

TEXAS DEPARTMENT OF INSURANCE

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PRODUCT EVALUATION RC-175

Effective Date: September 1, 2013

*The following product has been evaluated for compliance with the wind loads specified in the **International Residential Code (IRC)** and the **International Building Code (IBC)**. This product shall be subject to reevaluation **September 2017**.*

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.

26 Gauge PBR Metal Roofing Panels Installed Over a Plywood Deck manufactured by

Triple S Steel Supply Co.
6000 Jensen Drive
Houston, Texas 77026
Telephone: (800) 231-1034

will be accepted for use in areas along the Texas Gulf Coast when installed in accordance with the manufacturer's installation instructions and this product evaluation.

PRODUCT DESCRIPTION

The PBR metal roofing panels are minimum 26 gauge galvalume steel with an optional paint finish. The 26 gauge metal roofing panels have an actual coverage of 36". Each metal roofing panel has ribs that are 1 1/4" deep. The metal roofing panels conform to ASTM A792, with an 80,000 psi yield point. The metal roofing panels can be painted with CERAM-A-STAR 950 by Akzo Nobel.

LIMITATIONS

Roof Decking: The PBR metal roofing panels shall be installed over minimum 1 5/32" plywood decking.

New Roof Deck Attachment: The roof decking shall meet or exceed the uplift requirements of the International Residential Code or International Building Code and shall be installed as required for resistance to lateral wind loads.

Design Wind Pressures: The design pressure uplift load resistance shall be as specified in Table 1.

Table 1

Attachment of minimum 26 gauge PBR metal roofing panels to minimum 1 5/32" plywood decking

| Design Wind Pressure | Fastener Pattern | Fastener Spacing |
|----------------------|------------------|---------------------|
| -52.5 psf | 12"-12"-12" | 24 inches on center |
| -123.5 psf | 7"-5"-7"-5"-7" | 18 inches on center |

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 applied over an existing, solid roof deck of minimum $1\frac{5}{32}$ " plywood. Note: Inspection of the existing roof deck must be made prior to the installation of the roof panels. The condition of the existing roof deck must be acceptable to receive the metal roofing panels before the metal roofing panel installation proceeds. NOTE: Underlayment is not required to be installed.

Roof Slope: The metal roofing panels may be installed on roofs with a roof slope as low as $\frac{1}{2}$:12 if sealant is used on the panel side laps. If sealant is not used on the panel side laps, then the minimum roof slope is 3:12.

INSTALLATION INSTRUCTIONS

General: The PBR metal roofing panels shall be installed in accordance with the manufacturer's recommended installation instructions and this evaluation report.

Panels: The PBR metal roofing panels shall be secured to the roof deck as specified in Table 1 and in accordance with this section. Refer to Figure 1 for an illustration of the required fastener pattern.

Underlayment: A minimum of one layer of No. 30 (Type II) asphalt felt shall be used. The underlayment used shall comply with one or more of the following: ASTM D 226, ASTM D 4869, or ASTM D 1970. The underlayment shall be installed with 6-inch side laps and 3-inch end laps. The underlayment shall be applied with corrosion-resistant fasteners in accordance with the manufacturer's installation instructions. Fasteners shall be applied along the overlaps not farther apart than 36 inches on center.

Attachment of Metal Roof Panels to Roof Deck: The PBR metal roofing panels shall be secured to the roof deck as follows:

Roofing Panels: Minimum No. 9-15 x $1\frac{1}{2}$ " long, HWH Woodgrip screws with a sealing washer. The fasteners shall be long enough to ensure a minimum penetration of $\frac{1}{4}$ " below the roof deck. (Note: If the metal roofing panels are installed over an existing roof covering, then the fastener length shall be increased so that the fasteners are long enough to ensure a minimum penetration of $\frac{1}{4}$ " below the existing plywood roof decking). A line of fasteners are to be installed as specified in Table 1. The spacing of the line of fasteners along the length of the panel shall be as specified in Table 1. Refer to Figure 1 of this evaluation report for an illustration of a fastener pattern (the illustration shows the 12"-12"-12" pattern).

Panel Side Laps: Minimum $\frac{1}{4}$ "-14 x $\frac{7}{8}$ " Lap Tek screws with a sealing washer. The fasteners shall be spaced 20 inches on center along the length of the side lap.

Panel Ends and End Laps: Minimum No. 9-15 x $1\frac{1}{2}$ " long HWH Woodgrip screws with a sealing washer. The fasteners shall be long enough to ensure a minimum penetration of $\frac{1}{4}$ " below the roof deck. (Note: If the metal roofing panels are installed over an existing roof covering, then the fastener length shall be increased so that the fasteners are long enough to ensure a minimum penetration of $\frac{1}{4}$ " below the existing plywood roof decking). A line of fasteners in a 7"-5"-7"-5"-7" pattern are to be installed. Refer to Figure 1 of this evaluation report for an illustration of the fastener pattern.

Panel Edges: Minimum No. 9-15 x $1\frac{1}{2}$ " long HWH Woodgrip screws with a sealing washer. The fasteners shall be long enough to ensure a minimum penetration of $\frac{1}{4}$ " below the roof deck. (Note: If the metal roofing panels are installed over an existing roof covering, then the fastener length shall

be increased so that the fasteners are long enough to ensure a minimum penetration of $\frac{1}{4}$ " below the existing plywood roof decking). Along the edge of a panel, the fasteners shall be spaced the same spacing as for the line of fasteners in Table 1.

Trims, Closures, and Accessories: Components, such as the eave trim, rake trim, ridge trim, hip trim, and valley trim shall be installed as required by the manufacturer.

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

No. 9-15 Woodgrip with a sealing washer, manufactured by SFS

- Ultimate withdrawal (pullout) \geq 326 lbs. in minimum $\frac{15}{32}$ " plywood.

Note: The manufacturer's installation instructions shall be available 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.

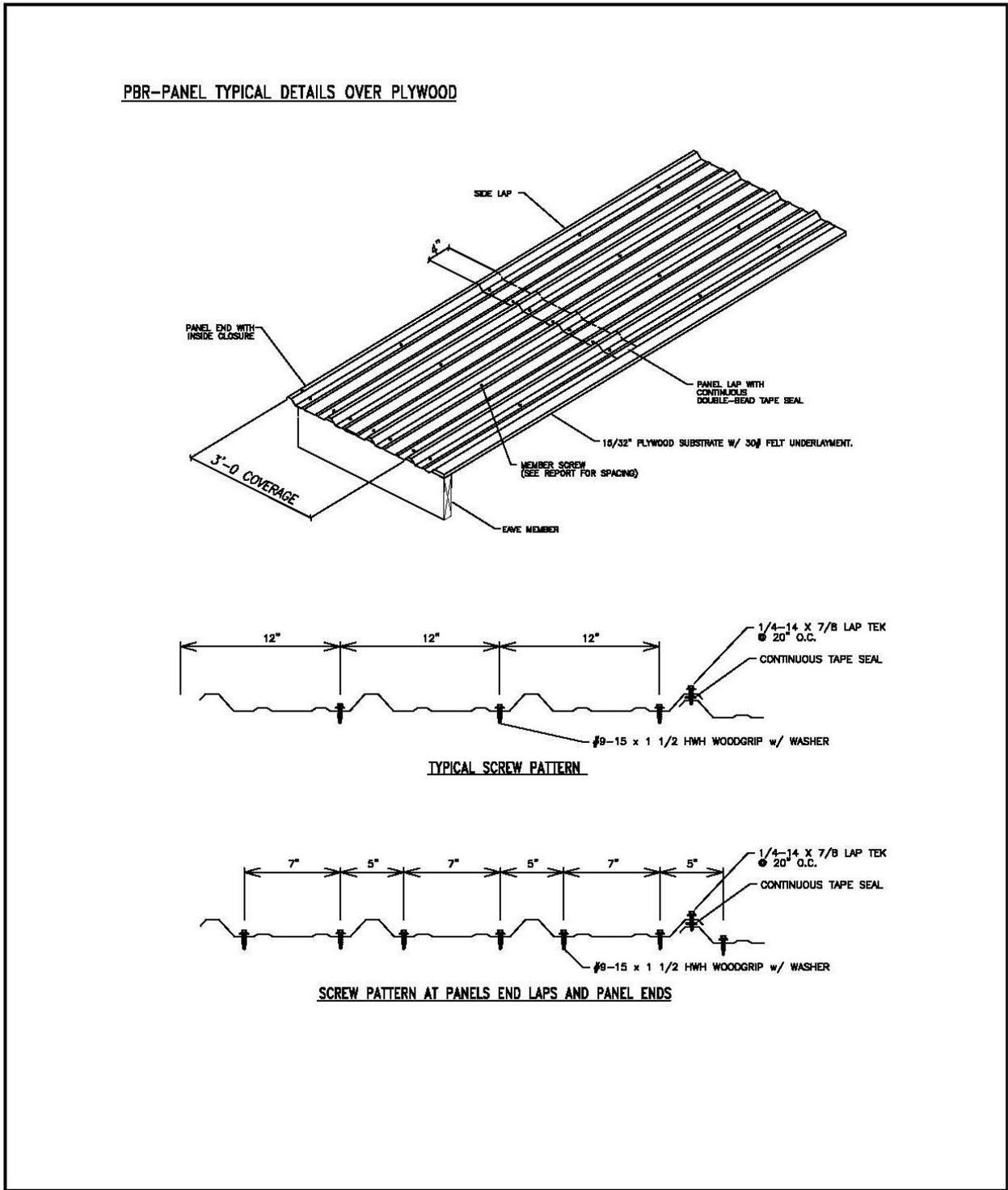


Figure 1. PBR Panel Detail (Minimum 26 Gauge)