

**Force Engineering & Testing**

19530 Ramblewood Drive  
Humble, Texas 77338  
Phone: (281) 540-6603 FAX: (281) 540-9966  
Website: [www.forceengineeringtesting.com](http://www.forceengineeringtesting.com)

**Product Evaluation Report**  
**TRI COUNTY METALS**

***1- 1/2" Nailstrip, 24 Ga. 15 1/2" Wide Roof Panel over Plywood***

**Florida Product Approval # 4595.9 R5**

Florida Building Code 2020

Per Rule 61G20-3

Method: 1 -D

Category: Roofing

Subcategory: Metal Roofing

Compliance Method: 61G20-3.005(1)(d)

HVHZ

**Product Manufacturer:**

**Tri County Metals**

**301 S. E. 16th Street**

**Trenton, Florida 32693**

**Engineer Evaluator:**

**Johnathan Green, P.E. #88223**

**Florida Evaluation ANE ID: 12901**

**Validator:**

**Brian Jaks P.E. #70159**

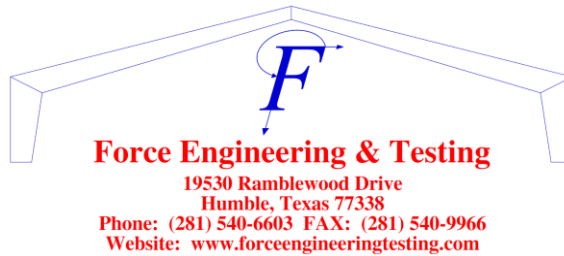
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**Compliance Statement:** The product as described in this report has demonstrated compliance with the Florida Building Code 2020, Sections 1504.3.2, 1518.9, 1523.6.5.2.4.

**Product Description:** 1-1/2" Nailstrip Roof Panel, 24 Ga. Steel, 15 1/2" Coverage, Roof Panel restrained with fasteners into APA Plywood decking. Non-structural Application.

**Panel Material/Standards:** Material: 24 Ga. Steel, ASTM A792 unpainted or painted with Valspar Fluropon or ASTM A653 G90 conforming to Florida Building Code 2020 Section 1507.4.3.  
Yield Strength: Min. 50.0 ksi  
Corrosion Resistance: Panel Material shall comply with Florida Building Code 2020, Section 1507.4.3

**Panel Dimension(s):** Thickness: 0.024"  
Width: 15 1/2" Max Coverage  
Female Rib: 1 1/2" tall  
Male Rib: 3/4" tall rib w/ slotted strip  
Panel Seam: Snap Lock

**Panel Fastener:** Through Panel Slot: (1) #12-11 x 1" Pancake Type A  
In Pan of Panel: (2) #10-11 x 1" Eclipse Head Type A  
1/4" minimum penetration through plywood  
Corrosion Resistance: Per Florida Building Code 2020, Section 1517.6.

**Substrate Description:** 1) For HVHZ construction, use 19/32" or greater APA Rated plywood or wood plank. In reroofing applications where the deck is less than 19/32" thick (min. 15/32") the attachment of the decking in no case shall be less than 8D annual ring shank nails at 6" O.C. Design of plywood and plywood supports are outside the scope of this evaluation. Substrate must be designed in accordance w/ Florida Building Code 2020.

2) For Non-HVHZ applications, use min. 15/32" thick, APA Rated plywood over supports at maximum 24" O.C. Design of plywood and plywood supports are outside the scope of this evaluation. Substrate must be designed in accordance w/ Florida Building Code 2020.



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**Allowable Design Uplift Pressures:**

Table "A"

Maximum Total Uplift Design Pressure:	78.5 psf	116.0 psf
Panel Slot Fastener Spacing:	11" O.C.	6 ½" O.C.
Panel Pan Fastener Spacing:	NA	12" O.C.

\*Design Pressure includes a Safety Factor = 2.0.

**Code Compliance:**

The product described herein has demonstrated compliance with The Florida Building Code 2020, Section 1504.3.2, 1518.9, 1523.6.5.2.4.

**Evaluation Report Scope:**

The product evaluation is limited to compliance with the structural wind load requirements of the Florida Building Code 2020, as relates to Rule 61G20-3.

**Performance Standards:**

The product described herein has demonstrated compliance with:

- TAS 125-03
- UL 580-06 - Test for Uplift Resistance of Roof Assemblies
- UL 1897-2012 - Uplift Test for Roof Covering Systems
- TAS 100-95 - Test Procedure for Wind and Wind Driven Rain Resistance of Discontinuous Roof Systems
- TAS 110-00 - Accel. Weathering ASTM G 155 / Salt Spray ASTM B 117

**Reference Data:**

1. TAS 125-03: UL 580-94 / 1897-98 Uplift Test  
Force Engineering & Testing, Inc. (FBC Organization # TST-5328)  
Report No. 72-0190T-07\*, Dated 07/11/2007
2. TAS 100-95  
Farabaugh Engineering & Testing, Inc. (FBC Organization # TST-1654)  
Report No. T349-07\*, Dated 12/28/2007
3. TAS 110-00: Valspar Fluoropon coated metal panel testing  
A) ASTM G 155 by PRI Asphalt Technologies dated 10/31/2012  
B) ASTM B 117 by PRI Asphalt Technologies dated 10/31/2012
4. Certificate of Independence  
By Johnathan Green, P.E. (No. 88223) @ Force Engineering & Testing  
(FBC Organization # ANE ID: 12901)

**Test Standard Equivalency:**

1. The UL 580-94 test standard is equivalent to the UL 580-06 test standard.
2. The UL 1897-98 test standard is equivalent to the UL 1897-2012 test standard.



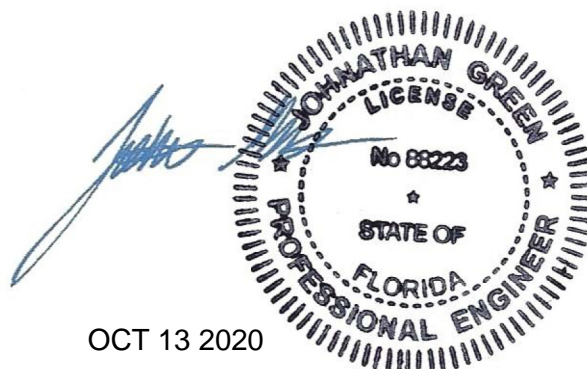
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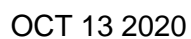
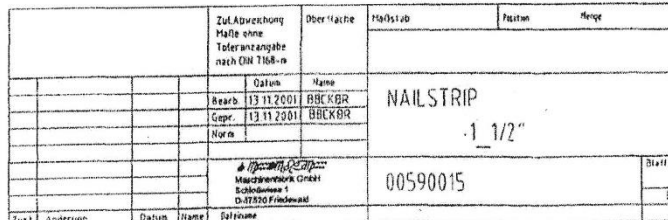
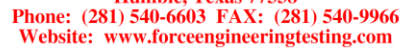
<b>Quality Assurance Entity:</b>	The manufacturer has established compliance of roof panel products in accordance with the Florida Product Code and Rule 61G20-3.005 (3) for manufacturing under a quality assurance program audited by an approved quality assurance entity.
<b>Minimum Slope Range:</b>	2:12. Minimum Slope shall comply with Florida Building Code 2020, including Sections 1515.2.2 and in accordance with Manufacturers recommendations.
<b>Installation:</b>	Install per manufacturer's recommended details and RAS 133.
<b>Underlayment:</b>	Per Manufacturer's installation guidelines per Florida Building Code 2020 Section 1518.2, 1518.3, 1518.4.
<b>Fire Barrier:</b>	Any approved fire barrier having a current NOA. Refer to a current fire directory listing for fire ratings of this roofing system assembly as well as the location of the fire barrier within the assembly. Fire classification is not part of this acceptance.
<b>Shear Diaphragm:</b>	Shear diaphragm values are outside the scope of this report.
<b>Design Procedure:</b>	Based on the dimensions of the structure, appropriate wind loads are determined using Chapter 16 of the Florida Building Code 2020 for roof cladding wind loads. These component wind loads for roof cladding are compared to the allowable pressure listed above. The design professional shall select the appropriate erection details to reference in his drawings for proper fastener attachment to his structure and analyze the panel fasteners for pullout and pullover. Support framing must be in compliance with Florida Building Code 2020 Chapter 22 for steel, Chapter 23 for wood and Chapter 16 for structural loading.

\*The Test Reports are owned by Metalforming, Inc. Metalforming, Inc. gives the above manufacturer permission to use these test reports.



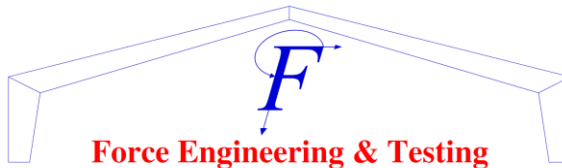
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**FL# 4595.9 R5**



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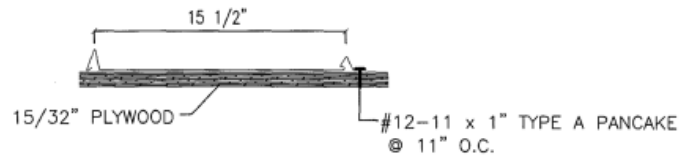
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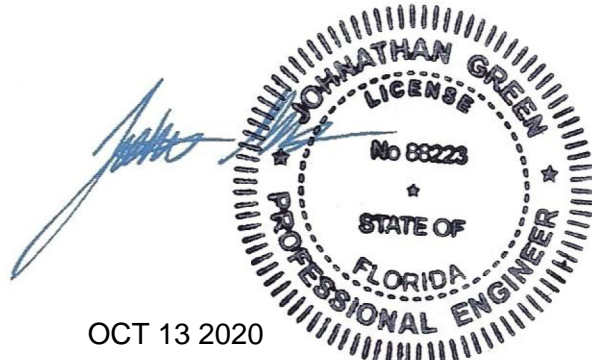
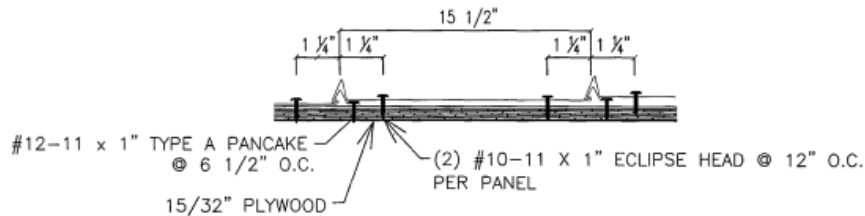
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### Panel Attachment

#### TYPE 1 FASTENER PATTERN (SEE LOAD TABLE)



#### TYPE 2 FASTENER PATTERN (SEE LOAD TABLE)



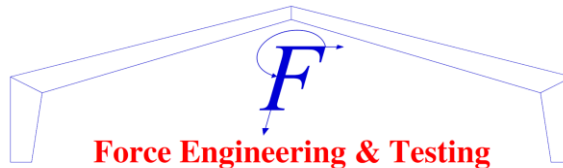
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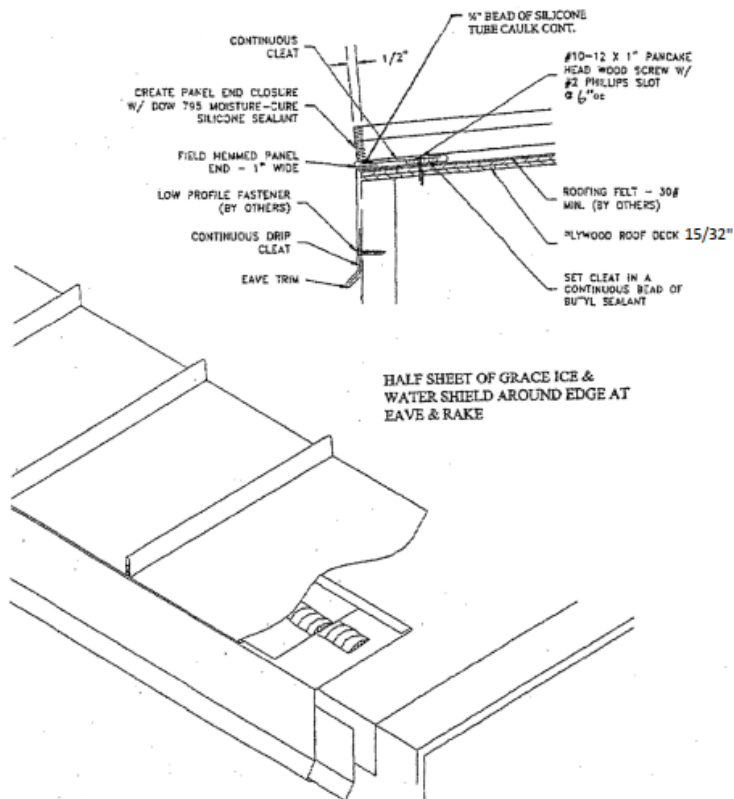


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### Low Eave Detail

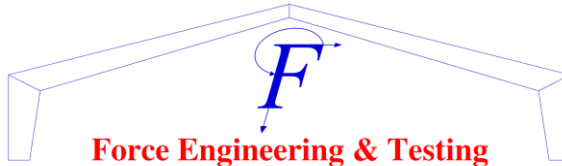


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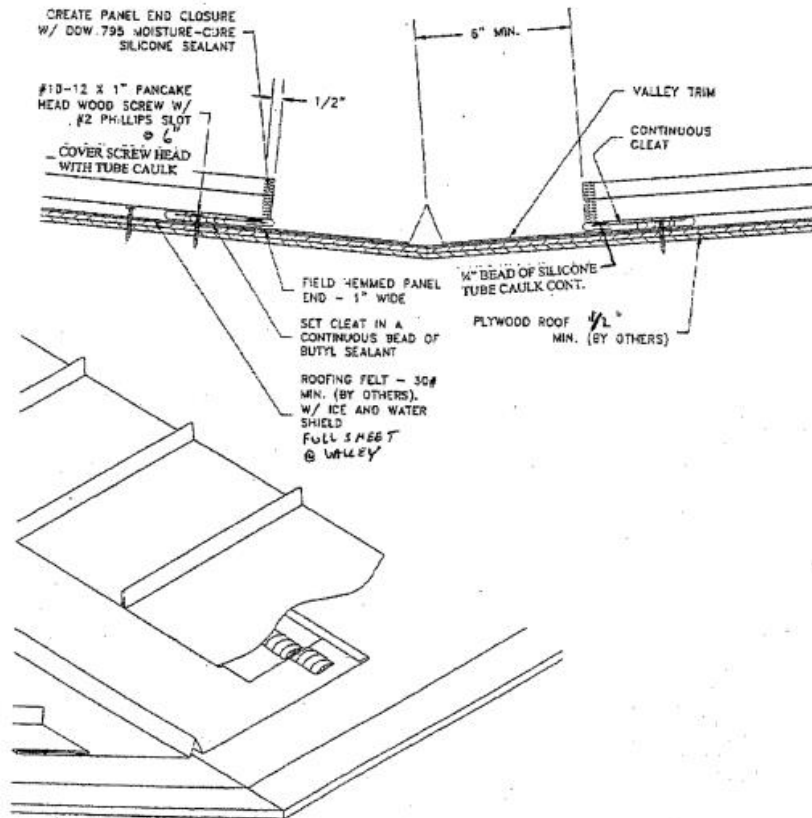


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### Valley Detail



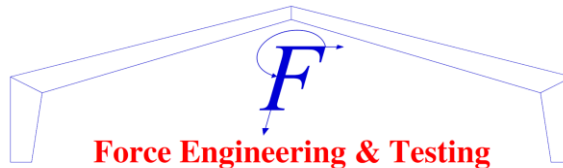
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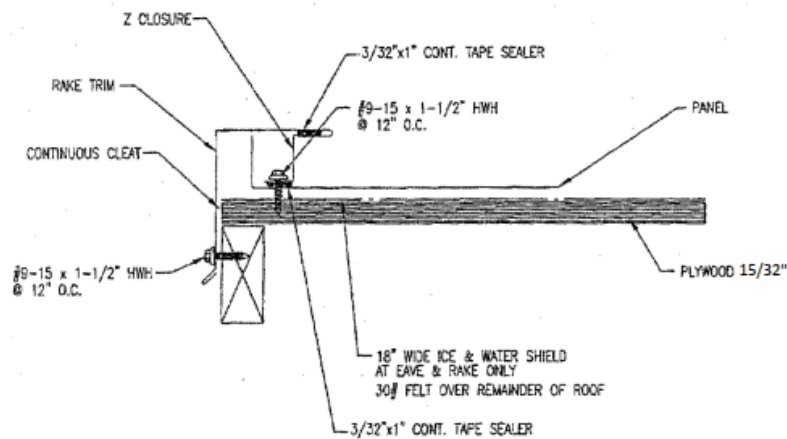
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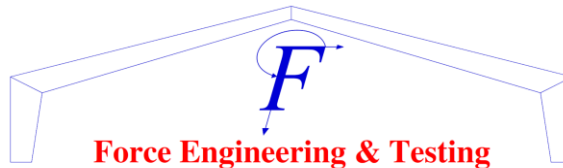
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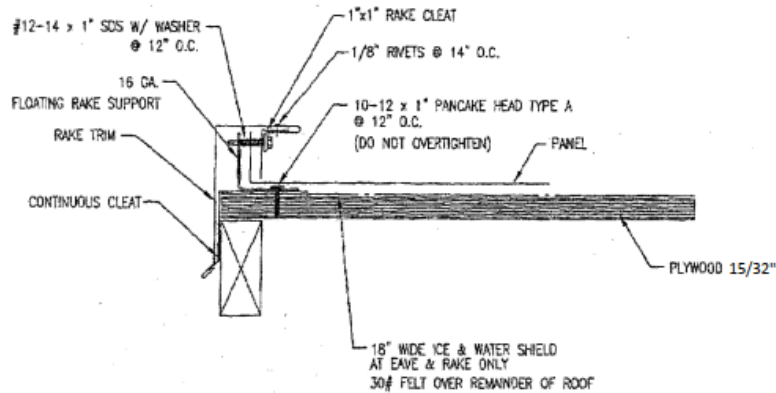


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