

Granite Ridge Shingle

DIRECT-TO-DECK INSTALLATION GUIDELINES – (CONCEALED FASTENED)



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Direct-to-Deck Installation Method



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INSTALLATION NOTES

These installation guidelines demonstrate installation techniques for GRANITE-RIDGE Shingle roof panels and accessories. Options are dependent upon chosen design and performance requirements of a given project. Local building codes might create alternative methods.

INSTALLATION WARNING

The details and information in this document reflect current roofing practices used in the United States. Installers of Unified Steel[®] roof panels and accessories should have knowledge of roof structures, an understanding of how to work with stone coated steel panels and accessories, and experience working with sloped roofs.

We recommend that installers of Unified Steel roof products use a Unified Steel Cutter and Bender, and have completed an *Installer Orientation Training Program* for each profile installed. Unified Steel does not consider its products to be "do-it-yourself" (D.I.Y.) mainly due to specialized cutting and bending tools used during installation.



Panels are susceptible to scuffing from foot traffic when subjected to prolonged periods of water saturation, do not install wet. See "Installing Panels When Wet" Technical Bulletin for details.

SAFETY NOTES



The safety tips provided here are for general awareness of the user. Unified Steel assumes no liability or responsibility for incorrect use of the products or any personal injury that may be caused as a result of use.

- Select an open area and establish a safe working perimeter to set up tools. Instruct anyone near the safe working area.
- Inspect each tool before use. Do not use a tool that is not in good working condition. Regularly maintain tools for best performance.
- Wear personal protective equipment.
- Be aware of "pinch points" and keep hands and clothing away from such areas.



GENERAL INFORMATION

FASTENERS

GRANITE-RIDGE Shingle panels are CONCEALED fastened. When installed as described in these guidelines, they use vertically positioned fasteners across the back flange spaced approximately 6" o.c.

All fasteners used on a Unified Steel[®] system shall meet or exceed the corrosion resistant standard as defined in ASTM B-117, (1,000-hr minimum Salt Spray Corrosion Resistance).

Panel fasteners shall be of sufficient length to penetrate into the roof deck a minimum of 3/4".

MATERIALS

The panels are produced from AZ-50, Aluminum-zinc alloy coated steel complying with ASTM A792.

PACKING AND STORAGE

A pallet of panels contains approximately 16 squares. Care should be taken to store panels in an area free from moisture. Refer to pallet storage warning information for more details.

ROOF DECK SHEATHING

The panels must be installed directly on solid or closely fitted minimum 15/32-inch (112 mm) thickness plywood, on solid or closely fitted wood structural panel sheathing, equivalent thickness spaced or closely fitted solid wood planking, or on spaced structural sheathing boards complying with the applicable code. Where spaced boards are used, additional structural sheathing boards must be attached to the roof framing as required to accommodate all panel and batten fastening locations.

ROOF PITCH

GRANITE-RIDGE Shingle panels are designed to be installed on a minimum roof pitch of 3:12 (12 degrees) or above. Roof slopes below 3:12 are deemed decorative coverings. See your local jurisdiction's prescribed treatment for decorative coverings.

ROOFING UNDERLAYMENT

Minimum one layer ASTM D1970, as needed to meet local building code requirements, installed per manufacturer's instructions.

SEALANT/CAULKING

Only exterior grade urethane, polyurethane, or non-acidic silicone, tested to ASTM D412 should be used with the system.

TESTING

The panels have been tested and evaluated to industry standards and are listed in Code Evaluation Report (QAI CER), National Research Council Canada (CCMC), State of Florida (FBC), Miami-Dade (NOA), and Texas Department of Insurance (TDI) evaluation reports. Testing has been conducted to evaluate fire, wind, impact resistance, water infiltration, and durability. Information regarding specific tests and approvals can be obtained from Unified Steel.

VENTILATION

Ensure proper attic ventilation as prescribed per local codes. Ridge venting can be installed to help achieve adequate attic ventilation.

WARRANTY

The panels carry a limited warranty for fifty years. This limited warranty is transferable and does not cover damage due to improper handling or installation. Complete warranty details available at WestlakeRoyalRoofing.com.

DISSIMILAR METALS



To avoid adverse corrosion effects caused by dissimilar metals, COPPER and LEAD flashings should not be used with Unified Steel panels and accessories.

FINISH COATING

Minor scuffing of the stone coated finish can be repaired with a Touch-Up Kit. Use the Unified Steel Touch-Up Kit for repairs. Colored aerosol paints should never be used as "touch-up" on stone coated products.



Colored aerosol paints should never be sprayed on stone coated panels and accessories.

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PARTS & PIECES



GRANITE-RIDGE Shingle Cover: 13.6875" x 44" (348 x 1117 mm) 5.4 lbs (2.45 Kg), 24 pcs/sq



Valley Five "V" 22" x 120" (559 x 3048 mm) 16.8 lbs (7.60 Kg) Painted Black, Brown or Bare.



Cap Shingle (Hip and Ridge) 2-Course 8" x 14" (203 x 356 mm)



Valley Center Cover 4.5" x 79" (108 x 2006 mm) 2.2 lbs (1.90 Kg)



Cap Cottage (Hip and Ridge) 12" x 12" (305 x 305 mm)



Rake Cover 1.5"x 4.25" x 79" (38 x 108 x 2006 mm)



Starter Strip 2.8125" x 2.25" x 79" (71 x 57 x 2006 mm)



Z-Bar Attachment 1.5" x 2.5" x 79" (38 x 64 x 2006 mm)



Z-Bar 5" x 79" (127 x 2006 mm) 4.8 lbs (2.18 Kg)



Head-Side-Wall 110° 3" x 3.5" x 79" (76 x 89 x 2006 mm)



Rake-Roof-To Wall 0.875" x 3.375" x 120" (22 x 86 x 3048 mm)



Flat Sheet 18" x 54" (457 x 1372 mm) 8 lbs (3.7 Kg)



Pipe-Jack 4-N-1 Base 18" x 18" (457 x 457 mm) Fits 1.25" to 4" pipes (32-100 mm) 1.86 lbs (0.85 Kg)



EmSeal Foam Tape Roll 1" x 0.75" x 19.68' (25 x 19 x 6000 mm) 1 lb (0.45 Kg)



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Pipe Sleeve 3/4" – 4" Dia. Pipes (19 – 100 mm) 1.72 lbs (0.78 Kg)



Barrier Foam Roll 1" x 6" x 20' (25 x 150 x 6096 mm) 3.5 lbs (1.6 Kg)



Pipe Jack Tray Used as base flashing around pipe-jacks. 14.5" x 15.5"



Char Foam Filter 3" x 76" (76 x 1930 mm)



Short Course Cleat 2" x 120" (50 x 3048 mm)



Touch-up Kit 1 Tube of Basecoat/Adhesive, 1 Bag of Stone Chips, Brush. 3.9 lbs/Box (1.76 Kg)



Direct-to-Deck Installation Method



PARTS & PIECES (Cont)



Sealant Tube Non-corrosive, single-component, silicone Sealant. 1 Tube, 12/Case Available in Black, Brown, Red.

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Basecoat 12-Pack (Adhesive) 12 Tubes/Case, 9.37 lbs/Box



Bulk Stone Chips 1 Bucket of stone chips - 25 lbs (11.3 Kg)

SCREWS



Shingle Panel Screws Carbon Steel 1.5" L x 0.25" HWH, (38 x 6 mm)

OPTIONAL: Carbon Steel or 410 Stainless Steel 2.0" L x 0.25" HWH (50 x 6 mm) 2.5" L x 0.25" HWH (63 x 6 mm) Available in Black, Red, Brown, Gold, White.



Valley Screws Carbon Steel (Dome Cap over rubber washer) 1.5" L x 0.25" HWH (38 x 6 mm) No color



Stitch Screws Carbon Steel 0.75" L x 0.25" HWH (19 x 6 mm) Available in Black, Brown, Gold, Grey, Red, White.

AVAILABLE COMPONENTS / ACCESSORIES



Westlake Royal[™] MetalSeal HT 36" x 72' (200 sq. ft.) (915 mm x 2.96 M) 70 lbs/Roll (31.7 Kgs)



Wakaflex[®] Universal Flashing 11" x 33' (290 mm x 10.07 M) Black, Brown, Terracotta



RidgeMaster[•] Plus Continuous ridge vent (used with Cottage Cap Only) 1" x 11" x 48" (25 x 280 x 1219 mm)



Quarrix[®] StormStop 7" Continuous ridge vent (used with Shingle Cap Only) 0.625" x 7" x 20' (16 x 178 x 6096 mm) 5 lbs/Roll (2.3 Kgs)



Quarrix° StormStop 11.25" Continuous ridge vent (used with Cottage Cap Only) 0.625" x 11.25" x 20' (16 x 286 x 6096 mm) 8 lbs/Roll (3.6 Kgs)

Weights are approximate.

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WALKING ON THE ROOF

Appropriate OSHA approved fall protection must be used when walking on roof panels. Place your feet over the front lip of the panels as shown in left image below. Avoid walking near the panel side-laps as shown in right image below.





SUGGESTED TOOLS

Cutter



39 lbs (17.7 Kg)







Cutter Blades (Top and Bottom) 54" x 43" x 35.25" (1372 x 1092 x 895 mm) 8 lbs/Set (3.63 Kg)







Direct-to-Deck Installation Method

FASTENING PATTERNS PER DESIGN PRESSURE*

Check with municipality prior to establishing method. Will need to determine: • Local Building Codes • Exposure Rating • Wind Uplift Requirements.



7) Seven (7) fasteners across the fastening flange.

GRANITE-RIDGE SHINGLE** Slope 3:12 or greater

ROOF DECK	The panels must be installed directly on solid or closely fitted minimum 15/32-inch (112 mm) thickness plywood, on solid or closely fitted wood structural panel sheathing, equivalent thickness spaced or closely fitted solid wood planking, or on spaced structural sheathing boards complying with the applicable code. Where spaced boards are used, additional structural sheathing boards must be attached to the roof framing as required to accommodate all panel and batten fastening locations.	
UNDERLAYMENT	Minimum one layer ASTM D1970, as needed to meet local building code requirements, installed per manufacturer's instructions.	
ATTACHMENT	Granite-Ridge Shingle installed with seven (7) #9-15 x 1-1/2 in. HWH corrosion resistance screws along back flange of panel as shown (max. 6-1/4 in. o.c. fastener spacing). Stagger side laps a minimum of 9 inches. Fasteners shall penetrate through the deck a minimum 3/4".	
MAXIMUM DESIGN PRESSURES	-110 psf Pressure calculated using 2:1 margin of safety per 1504.9	

*See QAICER or Texas Department of Insurances for design requirements for areas outside of Florida.

**See current Creek Lab Report for FBC design requirements to Florida Non-HVHZ and HVHZ (High Velocity Hurricane Zone) regions.



See Unified Steel GENERAL Code Approvals

Direct-to-Deck Installation Method



FIELD PANEL LAYOUT & FASTENING METHODS

GRANITE-RIDGE Shingle panels have a 2.0625" (52 mm) side-lap and must be staggered greater than 9" (229 mm). The panels incorporate a "Pittsburgh" interlock across the Fastening Flange of each panel that allows the nose of the panel above to fit into it and form a concealed fastened design. The panels are installed Direct-to-Deck and CANNOT be straight laid.



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GRANITE-RIDGE Shingle panels must be randomly staggered greater than 9" (229 mm) minimum to prevent pattering on the roof and CANNOT be straight laid.

GRANITE-RIDGE Shingle panels can only be laid LEFT to RIGHT



When installing any panel except the first one of each course, it is VERY important to **bend the shingle** at the horizontal step feature to approximately 100 degrees. This is to insure a better fitting joint and to prevent "fish-mouthing" of the side lip.



Fasten the panel using seven (7) fasteners into the fastener strip, 6" (152 mm) apart. Fasteners must penetrate the roof decking a minimum of 3/4" (19 mm).







EAVE PREP & INSTALL

EAVE / RAKE INTERSECTION



Place Starter Strip under the underlayment and extend 1" (25 mm) beyond the rake board. Cut and bend over the rake corner, as shown. Fasten every 16" (406 mm) o.c. Overlap Starter Strip joints 2" (50 mm).



At the hip, place right Starter Strip on top of the left Starter Strip and extend it 1" (25 mm) beyond the eave. Mark cut and bend lines. Cut off top overhang area and bend over the corner.

HIP INTERSECTION



Continue fastening every 16" (406 mm).



Check local code for fastener pattern as some regions require additional fastening.

PANEL / STARTER STRIP INTERLOCK DETAIL



Insert nose interlock of the GRANITE-RIDGE Shingle panel into the Starter Strip.

STARTER STRIP OVERLAP DETAIL



Cut a 0.5" x 2" (13 x 50 mm) in the back of the left Starter Strip. Cut both top and bottom front overhang of the right Starter Strip the same size.



Insert the left Starter Strip into the right, as shown, and fasten.

RAKE PREP & INSTALL

NOTE: Assemble the Rake/Roof-to-Wall and Rake Cover before installing panels.



Install Rake/Roof-to-Wall metal along the rake. Extend Rake/Roof-to-Wall 1/2" (13 mm) minimum beyond Starter Strip. Fasten in the outside channel 16" (406 mm) o.c., as shown.



Place Rake Cover on Rake/Roof-to-Wall and mark cut and bend lines, as shown.



Lap Rake/Roof-to-Wall 2" (50 mm) minimum to prevent leakage through seams.



Fit Rake Cover onto Rake/Roof-to-Wall and fasten 16" (406 mm) o.c. into the rake rafter board.









RAKE / GABLE PANELS INSTALL

LEFT SIDE RAKE PANELS



First course panel ONLY: Cut the panel's Nose Interlock and flatten the nose section the width of the Rake/Roof-to-Wall, to allow drainage of the rake detail.

RIGHT SIDE RAKE PANELS



Insert first course panel into Rake/Roofto-Wall and interlock with the Starter Strip. Fasten panel and continue installation across the roof.

Each Panel that is inserted into Rake/Roof-to-Wall:

Cut the top corner ("dog-ear") of the panel in 45-degree angle. After cutting the "dog-ear" make sure the back hem is open and will allow the panel above to fit tight.



Measure Rake panel cut from the panel overlap to the edge of the Roof/Rake-to-Wall.



Apply measurements to the full panel, mark and cut.



Cut the panel's nose interlock and backflatten the nose section the width of the Rake/Roof-to-Wall. Cut the top corner. Insert rake panel cut into Rake/Roof-to-Wall and interlock with the Starter Strip.

PANELS INTERLOCK DETAIL

Top Panel

I ower Pane

Water Channel Grooves



Fasten 1st row panel cuts, as shown.



Subsequent courses of panels hook onto the rear of the panel beneath. Ensure that the shingle courses are straight and parallel to each other, and that the interlock is fully seated. Not doing so may lead to joint failure. Lower panel water channels help reduce sideward migration of water at the joint. Top panel should lap fully to seat into designed groove of lower panel.



When installing any panel except the first one of each course, it is VERY important to bend the shingle at the horizontal step feature to approximately 90 degrees. This is to insure a better fitting joint and to prevent "fishmouthing" of the side lap. Test fit the side lap. If the lap is not tight, remove and hand work the seam until the fit is tight and secure.







VALLEY PREP & INSTALL

VALLEY WITHOUT TRAY



Overhang it at the eave 1/2" (13 mm) minimum. Fasten Valley with washer and grommet screws in the outside locations a minimum of 24" o.c. (610 mm) up both sides.



Position Valley Five "V" at the center of the valley. Place half a Flat Sheet under the Valley. Extend Flat Sheet a minimum of 1" (25 mm) past fascia. Mark, cut and bend, as shown.

VALLEY WITH EXIT TRAY



Hem both sides of the folded Flat Sheet to fit around outside edges of the Valley.



Fit the Exit Tray at the fascia. Apply Sealant, as shown.



Insert Valley Five "V" into the Valley Exit. Fasten Valley with washer and grommet screws in the outside locations a minimum of 24" o.c. (610 mm) up both sides.



When fastening through the valley metal, fasteners must have a rubber washer covered by metal cap to ensure a seal around the fastener location.

WAKAFLEX[®] FLASHING INSTALL ON VALLEY

OPTIONAL



Where two valleys meet at the ridge line, Wakaflex[®] universal flashing can be used to seal the intersecting pieces of valley.

The following necessary steps are provided to prevent water migration under the roof tile.

- 1. Cut Wakaflex^e of equal width to form on top of the 2 pieces of valley metal extended minimum 6" (153 mm) on both sides.
- 2. Remove the protective film exposing the butyl strip and form on top both sides of valley metal.
- 3. Ensure that the top upper side of the Wakaflex[®] is integrated into underlayment installed to prevent moisture from penetrating roof deck.





Direct-to-Deck Installation Method



VALLEY PANELS INSTALL

LEFT SIDE



Left Side: Measure from the side-lap reference point to the center rib of the Valley.



Apply measurements to the full panel and cut.



Each Valley Panel: Cut the top corner ("dog-ear") of the panel in 45-degree angle. After cutting the "dog-ear" make sure the back hem is open and will allow the panel above to fit tight.

Underside

1" - 2" (25-50 mm)

Second and All Following Valley Panel

Rows: At the nose interlock on the

underside of the panel cut the V-notch

approx. 1"-2" (25-50 mm) from the edge

of the valley cut. This prevents water

migration under the panel and across the

"V" Notch Offcut

6

roof.



First Valley Panel Row Only: Cut and notch the nose interlock the width of the side of the Valley Five "V", to allow free water flow to exit the valley.



Install first row valley panel onto the Valley Five "V" and fasten, keeping away from the no-fastening zone.



RIGHT SIDE



Right Side: Place full panel aligning with the eave, mark the line along the center rib of the Valley Five "V" and cut. **Repeat Step 3-4 above.**

Char Foam Filter

Panel



Install right side valley panel onto the Valley Five "V" and fasten, keeping away from the no-fastening zone. **Repeat Step 6** for the second and following valley panel rows.

Valley Center Cover is fastened with corrosion resistant stitch screws to each course of panels.



Do not penetrate the Valley Metal, use Stitch screws to secure the Valley Center Cover.

VIDEO ONLINE

VALLEY PANELS INSTALL

Center Cover

Valley Five 'V'

VALLEY CENTER COVER INSTALL



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After all valley cut sections are installed, place Char Foam Filter (debris guard) along the center of the Valley. Install Valley Center Cover on top.

Lap Valley Center Cover a minimum of 2" (50 mm).

Direct-to-Deck Installation Method



HIP PANELS INSTALL - Barrier Foam Method

LEFT SIDE HIP PANELS



Measure hip panels from the panel's side lap to the hip center line, as shown.

RIGHT SIDE HIP PANELS



Place full panel aligning with the eave, mark the center line on the panel and cut.



Apply measurements to the full panel, mark and cut.



Fit panels to the hip center line and fasten.



Continue hip panels installation.



Fit panels to the hip center line and fasten.



Complete first row before starting second row hip section. Continue hip panels installation.

OPTIONAL

HIP PANELS INSTALL - Overlap Method

The overlap method requires a 2" (50 mm) lap on **only one side** of the hip. One panel is cut along the hip center line, the other panel uses an overlap.



Position full panel, aligning with the eave. Mark the hip center line on the panel as bend line. Add 2" (50 mm) and mark as cut line.



Cut, bend and install hip panel, as shown.



HIP PANELS INSTALL



Direct-to-Deck Installation Method

RIDGE PANELS INSTALL - Barrier Foam Method



Measure ridge panels, as shown.



Install panels across ridge. Secure each end and the center of the ridge panel with fasteners.



Apply measurements to the full panel and cut.



Install Barrier Foam roll across the ridge.

RIDGE PANELS INSTALL - Overlap Method

OPTIONAL

The overlap method requires a 2" (50 mm) lap on **only one side** of the ridge. One panel is cut along the ridge center line, the other panel uses an overlap.



Measure ridge panels, as shown in Step 1. Apply measurements to the full panel and mark as Bend Line. Add 2" (50 mm) and mark as Cut Line. Cut and bend the ridge cut panel.



Install ridge panels overlapping, as shown.



RIDGE PANELS INSTALL



Direct-to-Deck Installation Method

RIDGE VENT INSTALL WITH SHINGLE CAP (Quarrix® Rigid Roll® shown)





Measure ridge panels from the interlock flange to the edge of the roof deck.



Apply the measurements and mark the Bend Line. Add 1" (25 mm) for the Cut Line.



Create the Hem across each ridge panel. Install ridge panels, as shown.



Install Ridge Panels. Place the Quarrix Rigid Roll and mark the edge distance. Apply a bead of Sealant (shown) or EmSeal along the marked line.



Install Quarrix Rigid Roll ridge vent across the ridge and fasten.



At the rake and ridge intersection, cut and fit Shingle Cap into the Rake Cover, as shown, or on top of the Rake Cover. Fasten through the cap, Quarrix^{*} Rigid Roll, panel and into the roof deck, with two fasteners per cap.



Continue Shingle Caps installation across the ridge.





RIDGE VENT INSTALL WITH SHINGLE CAP



Direct-to-Deck Installation Method

RIDGE VENT INSTALL WITH COTTAGE CAP (RidgeMaster® Plus shown)





Install ridge panels. Apply EmSeal Tape (shown) or a bead of Sealant 5" (127 mm) max. apart from the ridge center line.



Install ridge vent.



At the rake and ridge intersection, install Cap Cottage over the Rake Cover and fasten with Stitch Screws, so you don't penetrate the pan under the panels.



Any fasteners that penetrate through the top of the Cottage Caps must be sealed and stone-chipped.



Install next Cottage Cap. Fasten each cap through the nose in an angel into the decking, 1.5" (38 mm) from the edge of the cap on each side. Continue Cottage Caps installation.



Trim Cap Screws should be of sufficient length to penetrate a minimum of 3/4" (19 mm) into the roof decking.





RIDGE VENT INSTALL WITH COTTAGE CAP



SHINGLE CAP INSTALL ON HIP



Install a strip of Barrier Foam or approved weather block over the center line of the hip.



Position Shingle Cap on the roof so the hip center line is covered by the nose of the cap. Mark the panel line on the underside of the cap.



From the scribed panel line, add two more lines 3/4" (19 mm) apart so the cap now has three lines marked on the underside.



Cut a "V" notch out of the cap. Using hand seamers, bend the cap to create a 3-D nose section that will hook onto the front edge of the shingle around the hip corner.



The finished Hip Cap Starter piece will have a 3-D look and a nose that is approximately 1" (25 mm).



Install the Hip Starter Cap previously formed, interlocked over the nose of the panels, at the hip corner. Fasten through cap and Barrier Foam into the roof decking.

Use a Chalk Line aligned with the Starter Cap edge to ensure the following caps installed straight.



Fit each cap similar to panels, making sure the nose interlock is secure. Fasten each cap using two screws.



Continue this procedure with each cap up the hip to the ridge intersection.







Direct-to-Deck Installation Method



SHINGLE CAP INSTALL ON HIP / RIDGE INTERSECTION - BARRIER FOAM METHOD



At the ridge intersection, where two hips meet, install final hip cap and fasten.



Overlap hip caps. Mark and cut top hip cap along the center line to create a clean finish.



Apply a bead of Sealant along the center line before installing trimmed top cap to insure weather block.



Fit ridge cap to overlap hip caps, as shown. Mark bend lines, V-notch and bend to create 3-D look.



Fasten through the cap, barrier foam, panel and into the roof deck, with two fasteners per cap.

Trim Cap Screws should be of sufficient length to penetrate a minimum of 0.75" (19 mm) into the roof decking.

SHINGLE CAPS INSTALL ON RAKE/RIDGE



At the rake and ridge intersection, cut and fit Cap Shingle into the Rake Cover. Fasten through the cap, barrier foam, panel and into the roof deck, with two fasteners per cap.



Continue Caps Shingle installation across the ridge. Fasten through the cap, barrier foam, panel and into the roof deck, with two fasteners per cap.





Direct-to-Deck Installation Method



CHIMNEY / SKYLIGHT / HEADWALL / SIDEWALL DETAIL



Measure, cut and fold up panel 2" (50 mm) minimum.



Complete this step across the front of the headwall. Apply a bead of Sealant across the panel.



Measure, cut and fold up Head-Side-Wall flashing. Install and fasten, as shown, on both sides.



Measure, cut, fit and fasten Rake/Roof-to-Wall flashing.



On sloped side-wall areas notch and overlap Rake/Roof-to-Wall 2" min and apply Sealant to each joint.



Fasten Z-Bar Attachment at 16" (406 mm) o.c. as shown. Apply a bead of Sealant along top of Z-Bar Attachment & wall or Headwall/Chimney.



Fit the next course panel up from the bottom of the headwall and insert it into the Rake/Roof-to-Wall flashing.

NOTE that the nose interlock of the panel must be notched to the width of the Rake/ Roof-to-Wall, and the top corner cut in 45 degree angle (dog ear) before inserting into the Rake/Roof-to-Wall.



Measure and cut the top left and right panel on either side of the item being flashed.



Measure the width of the Headwall/ Chimney. Using the Flat Sheet, add 4" (100 mm) to the measurement on each side and cut the section. Bend it up 4" minimum, forming a saddle flashing. Bend 4"x 4" triangles over, as shown.



Apply Sealant along the back of the panel behind the Headwall/Chimneyand down the corners of the saddle, as shown, and set saddle onto the Sealant.

Direct-to-Deck Installation Method



CHIMNEY / SKYLIGHT / HEADWALL / SIDEWALL DETAIL (cont.)



The saddle fits down onto the previously installed top panel sections and the corners ensure drainage away from the top corners.



Cut and fit a section of Short Course Cleat across the back of the saddle, aligned with the fastening flange of the panels on either side of the item being flashed. Embed the Short Course Cleat in a bead of Sealant. Fasten the Short Course Cleat every 6" (152 mm).



Install a full panel, lapped and interlocked correctly, to the adjacent panels and interlocked with the Short Course Cleat.

SHORT COURSE DETAIL

Always start panel laying from the longest eave length and work towards the short course area where the eave line steps down. Work down to keep panels correctly interlocked and aligned over the short course area.



Short Course panels shall be applied to the lowest eave.

Mark a line onto the short course panels, **aligning with the longest section of Starter Strip**. Apply a bead of Sealant across the chalk line.



Set Short Course Cleat in Sealant and fasten every 6" (152 mm).



Fit the full panel from the longer roof section and ensure its interlocked into the Short Course Cleat.



The completed Short Course detail should look almost seamless from the rest of the field.



VIDEO ONLINE

SHORT COURSE DETAIL





PIPE VENT INSTALL - SANDWICH METHOD



Cut a hole in the Pipe-Jack Tray to fit over the pipe and interlock into the back flange of the panel below.

Apply a bead of Sealant in an upside "U" shape to allow for drainage.



Trim the Pipe-Jack flashing as needed to fit between the hemmed sides of the Pipe-Jack Tray. Install Pipe-Jack onto the pipe.



Cut a hole in the cover panel tight to the Pipe-Jack cone.

Cut and fold the nose interlock approx. 2" (50 mm) on either side of the pipe hole to allow for drainage.



Install the cover panel, ensuring the nose interlock and side lap are fully engaged.



Apply Sealant and stone chips using Unified Steel[®] Touch-Up Kit as needed. Install a Pipe Sleeve to finish the detail.



Install and fasten the Pipe-Sleeve through the back of the sleeve into the pipe. Make sure to fasten at least 2" (50 mm) above the Pipe-Jack cone.









PIPE VENT INSTALL - SPLIT COURSE METHOD



Measure and cut lower panel to fit around the vent pipe. Install panel.



Place Pipe Jack on the panel to the side of the pipe and make 1/2" (13 mm) cuts in line with the Interlock Flange of the panel. Hem the edges, as shown.



Apply Sealant to the area where the Pipe-Jack will be installed. Install Pipe-Jack and fasten, as shown.



Install full panel to the side of the pipe. Mark the top panel where the flashing cone base will align and cut out. Mark the edges of the Pipe-Jack.



On the back of the panel snip the Nose-Interlock where it was marked and flatten it, as shown, to allow water flow.



Fasten panel as regular field panel. Apply Sealant and stone chip around the flashing cone and Pipe-Jack fasteners.



Install Pipe Sleeve and fasten from the back into the PVC pipe to finish the detail.



PIPE INSTALL - SPLIT COURSE

Direct-to-Deck Installation Method



SPECIAL TRANSITION DETAILS





Direct-to-Deck Installation Method

DORMER VALLEY EXIT DETAIL

Use either Unified Steel stone coated Flat Sheet or Wakaflex[®] flashing to create a valley exit piece with hemmed edges for the valley to exit onto.



Flatten back flange against the roof deck. Apply Sealant.



Install valley panel cut onto the Valley. Note that the nose interlock hook of the panel must be notched to allow drainage of the valley.



Form the stone coated Flat Sheet as an extension and exit tray with hemmed edges, as shown. Apply a bead of Sealant.



Continue panel installation.



Fit Valley metal over and onto the formed exit tray and embed the Valley into the Sealant.



Install Valley Center Cover to complete detail.

VALLEY EXIT WITH WAKAFLEX® FLASHING

OPTIONAL

Where a typical standard metal valley flashing transitions onto an adjoining roof plane, a Wakaflex flexible extension must be added to make certain that moisture flows from the valley and onto the courses of roof tiles below. The following necessary steps are provided to prevent water migration under the roof panels.



- 1. Cut Wakaflex of equal width of the valley metal plus additional amount to allow. Wakaflex to cover 1" minimum past the highest portion of a panel on both sides.
- 2. With top surface facing up fold forward completely 6" one end of the Wakaflex (butyl strip side is now facing upwards) place under the lower end of the valley metal.
- 3. Remove the 5-1/2" strip protective release film to expose butyl, press butyl strip firmly onto the bottom side of valley metal. This will prevent any windblown moisture under the valley metal.
- 4. Form the other portion of Wakaflex on top of the panel, remove the protective release film and form Wakaflex to top side of profile panel ensuring a complete bond.



Wakaflex should be painted or stone coated to match the panel color.



DORMER VALLEY EXIT DETAIL



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FINISHING TOUCHES



After completing the roof installation, check the overall job for areas where the coating is scuffed or marked during install. Apply Unified Steel[®] adhesive and stone chip to provide a complete stone coat finish.



FINISHING TOUCHES



NOTES:



Metal Roofing, Nationwide

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