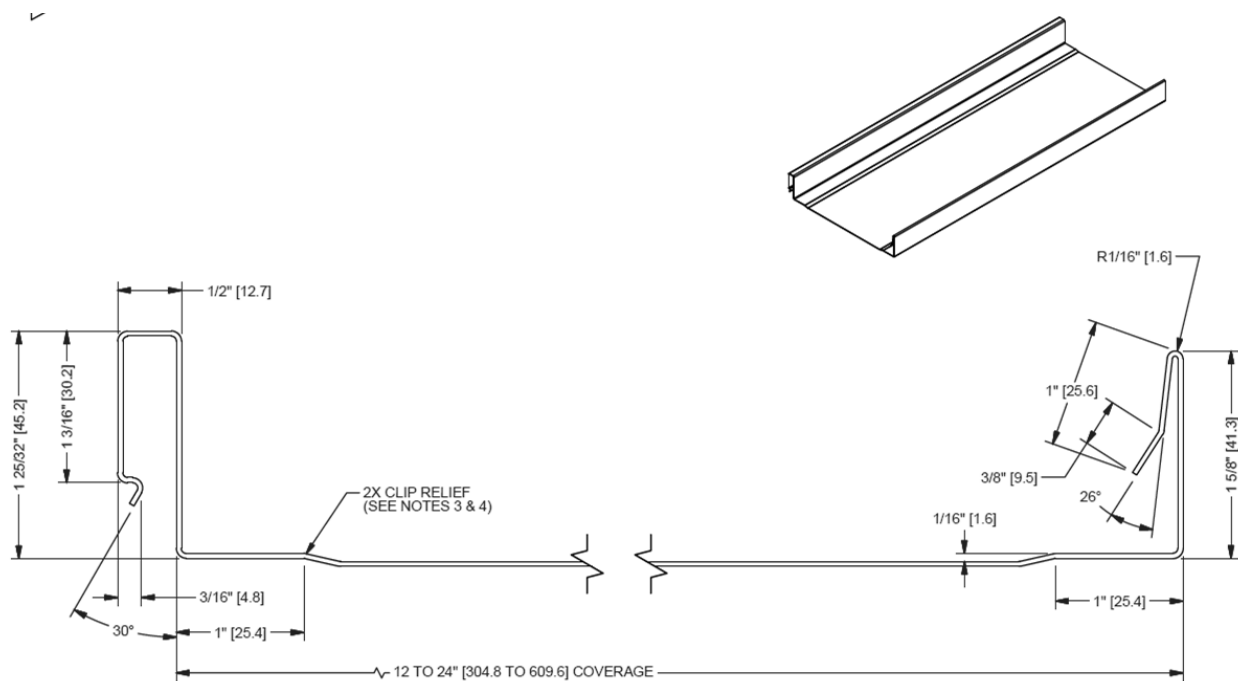


DSS-675 "Snap Lock" Standing Seam



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Important Information

This manual provides suggestions and guidelines for installing standing seam panels, but it is important to note that the illustrations and instructions may not be applicable to all building designs or product applications. The installation details presented are not comprehensive and may not meet all building requirements, designs, or codes. Therefore, it is the responsibility of the designer or installer to ensure that the installation details align with specific building requirements. The designer or installer should also consider the expansion and contraction of roof panels and make necessary adjustments accordingly. It is possible that modifications or revisions may be needed based on the unique conditions of each project.

The text states that a roof must be designed to support minimum live, dead, collateral, and wind loads, and it is necessary to consult local building officials to determine the specific design load requirements. The involvement of a professional engineer is recommended for all roof system designs. The buyer holds the responsibility of verifying code requirements, checking measurements, and ensuring the product's suitability for the job. Determining the necessary lengths and quantities of materials is also the buyer's responsibility. Before ordering and installing materials, it is important to verify all dimensions through field measurements. The instructions assume that a qualified firm or individual has been consulted for the application of the product. Failure to follow the stated recommendations releases the manufacturer from any responsibility for damage or deterioration of the product and voids any applicable warranty.

Safety Considerations

Each job site presents different hazards; therefore it is the responsibility of the buyer/installer to determine the safest way to install the DSS675 roof panel system based on the recommended instructions contained in this guide. Provide crew members working on the roof with required safety railing, netting, or safety lines. If you must walk on a metal roof, take great care. Metal panels can become slippery, so always wear shoes with non-slip soles. Avoid working on metal roofs during wet conditions when the panels can become extremely slippery. Walking or standing on a metal roof which does not have a plywood or other deck beneath it is not recommended. If necessary, walk on the purl-ins, never between. DSS675 is designed to be installed over solid plywood decking. OSHA safety regulations should be complied with at all times.

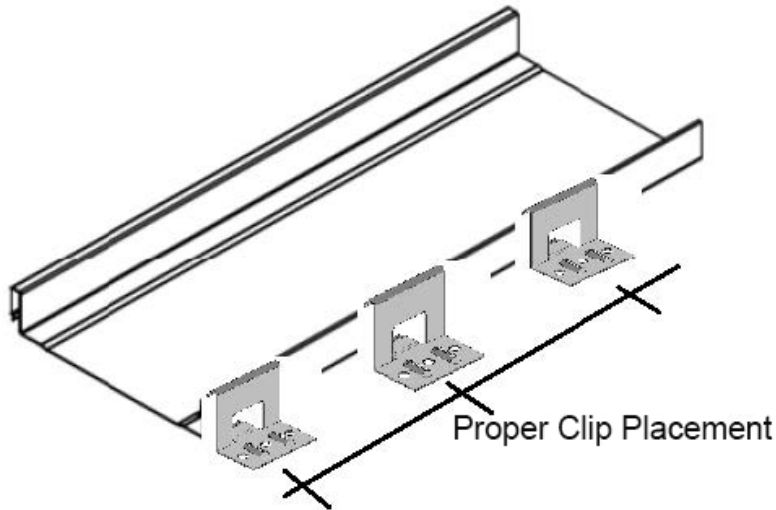
Fastener Spacing

Deck Thickness

1/2"

5/8"

3/4"



Refer to your local building code requirements or your engineer of record. It is the contractors responsibility to determine correct fastener spacing and types of fasteners to use.

Tools & Equipment

- Snips
- Notcher
- Rivet Tool
- Tape Measure
- Electric Metal Shear
- Caulking Gun
- Cordless Drill
- Chalk Line
- 6" Hand Seamer
- Hemming/Folding Tool

Concealed Fastener Tools

- Hand Snips
- Notcher
- Rivet Hole Punch
- Hand Riveter
- Folding Tools
- 6" Hand Seamer

Foot Traffic

To ensure the proper care and maintenance of metal panels and flashings during installation, the following guidelines should be followed:

- 1) Minimize foot traffic over the installed system to prevent distortion and damage to the finish.
- 2) Install a permanent walkway if continuous foot traffic is necessary for roof maintenance in specific areas.
- 3) If foot traffic is unavoidable during installation, use walking platforms to avoid panel damage, or leave panels off in accessible areas until the project is near completion.
- 4) When walking on the roof panels cannot be avoided, walk only on the flat sections of the panels and avoid walking on the ribs, as this can cause damage.
- 5) Adhere to all applicable safety regulations, including OSHA regulations, throughout the panel installation process.

Field Cutting

To cut sheet metal accurately and efficiently, use tin snips or an electric nibbler tool. When using a nibbler, cut over a garbage can to collect the metal shavings. Keep all product surfaces clean and wipe installed surfaces at the end of each work period. Avoid cutting panels over metal surfaces and always wear heavy gloves and safety glasses when cutting metal to prevent injuries. Metal shavings can lead to rusting and will void warranties in affected areas.

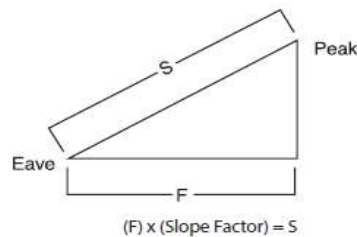
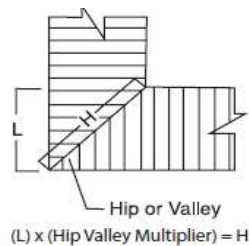
Roof Preparation

The DSS675 metal roofing system should be installed over solid decking, with a minimum of ½" plywood sheathing. Prior to installation, ensure that the existing decking is smooth, level, and in good condition. Replace any damaged decking. Clear the roof of any debris that might interfere with the installation process. Use high temp peel stick or synthetic underlayment that is approved for installation under metal roofing. To start the installation, use an alignment or "chalk" line, which should be vertical and 1/4" from the rake edge of the roof deck and square with the eave. Other methods of confirming squareness can also be used.

Slope Factors

DSS675 is designed to be installed on slopes of 2/12 to 12/12. In some instances, there may need to be special application methods used such as on slopes 2:12 to 4:12 and 9:12 to 12:12.

Roof Slope Factor Chart		
Slope	Slope Factor	Hip/Valley Multiplier
3:12	1.0308	1.4362
4:12	1.0541	1.4530
5:12	1.0833	1.4743
6:12	1.1180	1.5000
9:12	1.2500	1.6008
10:12	1.3017	1.6415
11:12	1.3566	1.6853
12:12	1.4142	1.7320



Substructure Condition

To avoid panel distortion, proper alignment and a uniform substructure are essential when installing DSS675 panels. Before installation, the installer should check the roof deck for squareness using various methods. Two methods are provided below.

The first method involves measuring the diagonal distance across one slope of the roof from similar points at the ridge and eave to obtain the same dimension.

The second method involves using the 3-4-5 triangle system, where measurements at specific intervals should result in a diagonal distance that is a multiple of five to ensure square corners. If the endwall cannot be made square, the roof system cannot be installed according to the provided instructions. Ensuring the building's squareness is crucial for the correct installation of the panels.

DSS675 Panel Installation Overview

Before starting the installation of DSS675 panels, familiarize yourself with all the instructions. Examine the substrate or framing to ensure it is straight, level, and plumb to prevent panel distortion. The substructures should meet code requirements.

Some field cutting and fitting of panels and trims are expected during installation, and minor corrections are normal.

The purchaser & installer is responsible for ensuring proper underlayment installation. Any panel distortion caused by an uneven substrate, vapor barrier issues, debris, or protruding nails is not the responsibility of D7 Metals LLC.

Trims, closures, and accessories shown in the installation drawings are available for use.

Oil canning is a frequent occurrence in the flat panel region, and it does not compromise the integrity of the panel. As such, it should not be grounds for rejection, and it is not an issue attributable to D7 Metals.

To install the panels properly, they should be installed straight, plumb, and square to the eave. Check the roof for squareness, and if it is square, use the edge of the rake for layout marks. If the roof is not perfectly square, install the first panel parallel to the roof square line, ensuring the first rib does not hang over the gable edge to allow proper fitting of the gable trim.

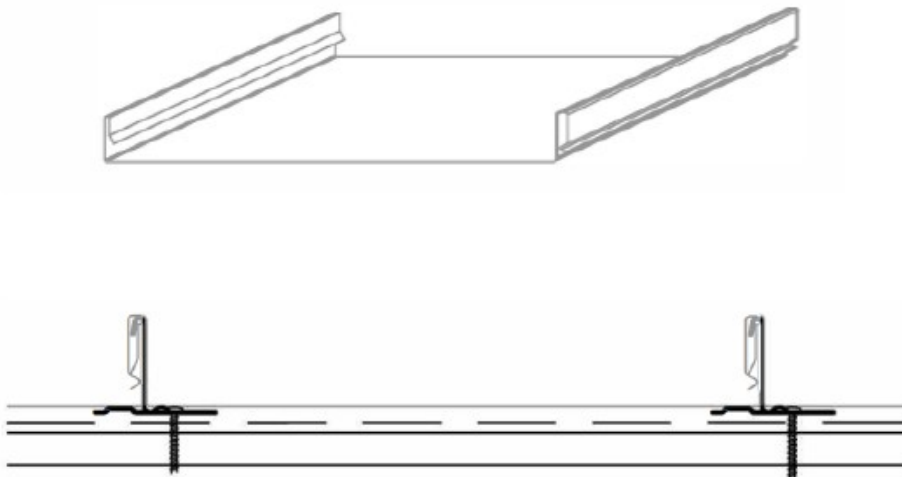
Trim Installation Overview

For runs of more than 10'2" that require multiple lengths of trim, overlap the pieces by a minimum of 4" to ensure a seamless appearance. Attach the trim using rivets or gasketed screws, making sure not to overdrive the screws to avoid deflecting the roofing or trim. To finish the ends of each trim run neatly, cut and fold the trim for a polished look. When hooking from the hem, measure 3" from the end of the trim piece, cut the hem 1/8" up from the bend to the 3" mark, and remove the back of the hem. For the lap piece, open up the hem with a screwdriver, insert the piece, and slide it together. Use rivets and sealant as necessary to secure the lap.

DSS675 Panel Installation

Complete the following steps for panel installation:

- 1) Align the female edge of the first panel with the chalk line at the rake edge. The line can be 0" – 1 3/4" from the rake, and the panel should overhang the eave by 1 1/2".
- 2) Panels should be perpendicular to the ridge for ridge trim attachment. Check panel alignment.
- 3) Attach the rake edge side of panel to the side panel using DSS675 clips and pancake screws properly sized and spaced correctly apart. Fasten the panel along the rake edge with clips designed for the DSS675 panels, using pancake screws to fasten the clips. Take care not to overdrive the screws to allow for panel movement during expansion and contraction.
- 4) Align the second panel's female edge with the male edge of the starter panel. Ensure panels are flush to each other and extend over the eave trim by 1 1/2".
- 5) Snap panels together at the seam from eave to ridge, then screw the second panel in place using 1" low profile pancake head screws.
- 6) Continue applying panels using the same method in steps 4 and 5.
- 7) Panels at the eave can be terminated with or without fasteners, depending on aesthetic considerations determined by the installer or building owner.



Eave Metal Installation - Recommended Method

Eave metal installation instructions must be followed to achieve high wind resistance along eave conditions where DSS675 panels will be hemmed to the eave metal. Follow the installation instructions below when installing DSS675 eave metal.

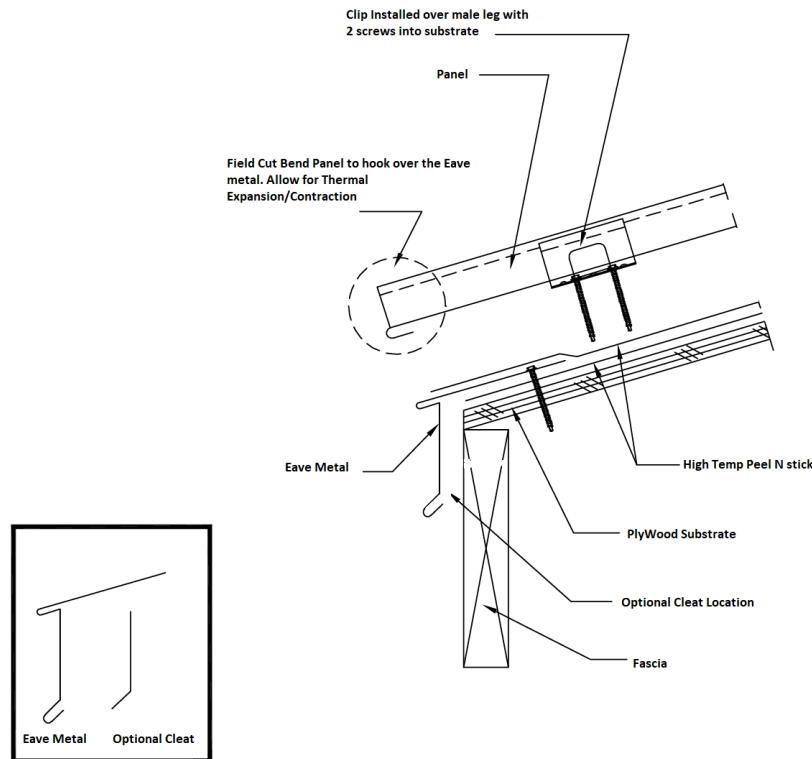
- 1) Install the eave metal cleat along fascia by fastening the cleat min of 6" on center using a min #10 1.5" pancake screw.
- 2) Install the adjacent cleat with no overlap. Cleat should have 1/16" gap between the adjacent piece.
- 3) Once cleat is installed and fastened min 6" on center with pancake screws, you are ready to install the eave metal.
- 4) Install eave metal by hooking the cleat to the bottom of the eave metal and pulling it over the roofing substrate to ensure the eave metal is hooked to the cleat and is snug and tight.
- 5) Make sure the cleat joint is under the center of the eave metal. Make sure the joint of the cleat and the joint of the eave metal is never on top of one another and always spaced apart.
- 6) Eave metal should be screwed in place using min 1.5" #10 pancake screws 6" on center staggered.
- 7) With eave metal installed you can cut and notch both sides of the panels to hook to the eave metal.

Eave Metal Installation - No Cleat Option (*not recommended*)

While a cleat-free installation is an option, it is strongly discouraged for optimal performance. For those choosing this method, the following steps should be followed:

- 1) Install the eave metal directly onto the fascia without using a cleat. Fasten it at least 6" on center with #10, 1.5" pancake screws.
- 2) For adjacent pieces, install them next to each other with overlap of min 3".
- 3) Once the eave metal is fastened and properly positioned, you can proceed with panel installation.
- 4) Attach the metal roofing by hooking it onto the eave metal and pulling it snug to the eave metal to ensure that it's securely connected to the eave metal. See application on next page.
- 5) Once panels are installed, fasten eave metal through the face of the eave metal using #10, 1.5" ultimate screws at a distance of 6" on center through face. Although this installation method is deemed acceptable, utilizing fasteners through the front of the eave metal detracts from its aesthetic appeal.

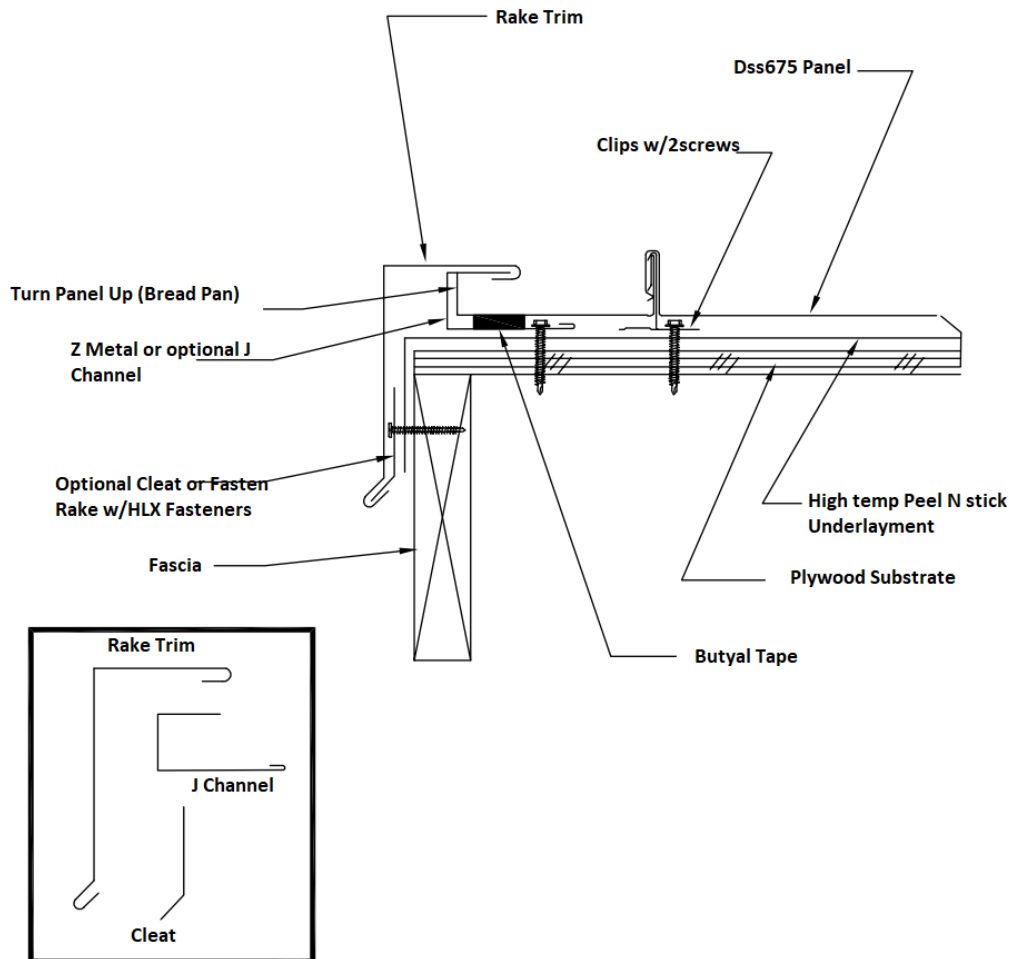
Drip Edge -- Concealed Fastener



To install DSS675 panels along the drip edge:

- 1) Screw the drip edge to the decking.
- 2) Notch the DSS675 panels at the rib.
- 3) Use a folding tool to fold the panel at the notched area, aligning the unpainted sides together.
- 4) Slide the panel over the drip edge, snap it in place, and screw it into the decking.
- 5) Repeat steps 2-4 for each DSS675 panel along the drip edge.
- 6) Seal the end, or leave a tab when notching and fold it over the end for a more finished look.

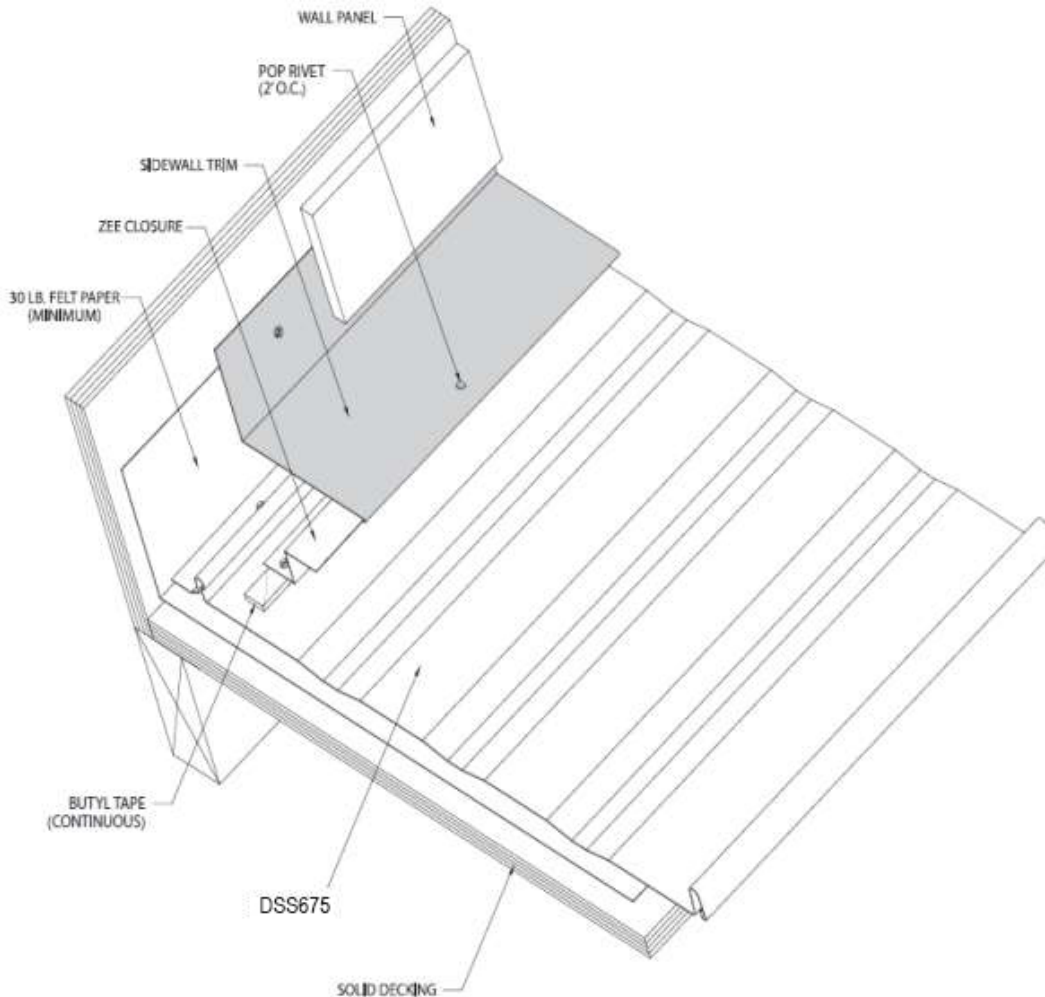
Rake Trim -- Concealed Fastener



To install DSS675 panels along the rake of the roof:

- 1) Install the cleat along the rake of the roof.
- 2) Place the DSS675 panel on top of the cleat, ensuring that the edge of the panel aligns with the edge of the rake.
- 3) Install a z closure on top of the panel, using butyl tape beneath for proper sealing. Run the z closure along the length of the rake and screw it down to the panel.
- 4) Install the rake trim by snapping the open hems of the rake trim over the cleat and z closure. Pop rivet the rake trim to the z closure along the joints and every three feet along the rake.
- 5) Ensure that trims are overlapped a minimum of 3" with butyl tape between laps for proper sealing.

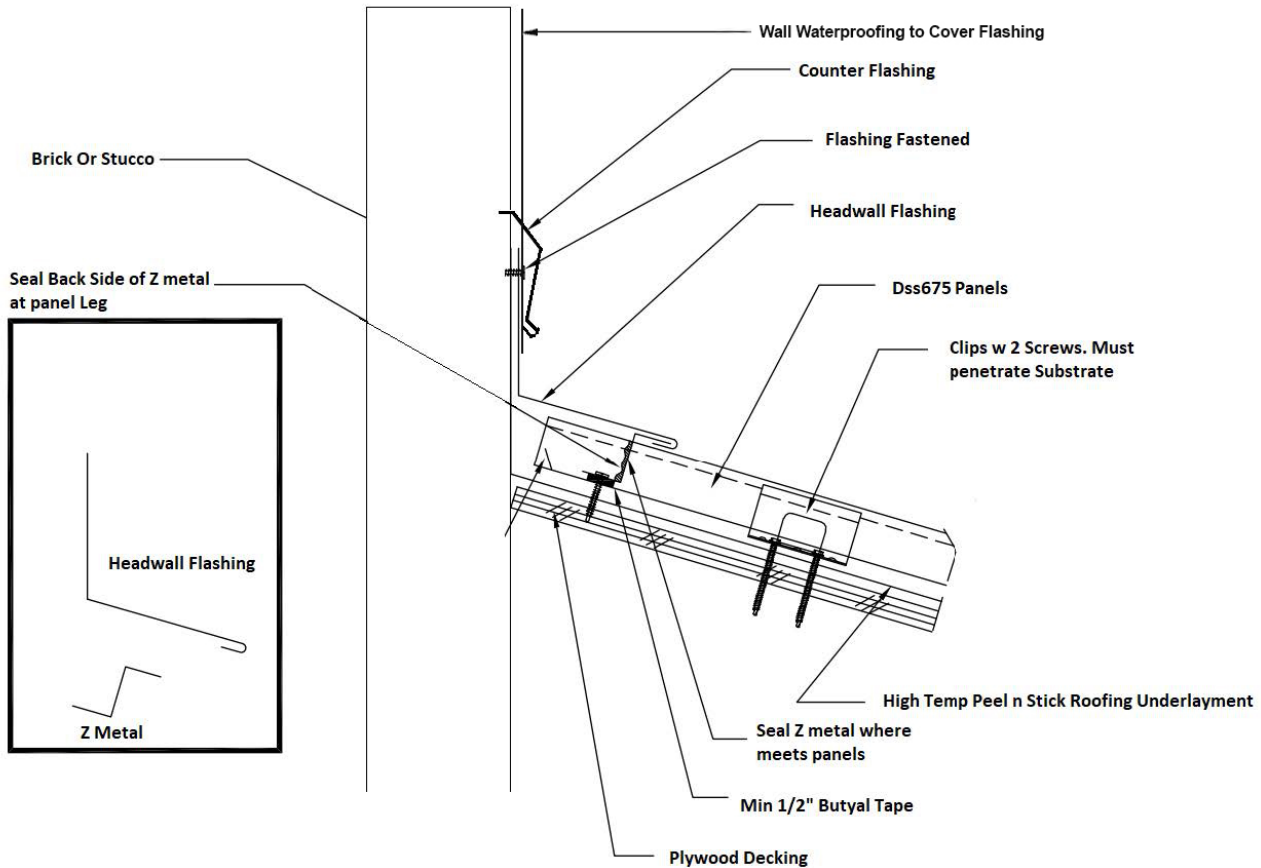
Sidewall Trim -- Concealed Fastener



To install DSS675 panels to the sidewall:

- 1) Install panels up to the sidewall.
- 2) Place a z closure on top of the panel along the sidewall, using butyl tape for proper sealing.
- 3) Slide the open hem of the sidewall trim over the z closure and screw it into the sidewall. Pop rivet the sidewall trim to the z closure.
- 4) Repeat steps 1 and 2 for each panel along the sidewall.
- 5) Install DSS675 panels over the sidewall, ensuring that trims are overlapped a minimum of 2" with butyl tape between laps for proper sealing.
- 6) Proper screw spacing of 6 inches maximum on z metal is crucial to ensure that the butyl tape properly seals the z metal to the panel and maintains consistent adhesion.

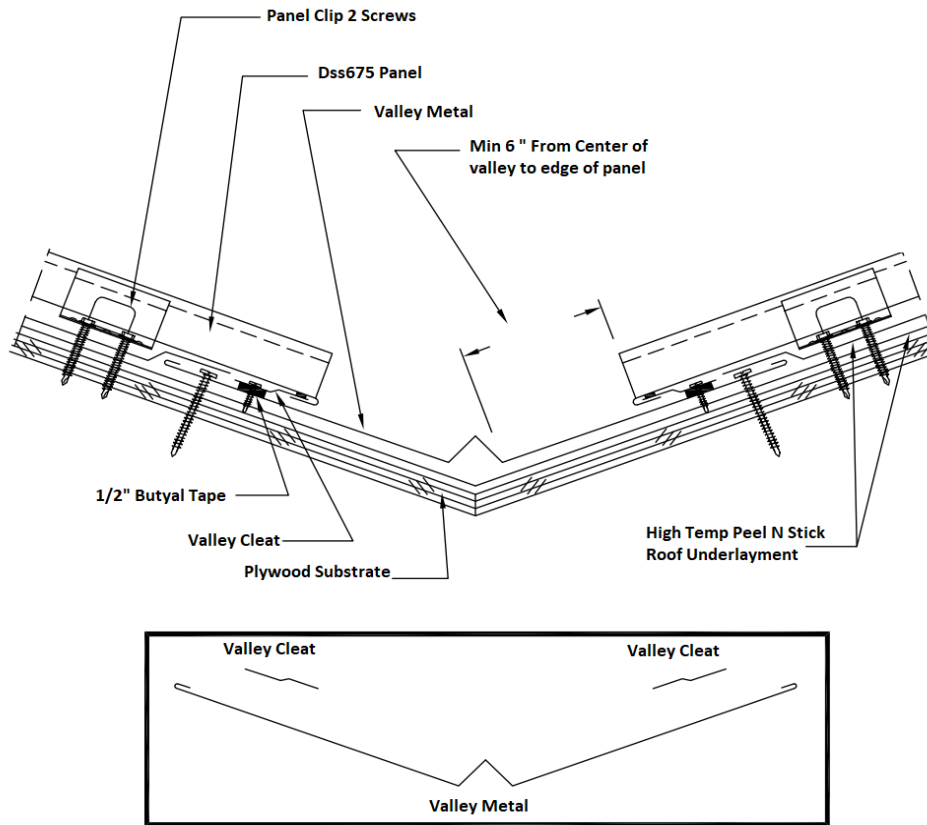
Headwall Trim -- Concealed Fastener



To install DSS675 panels along the headwall:

- 1) Install DSS675 panels up to the headwall.
- 2) Place z closures on top of the panels along the headwall, using butyl tape for proper sealing. Cut the z closures into pieces that fit between panel seams and screw them to the panel. When fastening screws, use a drill at high RPM to avoid damaging the butyl tape seal. Seal the cut edge of the z closure with tube sealant.
- 3) Slide the open hem of the trim over the z closures and screw it into the headwall. Overlap trims a minimum of 2" with butyl tape between laps. Pop rivet the headwall trim to the z closures.
- 4) Repeat steps 1 and 2 for each panel along the headwall.
- 5) Install wall panels over the headwall following the same procedure.

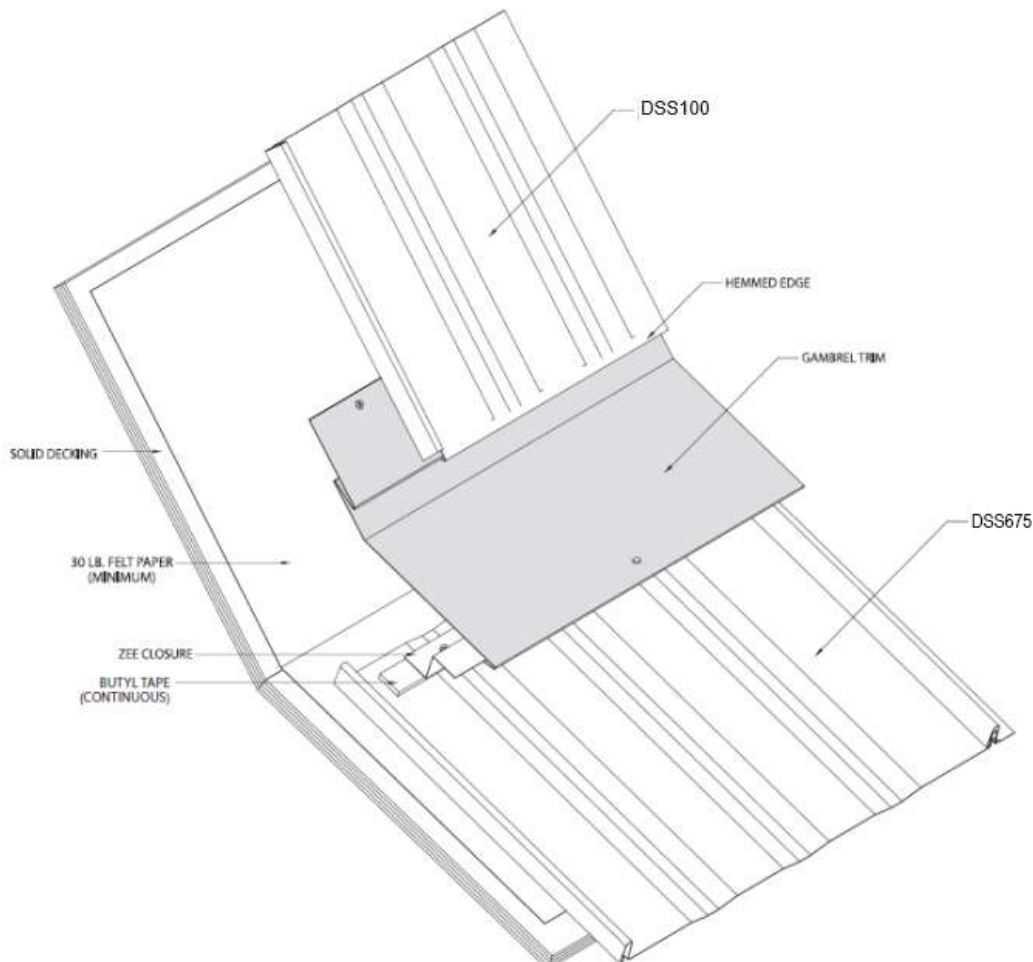
Valley Trim -- Concealed Fastener



To install DSS675 panels in the valley area:

- 1) Hem the end of the valley by 1" using the folding tool and slide it over the drip edge.
- 2) Install the valley to the decking, placing screws as high as possible on the 3 1/8" section of the valley.
- 3) Hem the panel at a 45° angle where it meets the valley and slide it under the open hem on the valley.
- 4) Slide the panel over the valley, snap it in place, and screw it into the decking.
- 5) Repeat step 3 for each panel as it meets the valley. Overlap trims a minimum of 6" with butyl tape between laps.
- 6) Use tape sealant at the panel end for proper sealing.

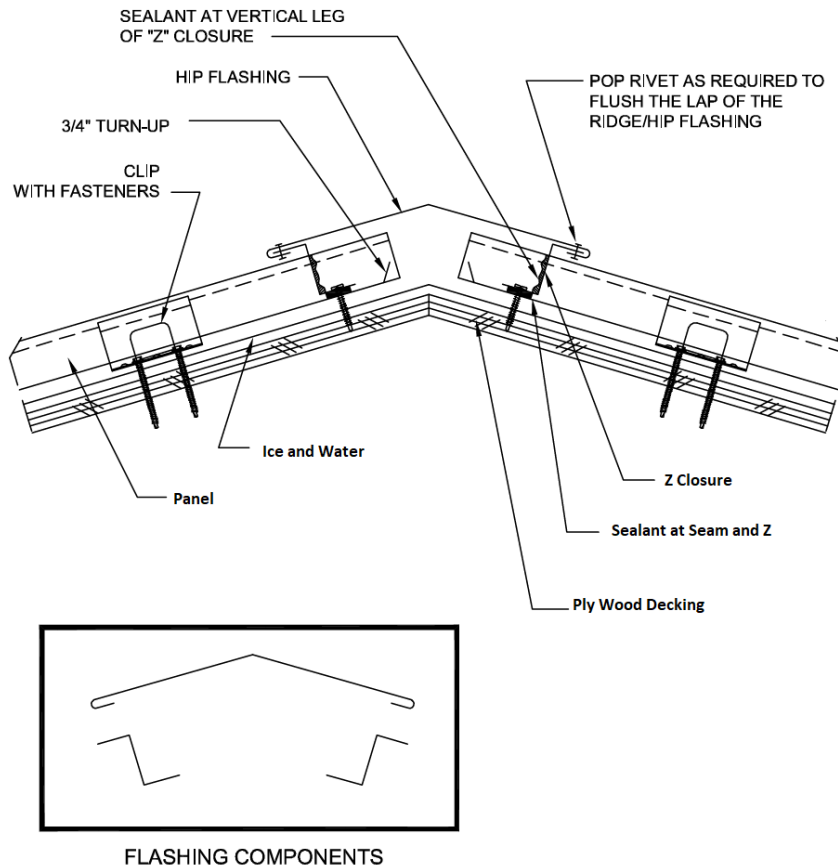
Transition Trim -- Concealed Fastener



To install DSS675 panels along the transition with a gambrel roof:

- 1) Install the bottom DSS675 panels and attach z closures. Cut z closures into pieces that fit and screw them to the panel, using butyl tape for proper sealing. Seal the cut edge of the z closure with tube sealant.
- 2) Slide the open hem of the gambrel trim over the z closures and screw the gambrel trim to the upper decking. Overlap trims a minimum of 2" with butyl tape between laps for proper sealing.
- 3) Notch and hem the panel by 1" and slide it over the open hem on the gambrel trim. Screw the panel to the decking.
- 4) Pop rivet the trim to the z closures on the lower portion of the trim.
- 5) Repeat steps 1 through 3 for each panel along the transition.

Hip/Ridgecap Trim -- Concealed Fastener



To complete the installation of DSS675 panels up to the ridge:

- 1) Install panels on both sides of the roof up to the ridge and attach z closures. Cut z closures into 15 1/2" lengths and screw them to the panel using butyl tape for proper sealing. Seal the cut edges of the z closures with tube sealant. If venting is required, leave a gap at the ridge to allow for air flow.
- 2) Snap the ridge cap over the z closures and pop rivet it to the z closures every 2 feet and at the joints to secure it in place.

Note: When overlapping ridgecap, cut 6 inches off the bottom hem of the underlapping ridgecap, then slide the upper ridgecap over it. Pop rivet the overlapping sections with sealant. For trims, overlap a minimum of 6 inches using butyl tape or sealant between laps for proper sealing.