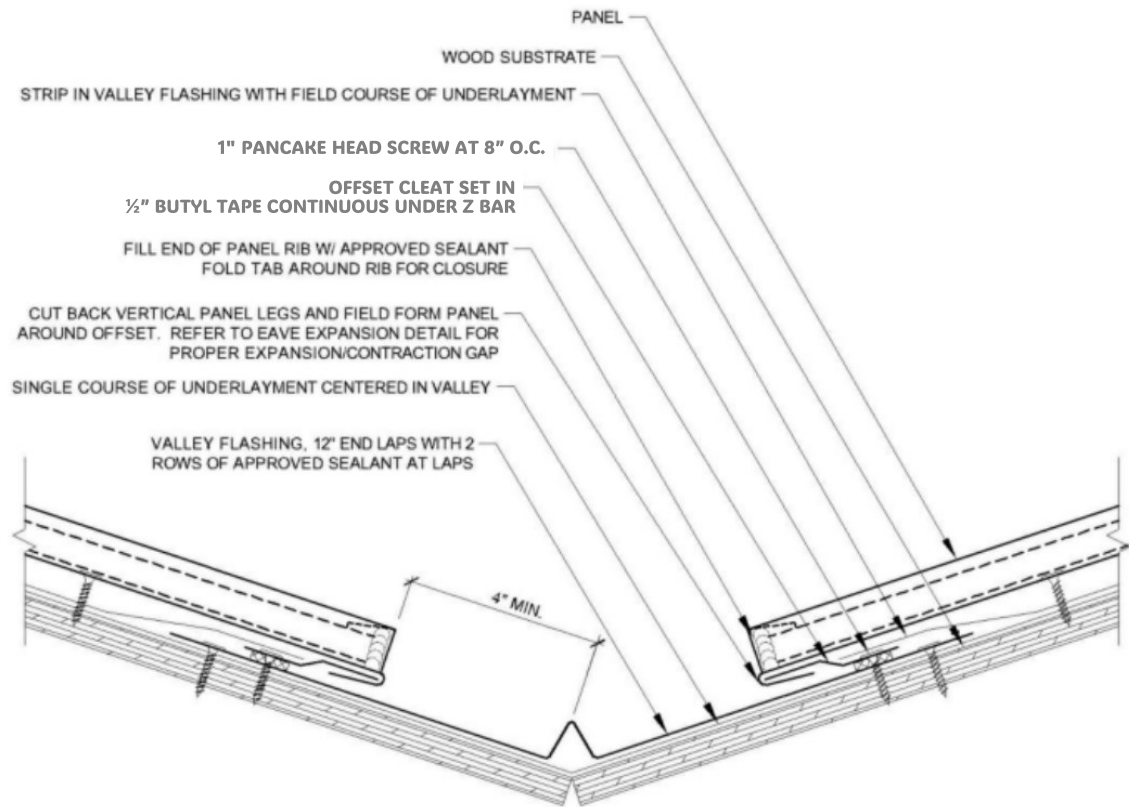
SLOPE TRANSITION DETIAL

PANEL

STRIP IN SLOPE TRANSITION FLASHING WITH FIELD COURSE OF UNDERLAYMENT

1" PANCAKE HEAD SCREW AT 8" O.C.

CONTINUOUS OFFSET CLEAT SET IN CONTINUOUS ½" BUTYL TAPE SEALENT

FILL END OF PANEL RIB With SEALANT FOLD TAB AROUND RIB FOR CLOSURE

SLOPE TRANSITION FLASHING, 4" END LAPS WITH CONTINUOUS APPROVED SEALANT AT LAPS

½" BUTYL TAPE CONTINUOUS UNDER Z CLOSURE

1" PANCAKE SCREW HEAD INSTALL MIN. 4 PER Z CLOSURE OR 3" ON CENTER

Z BAR, FIELD CUT TO FIT BETWEEN PANEL RIBS WITH CONTINUOUS BEAD OF SEALANT ADJACENT TO PANEL RIBS

Rivet at 18" ON CENTER

SINGLE LAYER OF UNDERLAYMENT

WOOD SUBSTRATE

THERMAL EXPANSION

CUT BACK VERTICAL PANEL LEGS AND FIELD FORM PANEL AROUND OFFSET. REFER TO EAVE EXPANSION DETAIL FOR PROPER EXPANSION/CONTRACTION GAP

Ensure the deck is clean and prepared for installation before proceeding to install the underlayment according to the manufacturer's instructions. Begin by installing the lower panel, field bending the panel edge at a 45° angle to create a box end without cutting the panel ribs. Apply butyl tape to the Z closure and secure it over the panel using pancake head fasteners spaced at 4" intervals through the butyl tape, with a minimum of 5 fasteners per panel. Apply a vertical bead of approved sealant behind the Z closure at the panel rib and tool it in. Place continuous support flashing over the lower panels, fastening it to the upper roof deck high flute with #10x1" pancake head fasteners spaced at 12" intervals, ensuring the flashing has the required slope. Engage the transition flashing onto the Z closure and fasten it with 1" pancake head fasteners spaced at 6" intervals, ensuring a minimum 4" lap on transition flashings with approved sealant between laps and a minimum flashing length of 24". Apply butyl tape to the offset cleat and install it over the transition flashing using 1" pancake head fasteners spaced at 4" intervals through the butyl tape. Strip in the offset cleat and edge of the transition flashing. Install panels and engage the panel hem onto the offset cleat, leaving the required gap for thermal expansion and contraction, then crimp the hem closed carefully using hand seamers. Drill holes through the transition flashing hem and Z closure at 18" intervals using the correct size drill bit. Install stainless steel pop rivets through the hem of the transition flashing, attaching them to the Z closure at 18" intervals.

PANEL

WOOD SUBSTRATE

STRIP IN VALLEY FLASHING WITH FIELD COURSE OF UNDERLAYMENT

1" PANCAKE HEAD SCREW AT 8" O.C.

OFFSET CLEAT SET IN ½" BUTYL TAPE CONTINUOUS UNDER Z BAR

FILL END OF PANEL RIB W/ APPROVED SEALANT FOLD TAB AROUND RIB FOR CLOSURE

CUT BACK VERTICAL PANEL LEGS AND FIELD FORM PANEL AROUND OFFSET. REFER TO EAVE EXPANSION DETAIL FOR PROPER EXPANSION/CONTRACTION GAP

SINGLE COURSE OF UNDERLAYMENT CENTERED IN VALLEY

VALLEY FLASHING, 12" END LAPS WITH 2 ROWS OF APPROVED SEALANT AT LAPS

4" MIN.

Ensure the deck is thoroughly cleaned and prepared for installation according to the manufacturer's instructions, including the installation of underlayment. Place the valley flashing centered in the valley and tack it in place using a 1" pancake head fastener at 3' intervals. Maintain a minimum valley lap of 12" with two rows of approved sealant in the lap, and ensure a minimum flashing length of 24". Apply butyl tape to the offset cleat and install it over the valley flashing using 1" pancake head fasteners at 4" intervals through the butyl tape. Maintain a minimum 6" cleanout between the center of the valley and the offset cleat. Strip in the offset cleat and edge of the valley flashing. Proceed to install the panels, engaging the panel hem onto the offset cleat, leaving the necessary gap for thermal expansion and contraction.

SHED RIDGE DETAIL
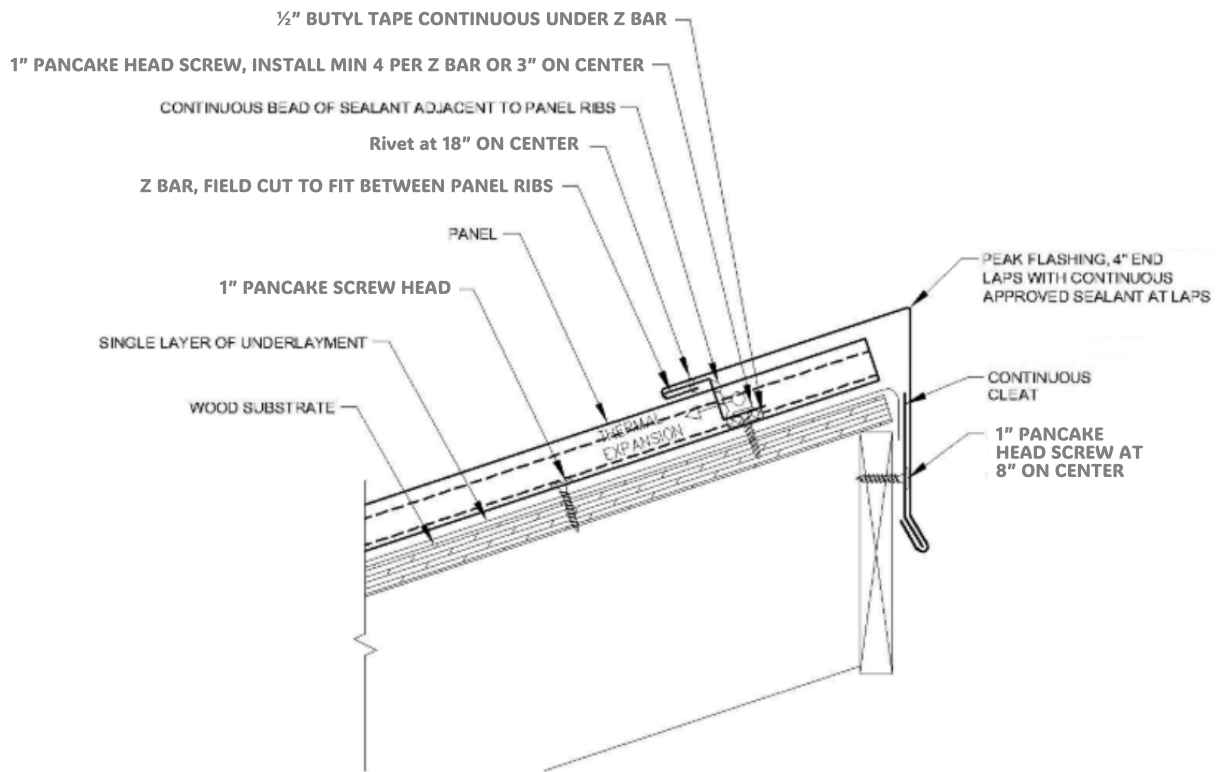
½" BUTYL TAPE CONTINUOUS UNDER Z BAR

1" PANCAKE HEAD SCREW, INSTALL MIN 4 PER Z BAR OR 3" ON CENTER

CONTINUOUS BEAD OF SEALANT ADJACENT TO PANEL RIBS

Rivet at 18" ON CENTER

Z BAR, FIELD CUT TO FIT BETWEEN PANEL RIBS

PANEL

1" PANCAKE SCREW HEAD

SINGLE LAYER OF UNDERLAYMENT

WOOD SUBSTRATE

PEAK FLASHING, 4" END LAPS WITH CONTINUOUS APPROVED SEALANT AT LAPS

CONTINUOUS CLEAT

1" PANCAKE HEAD SCREW AT 8" ON CENTER

THERMAL EXPANSION
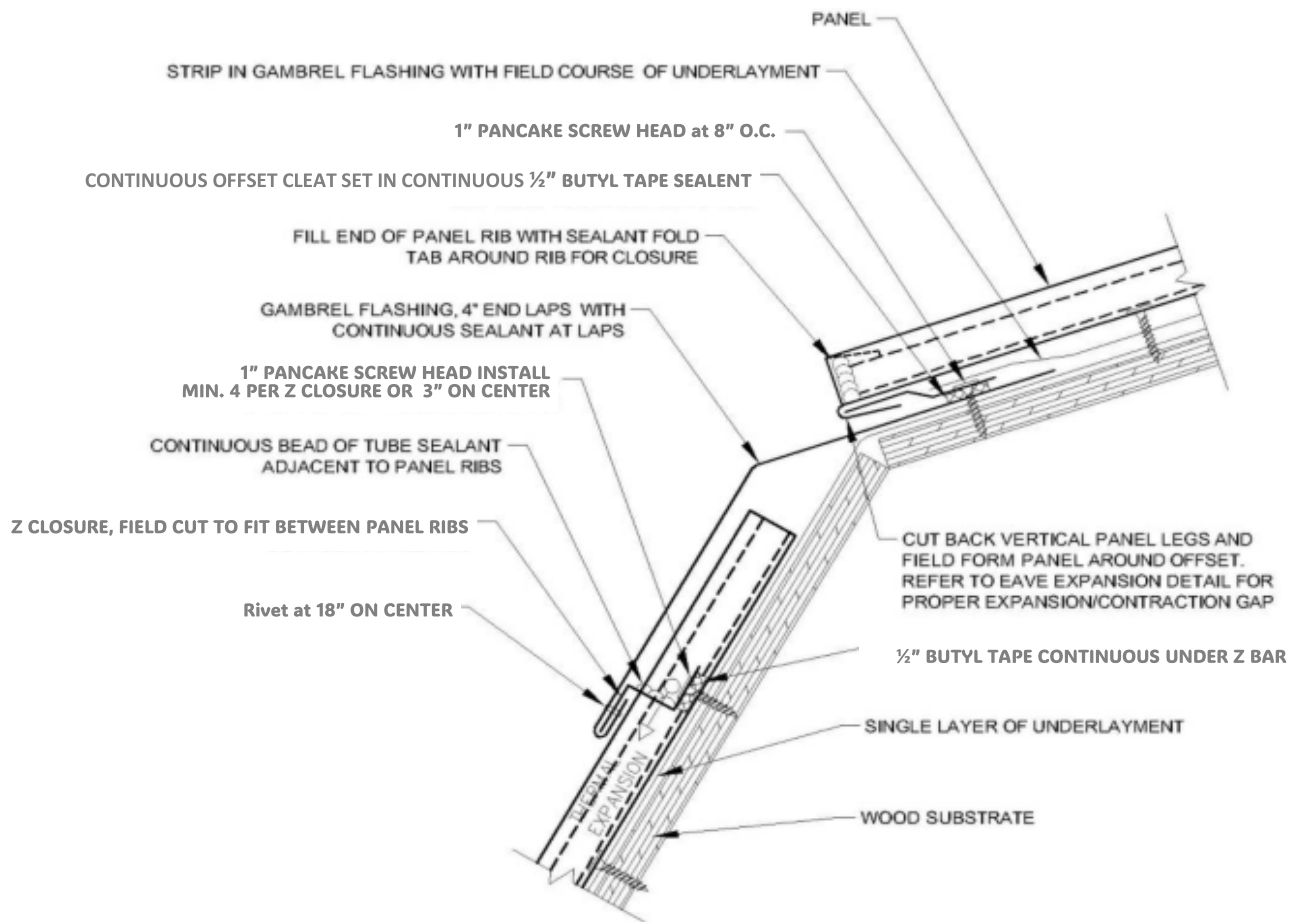
Ensure that the deck is clean and prepared for installation according to the manufacturer's instructions, including the installation of underlayment. Install the panel, field bending the panel edge at a 45° angle to create a box end without cutting panel ribs. Proceed to install a cleat on the peak face and fasten it with 1" pancake head fasteners spaced at 8" intervals. Apply butyl tape to the Z closure and install it over the panel using 1" pancake head fasteners spaced at 4" intervals through the butyl tape, ensuring a minimum of 5 fasteners per panel. Apply a vertical bead of approved sealant behind the Z closure at the panel rib and tool it in. Install the peak flashing by engaging it onto the cleat and Z closure, ensuring a minimum 4" lap on the peak flashing with approved sealant between laps and maintaining a minimum flashing length of 24". Drill holes in the rake flashing hem and Z closure using the correct size drill bit at 18" intervals. Proceed to install pop rivets through the hem of the rake flashing, attaching it to the Z closure at 18" intervals.

PANEL

STRIP IN GAMBREL FLASHING WITH FIELD COURSE OF UNDERLAYMENT

1" PANCAKE SCREW HEAD at 8" O.C.

CONTINUOUS OFFSET CLEAT SET IN CONTINUOUS ½" BUTYL TAPE SEALENT

FILL END OF PANEL RIB WITH SEALANT FOLD TAB AROUND RIB FOR CLOSURE

GAMBREL FLASHING, 4" END LAPS WITH CONTINUOUS SEALANT AT LAPS

1" PANCAKE SCREW HEAD INSTALL MIN. 4 PER Z CLOSURE OR 3" ON CENTER

CONTINUOUS BEAD OF TUBE SEALANT ADJACENT TO PANEL RIBS

Z CLOSURE, FIELD CUT TO FIT BETWEEN PANEL RIBS

Rivet at 18" ON CENTER

CUT BACK VERTICAL PANEL LEGS AND FIELD FORM PANEL AROUND OFFSET. REFER TO EAVE EXPANSION DETAIL FOR PROPER EXPANSION/CONTRACTION GAP

½" BUTYL TAPE CONTINUOUS UNDER Z BAR

SINGLE LAYER OF UNDERLAYMENT

WOOD SUBSTRATE

Ensure the deck is clean and prepared for installation before proceeding to install the underlayment according to the manufacturer's instructions. Begin by installing the lower panel, field bending the panel edge at a 45° angle to create a box end without cutting the panel ribs. Apply butyl tape to the Z closure and secure it over the panel using 1" pancake head fasteners spaced at 4" intervals through the butyl tape, with a minimum of 5 fasteners per panel. Apply a vertical bead of approved sealant behind the Z closure at the panel rib and tool it in. Place continuous support flashing over the lower panels, fastening it to the upper roof deck high flute with 1" pancake head fasteners spaced at 12" intervals, ensuring the flashing has the required slope. Engage the transition flashing onto the Z closure and fasten it with 1" pancake head fasteners spaced at 6" intervals, ensuring a minimum 4" lap on transition flashings with approved sealant between laps and a minimum flashing length of 24". Apply butyl tape to the offset cleat and install it over the transition flashing using 1" pancake head fasteners spaced at 4" intervals through the butyl tape. Strip in the offset cleat and edge of the transition flashing. Install panels and engage the panel hem onto the offset cleat, leaving the required gap for thermal expansion and contraction, then crimp the hem closed carefully using hand seamers. Drill holes through the transition flashing hem and Z closure at 18" intervals using the correct size drill bit. Install pop rivets through the hem of the transition flashing, attaching them to the Z closure at 18" intervals.

PIPE PENETRATION DETAIL

CONTINUOUS BEAD OF SEALANT AROUND
TOP OF BOOT

PIPE BOOT

12-14 X 1" S.D W WASHER 1" ON CENTER

MINIMUM CLEARANCE BETWEEN FLANGE OF
BOOT FLASHING AND PANEL RIBS

CONTINUOUS TUBE SEALANT AROUND BASE IF
PIPE AND SUBSTRATE OPENING

LEAVE MIN ½" CLEARANCE AROUND PENETRATION

SET SECUREMENTING IN CONTINOUS BEAD OF TUBE
SEALANT

SYNTHETIC UNDERLAYMENT OR APPROVED UNDERLAY-
MENT

WOOD SUBSTRATE

To install a pipe through a panel with a ½ inch gap around it, follow these steps: Cut a round opening in the panel, leaving the desired gap. Apply a continuous bead of tube sealant around the base of the pipe at the panel surface. Ensure to use EPDM pipe flashing (or siliconized pipe flashing for high-temperature pipes) with an integral aluminum base ring. Cut an opening in the top of the pipe flashing slightly smaller than the pipe diameter. Apply another continuous bead of tube sealant to the bottom of the pipe flashing base. Install the boot over the pipe and position the base against the panel surface. Proceed to secure the pipe flashing by installing self drilling screws with washers around its base at 1-inch intervals. Apply a continuous bead of tube sealant around both the top and base of the pipe flashing. These steps will ensure a proper seal and secure installation of the pipe through the panel.