TEXAS DEPARTMENT OF INSURANCE

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PRODUCT EVALUATION Effective January 1, 2006
RC-133

The following product has been evaluated for compliance with the wind loads specified in International Residential Code (IRC) and the International Building Code (IBC). This product shall be subject to reevaluation 3 years after the effective date.

This product evaluation is not an endorsement of this product or a recommendation that this product be used. The Texas Department of Insurance has not authorized the use of any information contained in the product evaluation for advertising, or other commercial or promotional purpose.

This product evaluation is intended for use by those individuals who are following the design wind load criteria in Chapter 3 of the IRC and Section 1609 of the IBC. The design loads determined for the building or structure shall not exceed the design load rating specified for the products shown in the limitations section of this product evaluation. This product evaluation does not relieve a Texas licensed engineer of his responsibilities as outlined in the Texas Insurance Code, the Texas Administrative Code, and the Texas Engineering Practice Act.

5-VEE Roof Panels manufactured by

Central Texas Metal Rollforming, Inc.
830 Sagebrush Drive
Austin, Texas 78758
(512) 452-1515

is acceptable in designated catastrophe areas along the Texas Gulf Coast when installed in accordance with the manufacturer's installation instructions and this product evaluation.

PRODUCT DESCRIPTION

Central Texas Metal Rollforming 5-VEE roof panels are manufactured from 26 gauge coated steel conforming to ASTM A792, Grade E, with a minimum yield strength of 80,000 psi and 24 gauge coated steel conforming to ASTM A792, Grade 40, with a minimum yield strength of 50,000 psi. The panels have an AZ 55 hot-dip aluminum zinc alloy coating conforming to ASTM A792.

The panels are 24 inches in width and have a nominal rib height of $\frac{1}{2}$ inch.

LIMITATIONS

Design Wind Pressure: For installation of the 5-VEE roof panels to nominal $\frac{19}{32}$ inch plywood panel decks, design wind pressure limitations are specified in Table 1.

Roof Deck: The roof deck shall be minimum nominal $\frac{19}{32}$ inch plywood. All plywood butt joints must be sealed with caulk or with one-part urethane sealant.

Roof Deck Attachment: The roof deck shall be secured to the roof framing to resist the required design pressures.

LIMITATIONS (continued)

Installation Over an Existing Roof Covering: Installation over an existing roof covering is limited to a maximum of one existing layer of composition shingles, wood shingles or shakes, built-up roofing, or roll roofing. The thickness of the plywood deck shall comply with the requirements of this evaluation report. Note: Inspection of the existing roof deck must be made before installing the roof panels. The condition of the existing roof deck must be acceptable to receive the roof panels before the roof panel installation can proceed.

Roof Slope: The 5-VEE roof panels shall not be installed on roofs with a roof slope less than $\frac{1}{2}$:12.

INSTALLATION INSTRUCTIONS

General Installation Requirements:
The installation of the panels shall be limited to extending two inches beyond the plane of the facia board.

Panel Installation Requirements

Panels: Panels shall be attached to the roof deck in accordance with Table 1. Refer to Figures 1-12 in this evaluation report for illustrations of the attachment details.

Table 1

Attachment of 5-VEE Roof Panel to nominal $\frac{19}{32}$ inch plywood panel deck:

Wind Pressure (psf)	Attachment of Roof Panel to $\frac{19}{32}$ inch Thick Plywood Deck	
	Fastener Into Roof Deck	Fastener Spacing
-52.5	One (1) No. 10-16 x 1 $\frac{1}{2}$ " @ 2"-9"-2"-9"	36" on center

Underlayment: Minimum one layer of No. 30 (Type II) asphalt felt shall be used. The underlayment used shall comply with ASTM D 226, ASTM D 4869, or ASTM D 1970. The felt shall be installed with minimum 6-inch side laps and 3-inch head laps. The underlayment shall be applied with corrosion resistant fasteners in accordance with manufacturer's installation instructions. Fasteners shall be applied along the overlaps not farther apart than 36 inches on center. **Note:** An optional radiant barrier may be installed beneath the panels in conjunction with the underlayment.

Anchorage:

Panels: The 5-VEE roof panels shall be secured to the plywood deck in accordance with Table 1 with minimum #10-16 x 1 $\frac{1}{2}$ inch Kwikseal Woodbinder screws, manufactured by Sealtite. If the panels are laid directly over an existing roof covering, then minimum #10-12 x 2 inch Kwikseal Woodbinder screws, manufactured by Sealtite, are required. Refer to Figure 1 for an illustration of the fastening pattern. The fasteners shall be long enough to penetrate completely through the wood structural panels with a minimum exposure of $\frac{1}{4}$ inch below the underside of the wood structural panels.

Ridge Flashing: The ridge flashing shall be installed as shown in Figures 2 and 3.

Valley Trim: The valley trim shall be installed as shown in Figure 4.

Eave Trim: The eave trim shall be installed as shown in Figure 11.

Gable/Rake Trim: The gable/rake trim shall be installed as shown in Figure 12.

INSTALLATION INSTRUCTIONS (continued)

Alternative Fasteners: Substitution of equivalent fasteners shall meet the following requirements:

#10-16 Kwikseal Woodbinder screws, manufactured by Sealtite.

- Ultimate withdrawal (pullout) $\geq$ 592 lbs. in $^{19}/_{32}$ inch plywood

Note: The manufacturer's installation instructions shall be on the job site during the installation. All fasteners shall be corrosion resistant as specified in the International Residential Code (IRC), the International Building Code (IBC), and the Texas Revisions.

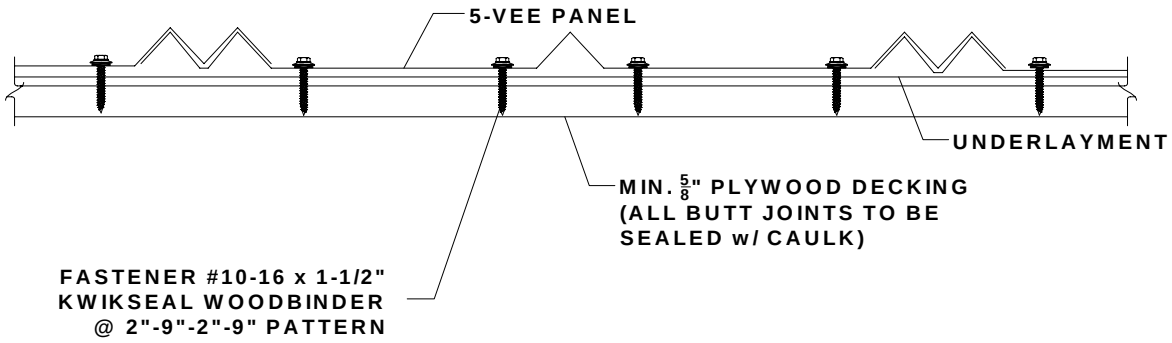
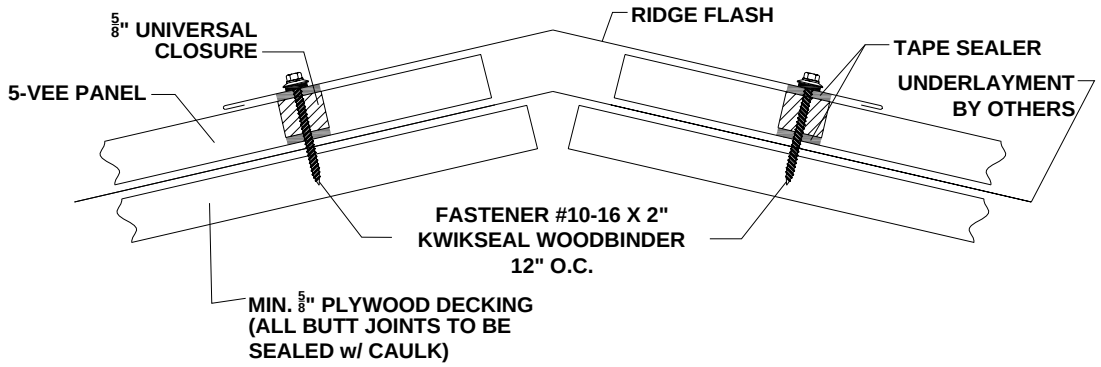


Figure 1: Fastener Pattern



Alternative Ridge

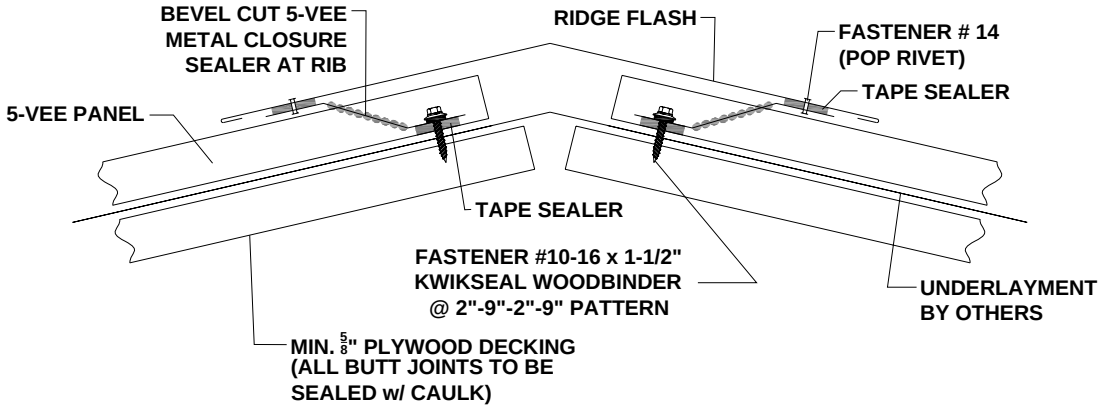


Figure 2: Ridge Details

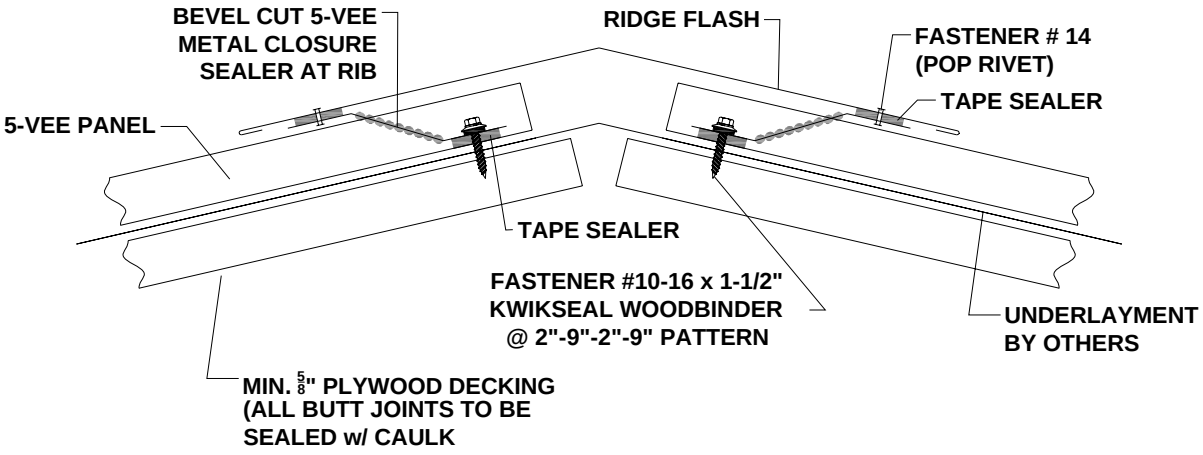


Figure 3: Hip Detail

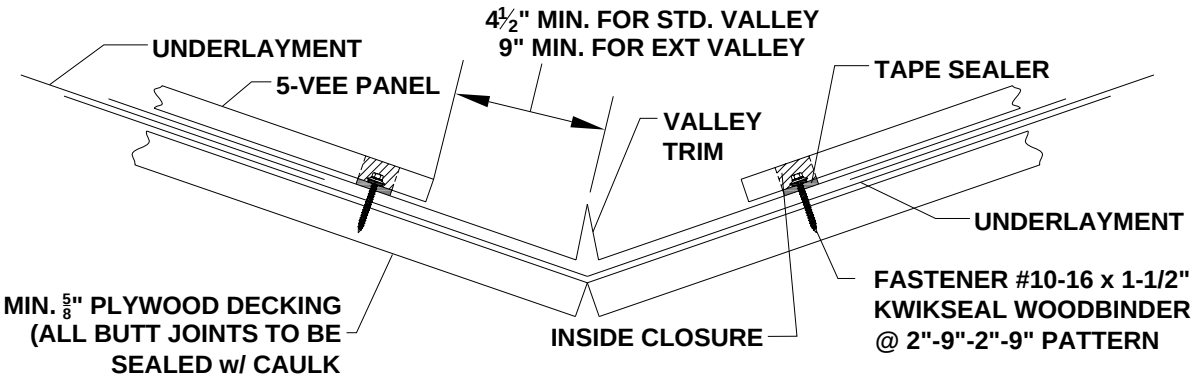


Figure 4: Valley Detail

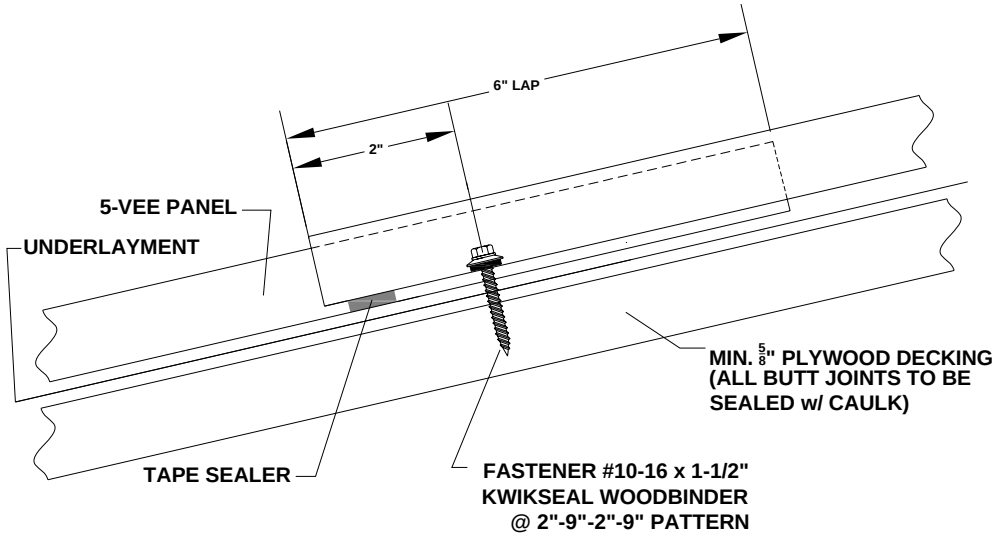


Figure 5: Endlap Detail

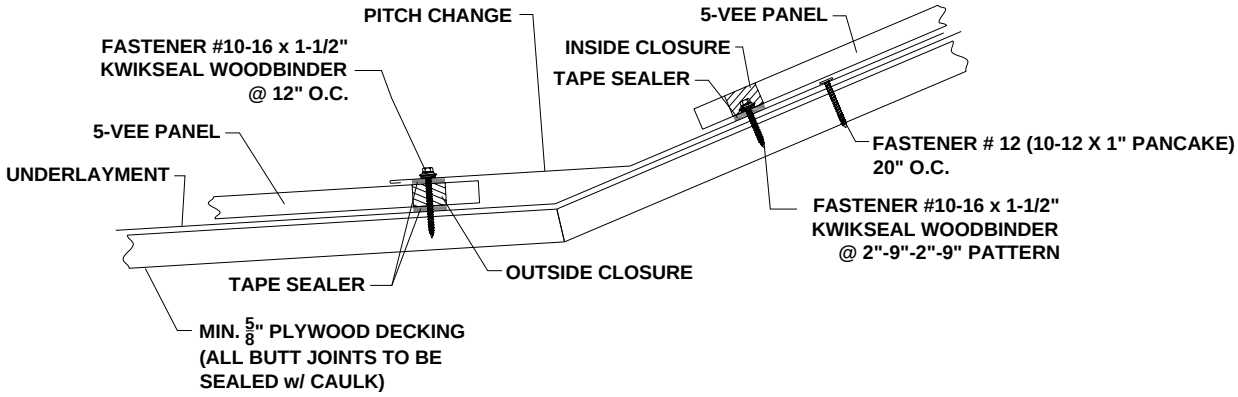


Figure 6: Pitch Change Detail

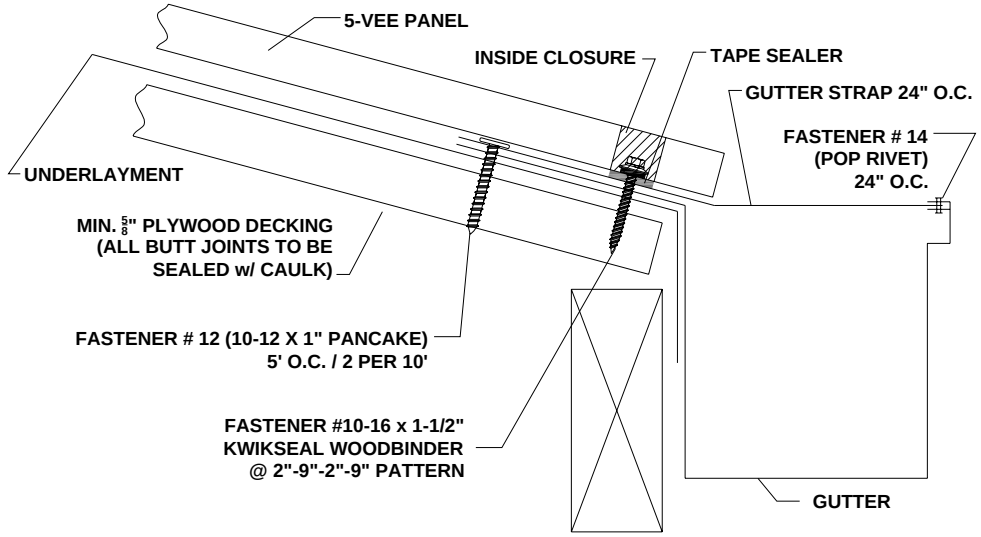


Figure 7: Gutter Detail

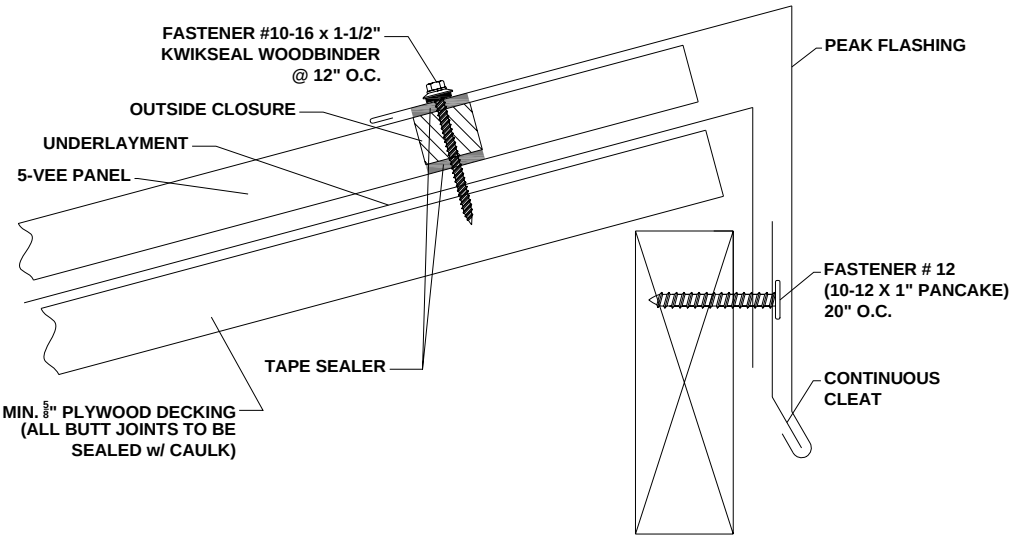
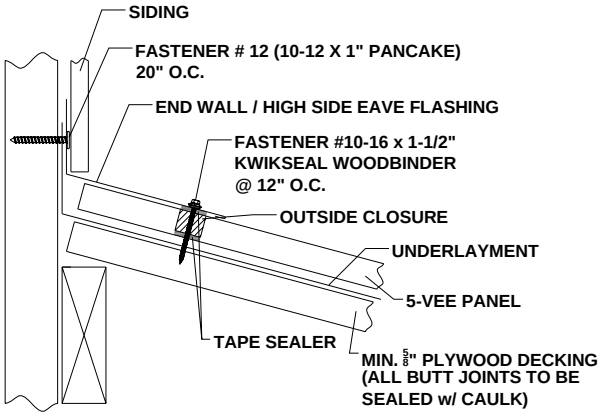
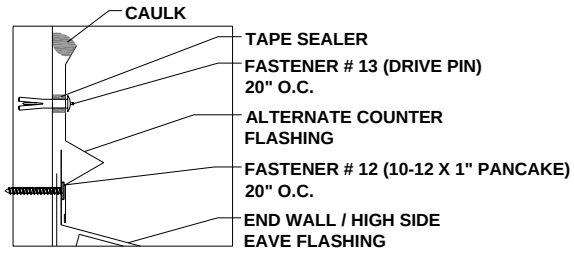


Figure 8: Peak Flashing Detail



Finishing Off Module



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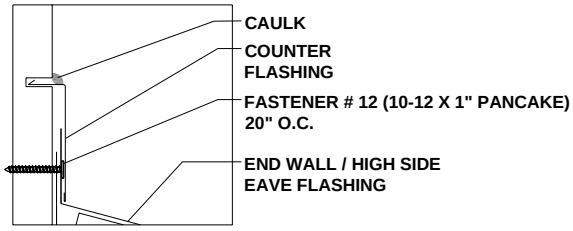
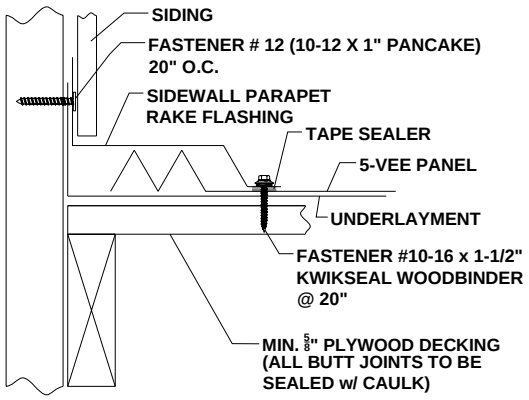


Figure 9: Endwall Parapet Highside Eave Flashing Detail



Counter Flashing **Alternative Counter Flashing**

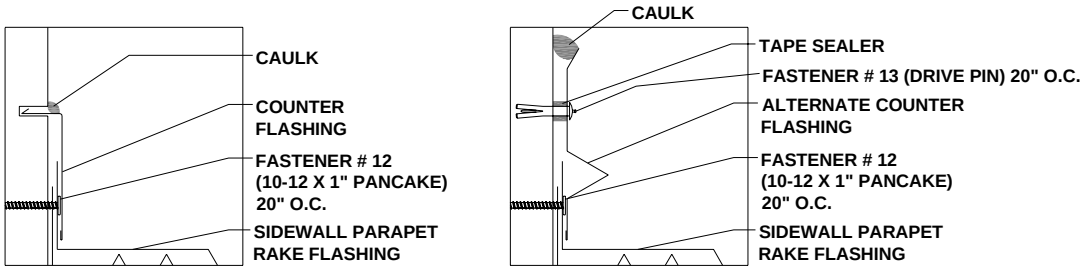
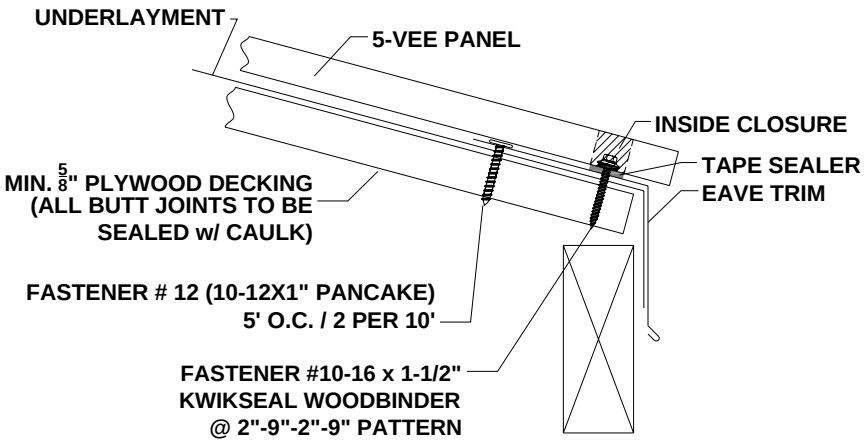


Figure 10: Sidewall Parapet Rake Flashing Detail



Alternative Eave Detail

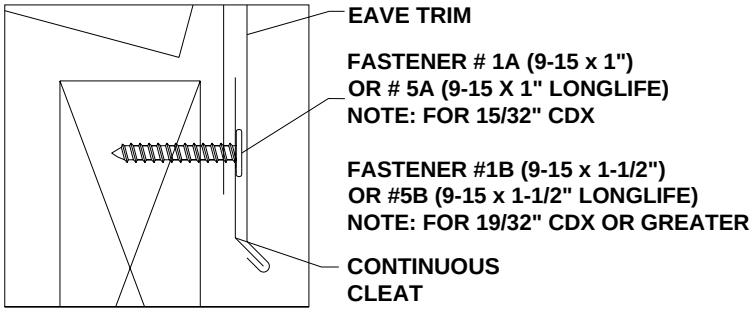
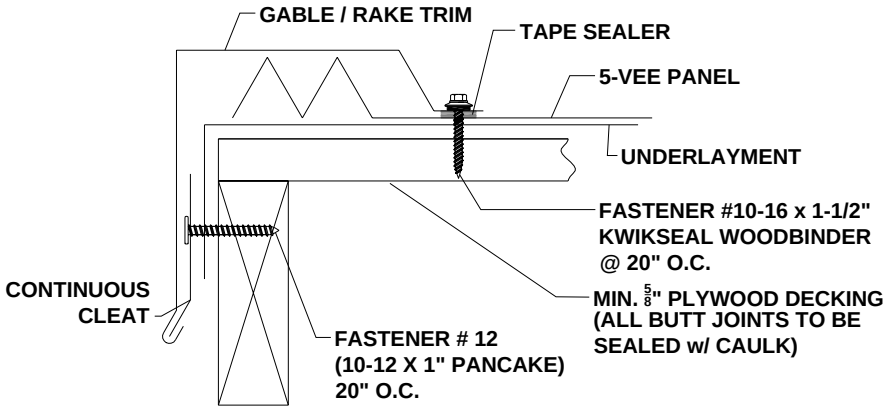


Figure 11: Eave Detail

Gable / Rake Trim



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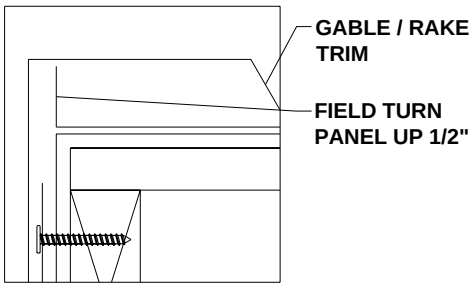

Alternative Finishing Off Module

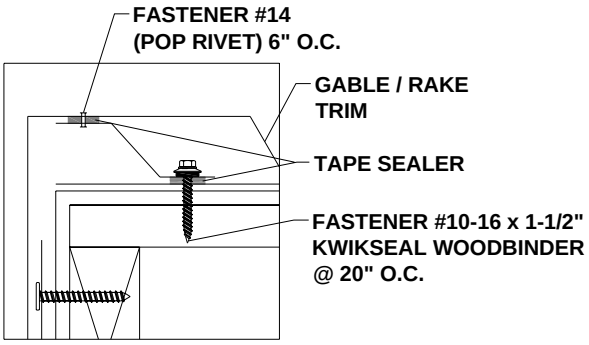

Figure 12: Gable/Rake Detail