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

Product Evaluation Report

FREEDOM MANUFACTURING AND ROOFING SUPPLY, LLC.

Freedom Lok 0.032" Aluminum Roof Panel over 15/32" Plywood

Florida Product Approval # 39378.1 R1

Florida Building Code 2023
Per Rule 61G20-3
Method: 1 –D

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

Product Manufacturer:
Freedom Manufacturing and Roofing Supply, LLC.
18504 SE Highway 19
Cross City, Florida 32628

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

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AUG 15 2023

JOHNATHAN GREEN
LICENSE
No. 88223
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

THIS DOCUMENT HAS BEEN DIGITALLY SIGNED AND SEALED BY JOHNATHAN GREEN ON THE DATE ADJACENT TO THE SEAL.

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Compliance Statement: The product as described in this report has demonstrated compliance with the Florida Building Code 2023, Sections 1504.3.2.

Product Description: Freedom Lok Roof Panel, 0.032" Aluminum, 16" Coverage, 1" Snap lock Roof, Roof Panel attaching to 15/32" APA Plywood decking. Non-structural Application.

Panel Material/Standards: Material: 0.032" Aluminum conforming to Florida Building Code 2023 Section 1507.4.3 Yield Strength: Min. 20.0 ksi
Corrosion Resistance: Panel Material shall comply with Florida Building Code 2023, Section 1507.4.3

Panel Dimension(s):

Thickness:	0.032"
Width:	16" max coverage
Female Rib:	1" tall
Male Rib:	1/8" x 1" Slots at 5 ¼" O.C.
Panel Seam:	Snap Lock

Panel Fastener: (1) #10-9 x 1" Pancake Type 17 Point or approved equal
¼" minimum penetration through plywood
Corrosion Resistance: Per Florida Building Code 2023, Section 1507.4.4.

Substrate Description: 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.

Allowable Design Uplift Pressures:

Table "A"

Maximum Total Uplift Design Pressure:	22.7 psf	32.2 psf	41.7 psf
Panel Fastener Spacing:	15.75" O.C.	10.5" O.C.	5.25" 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 2023, Section 1504.3.2.

Evaluation Report Scope: The product evaluation is limited to compliance with the structural wind load requirements of the Florida Building Code 2023, 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 1897-2015 - Uplift Test for Roof Covering Systems

Reference Data:

1. UL 580-06 / 1897-12 Uplift Test
   Force Engineering & Testing (FBC Organization # TST-5328)
   Report No. 731-0059T-21
2. Certificate of Independence
   By Johnathan Green, P.E. #88223

Test Standard Equivalency: The UL 1897-2012, Uplift Test for Roof Covering Systems test standard is equivalent to the UL 1897-2015, Uplift Test for Roof Covering Systems 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 2023, including Section 1507.4.2 and in accordance with Manufacturers recommendations.

Installation: Install per manufacturer's recommended details.

Underlayment: Per Florida Building Code 2023, Section 1507.1 and manufacturer's installation guidelines.

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

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 2023 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 2023 Chapter 22 for steel, Chapter 23 for wood and Chapter 16 for structural loading.

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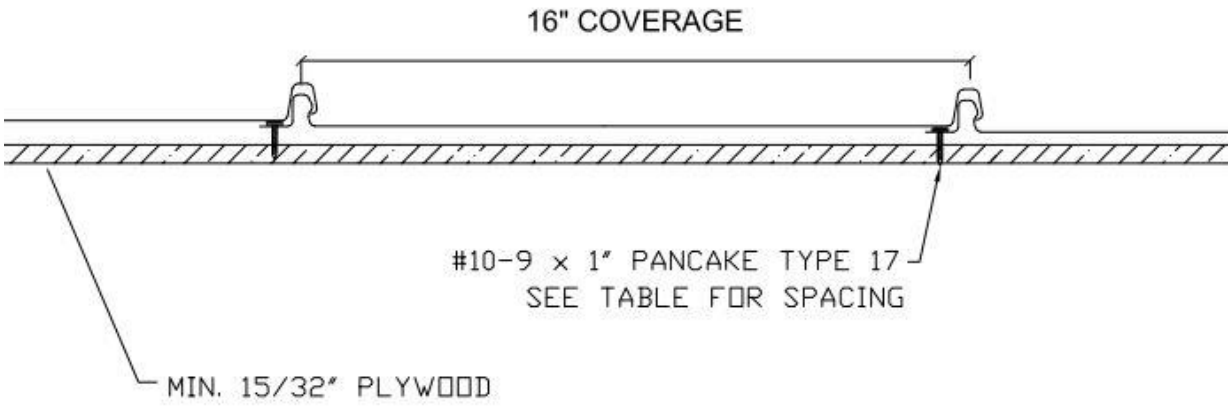
FREEDOM LOK 0.032" ALUM. 16" COVERAGE