

# TEXAS DEPARTMENT OF INSURANCE

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## PRODUCT EVALUATION RC-165

Effective August 1, 2008

*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 **June 2011**.*

*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.*

### **1.5" Nailstrip Metal Roofing Panels** manufactured by

**Northwest Roof Tile & Metal LLC**  
**6807 Theall**  
**Suite C**  
**Houston, Texas 77066**  
**Telephone: (281) 893-8382**

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 1.5" Nailstrip metal roofing panels are minimum 24 gauge galvalume steel panels with an optional paint finish. The metal roofing panels have a coverage of 15 ½ inches. The ribs are 1 ½ inches deep. The metal roofing panels conform to ASTM A792, Grade 50, with a 50,000 psi yield point. The metal roofing panels have an AZ 55 hot-dip aluminum zinc alloy coating or a hot dip coating conforming to ASTM A525. The metal roofing panels must be formed within the panel rollformer specifications and tolerances.

Panel Rollformer: Schlebach Quadro-Plus Rollformer  
Metalforming, Inc.  
100 International Drive  
Peachtree City, Georgia 30269

## LIMITATIONS

**Roof Decking:** The 1.5" nailstrip metal roofing panels shall be installed over minimum 15/32" 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 24 gauge 1.5" nailstrip metal roofing panels to minimum  $\frac{15}{32}$ " plywood decking

Design Wind Pressure	Fastener Pattern	Fastener into Roof Deck Through Nail Strip	Fastener into Roof Deck Through Pan
-78.5 psf	Type 1	One (1) #12-11 x 1" Type A 11" o.c. Along Panel Length	N/A
-116.0	Type 2	One (1) #12-11 x 1" Type A 6 $\frac{1}{2}$ " o.c. Along Panel Length	Two (2) #10-11 x 1" Eclipse Head 12" o.c. Along Panel Length

**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  $\frac{15}{32}$  inch 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 roof panels before the roof 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 3:12.

### INSTALLATION INSTRUCTIONS

**General:** The 1.5" nailstrip metal roofing panels shall be installed in accordance with the manufacturer's recommended installation instructions and this evaluation report.

**Panels:** The 1.5" nailstrip 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 or equivalent 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 1.5" nailstrip metal roof panels shall be secured to the roof deck as follows:

**Roof Panels:** Minimum No. 12-11 x 1" long, Pancake Type A screws, manufactured by ITW Buildex and No. 10-11 x 1" Eclipse screws by Sealtite. 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.) The placement of the fasteners across the width of the panel shall be as shown in Figure 1 of this evaluation report. The spacing of the fasteners along the length of the panels shall be as specified in Table 1 and as shown in Figure 1 of this evaluation report.

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

#12-11 x 1" Type A Pancake head, manufactured by ITW Buildex  
Ultimate withdrawal (pullout)  $\geq$  377 lbs in  $\frac{15}{32}$ " plywood.

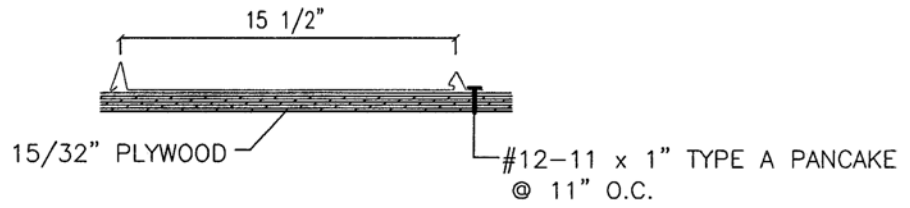
#10-11 x 1" Eclipse Type A, manufactured by Sealtite  
Ultimate withdrawal (pullout)  $\geq$  398 lbs in  $\frac{15}{32}$ " plywood.

**Panel Ends:** The panel ends shall be secured to the roof deck as required by the manufacturer.

**Trims, Closures, and Accessories:** Components, such as the ridge/hip trim, high eave trim, low eave trim, low eave/gutter trim, high eave transition trim, high profile rake trim, rake wall transition trim, and valley trim shall be installed as required by the manufacturer in their installation details and trim instructions.

**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.

FASTENER PATTERN TYPE 1



FASTENER PATTERN TYPE 2

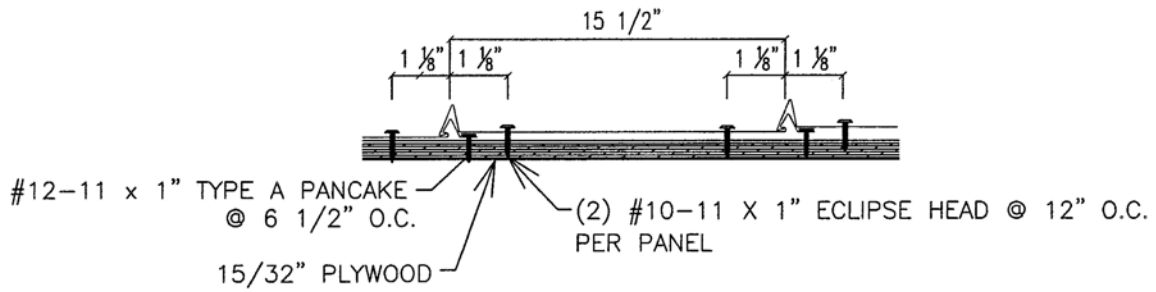


Figure 1. 1.5" Nailstrip Panel Detail (Minimum 24 Gauge)