Force Engineering & Testing
19530 Ramblewood Drive
Humble, Texas 77338
Phone: (281) 540-6603 FAX: (281) 540-9966
Website: www.forceengineeringtesting.com

Product Evaluation Report

ALUMINUM AND FABRICATION BY SANT GROUP

Minimum 29 Ga. SG Rib Roof Panel over 1x4 Wood Purlins over 15/32" Plywood

Florida Product Approval # 30023.1 R1

Florida Building Code 2020
Per Rule 61G20-3
Method: 1 –D

Category: Roofing
Subcategory: Metal Roofing
Compliance Method: 61G20-3.005(1)(d)
NON HVHZ

Product Manufacturer:
Aluminum and Fabrication by Sant Group
1115 West Gulf to Lake Hwy
Lecanto, FL 34461

Engineer Evaluator:
Johnathan Green, P.E. #88223
Florida Evaluation ANE ID: 12901

Validator:
Steven Urich, P.E. #57795

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JOHNATHAN GREEN
LICENSE
No 88223
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

JUN 14 2022

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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, 1504.7.

Product Description: SG Rib Roof Panel, Min. 29 Ga. Steel, 36" coverage, through fastened roof panel over 1x4 wood purlins over minimum 15/32" plywood sheathing. Non-structural Application.

Panel Material/Standards: Material: Minimum 29 Ga. Steel conforming to Florida Building Code 2020 Section 1507.4.3.
Yield Strength: Min. 80.0 ksi
Corrosion Resistance: Panel Material shall comply with Florida Building Code 2020, Section 1507.4.3.

Panel Dimension(s):

Thickness:	0.0145" min.
Width:	36" maximum coverage
Rib Height:	¾" major rib at 9" O.C.
Panel Rollformer:	MRS Metal Rollforming Systems

Panel Fastener: #10-15 x 1 ½" WoodZAC HiLo HWH w/ sealing washing or approved equal.
Corrosion Resistance: Per Florida Building Code 2020, Section 1507.4.4.

Substrate Description: Min. 1x4 No. 2 SYP wood purlin over (1) layer of asphalt composition shingles/felt paper (optional) over minimum 15/32" APA Plywood over SYP rafters at 24" O.C. 1x4 wood purlins attached through sheathing into rafters with (2) #9 x 3" deck screws (Min. 1 ½" screw penetration into rafters) at 24" O.C. maximum. Substrate must be designed in accordance w/ Florida Building Code.

Allowable Design Uplift Pressures:

Table "A"

Maximum Total Uplift Design Pressure:	108.5 psf
Fastener Pattern:	9"-9"-9"-6"-3"
Fastener Pattern/1x4 Purlin Spacing:	18" O.C.

*Design Pressure includes a Safety Factor = 2.0.

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Code Compliance: The product described herein has demonstrated compliance with The Florida Building Code 2020, Section 1504.3.2, 1504.7.

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:

- UL 580-06 - Test for Uplift Resistance of Roof Assemblies
- UL 1897-2012 - Uplift Test for Roof Covering Systems
- FM 4471-92 - Foot Traffic Resistance Test

Reference Data:

1. UL 580-06 / 1897-12 Uplift Test
   Force Engineering & Testing, Inc. (FBC Organization # TST-5328)
   Report No. 683-0108T-19
2. FM 4471-10, Section 4.4 Foot Traffic Resistance Test
   Force Engineering & Testing, Inc. (FBC Organization # TST-5328)
   Report No. 683-0108T-19
3. Certificate of Independence
   By Johnathan Green, P.E. #88223

Test Standard Equivalency: The FM 4471-10, Foot Traffic Resistance test standard is equivalent to the FM 4471-92, Foot Traffic Resistance test standard.

Quality Assurance Entity: The manufacturer has established compliance of roof panel products in accordance with the Florida Building Code and Rule 61G20-3.005 (3) for manufacturing under a quality assurance program audited by an approved quality assurance entity.

Minimum Slope Range: Minimum Slope shall comply with Florida Building Code 2020, including Section 1507.4.2 and in accordance with Manufacturers recommendations. For slopes less than 3:12, lap sealant must be used in the panel side laps.

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Installation: Install per manufacturer's recommended details.

Underlayment: Per Florida Building Code 2020, Section 1507.1 and manufacturer's installation guidelines.

Roof Panel Fire Classification: Fire classification is not part of this acceptance.

Shear Diaphragm: Shear diaphragm values are outside the scope of this report.

Design Procedure: 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.

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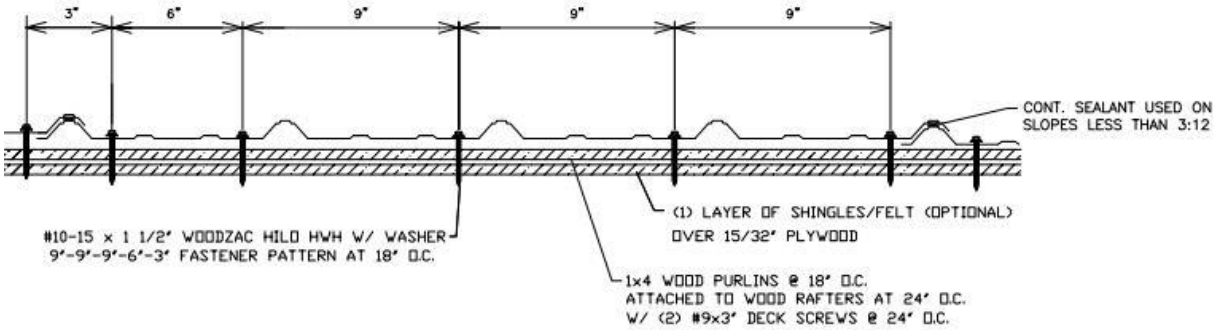
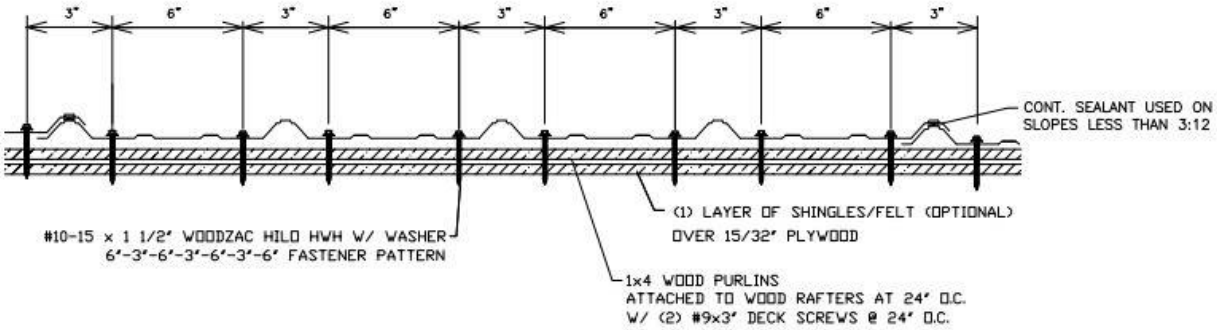
FASTENER PATTERN AT 18" O.C.



FASTENER PATTERN AT PANEL ENDS/ENDLAPS



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