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

Product Evaluation Report
Whirlwind Steel Buildings, Inc.

Super Span X Steel Roof Panel System Over Open Framing

Florida Product Approval # 17700.6 R4

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

Category: Structural Components
Subcategory: Roof Deck
Compliance Method: 61G20-3.005(1)(d)
HVHZ

Product Manufacturer:
Whirlwind Steel Buildings, Inc.
8234 Hansen Road
Houston, Texas 77075

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

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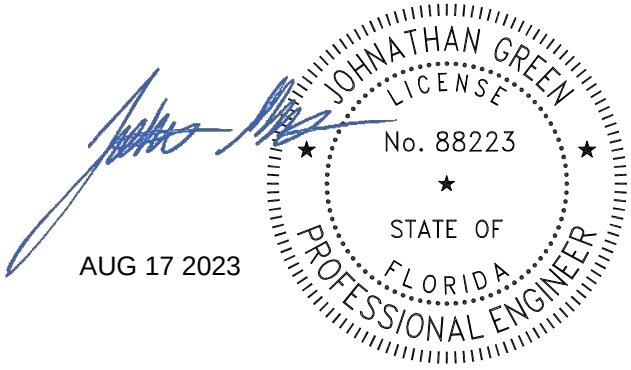

AUG 17 2023

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, 1504.7, 1518.9, 1523.6.5.2.4.

Product Description: Super Span X Roof Panel, minimum 24ga steel, 36" wide, through fastened structural roof panel. Structural Application.

Panel Material/Standards: Material: 24ga steel, ASTM A792 or ASTM A653 G90 Grade 50 steel, conforming to Florida Building Code 2023 Section 1507.4.3. Paint finish optional.
Yield Strength: Minimum 50.0 ksi
Corrosion Resistance: Panel Material shall comply with Florida Building Code 2023, Section 1507.4.3

Panel Dimension(s):

Thickness:	0.0240" min.
Coverage width:	36" nominal coverage
Rib Height:	1-1/4" major rib at 12" o.c.

Panel Fastener: #12-14 x 1-1/4" zinc head "HTZ" DP2 HWH SDS with washer or equal. Screw pattern 12", 12", 12" in field of roof and 7", 5", 7", 5", 7", 5" pattern at panel ends and panel end laps. 1/4-14 x 7/8" zinc head "HTZ" HWH SDS side lap screw with washer at 12" o.c. Panel sidelaps shall contain continuous tape sealant.
Corrosion Resistance: Per Florida Building Code 2023, Section 1517.6

Substrate Description: Min. 16 Ga. Steel Framing. Must be designed in accordance w/ Florida Building Code.

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Allowable Design Uplift Pressures:

Panel Allowables for Uplift Pressures:
Maximum Bending Moment of the panel at Support: 114.22 lbs-ft
Maximum Bending Moment of the panel at Mid Span: 82.33 lbs-ft
Maximum Panel Interior Support Reaction: 198.00 lbs
Maximum Panel Exterior Support Reaction: 83.83 lbs
Maximum Allowable Deflection of Roof Panel = L/240
Panel EI Value: 1,160,547.00 lbs-in^2

Maximum Allowable Uplift Pressure for Panel:

Purlin Spacing	Uplift Pressure	Fastener Pattern
5'-0"	-60.0 psf	12", 12", 12"
2'-0"	-135.0 psf	12", 12", 12"

Allowable uplift pressure includes a Safety Factor = 2.0.

Code Compliance:

The product described herein has demonstrated compliance with
The Florida Building Code 2023, Sections 1504.3.2, 1504.7, 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 2023, as relates to Rule 61G20-3.

Performance Standards:

The product described herein has demonstrated compliance with:

- TAS 125-03 – Test method for structural performance of sheet metal roof and siding systems by uniform static air pressure difference.
- ASTM E 1592-05 Test method for structural performance of sheet metal roof and siding systems by uniform static air pressure difference.
- TAS 201-94 - Impact Testing
- FM 4471 Appendix G for roof slopes less than 2:12.
- TAS 110-00 - Accel. Weathering ASTM G155 / Salt Spray ASTM B 117
- FM 4471-92 Foot Traffic Resistance Test.

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Reference Data:

1. TAS 125-03: ASTM E 1592-01
   Force Engineering & Testing, Inc. (FBC Organization # TST-5328)
   Report No. 14-0325T-07A, B dated 09/27/07
   TAS 125-03; ASTM E 1592-01
   Force Engineering & Testing, Inc. (FBC Organization # TST-5328)
   Report No. 14-0325-07C dated 09/27/07
2. TAS 201-94
   Large Missile Impact Test
   Farabaugh Engineering and Testing, Inc.
   Report No. T304-07 dated 10/28/07
3. FM 4471 Appendix G
   Farabaugh Engineering and Testing, Inc.
   Report No. T305-07 dated 10/30/07
4. TAS 110-00 Akzo Nobel Coatings, Inc. coating on metal panel testing
   A) ASTM G 26 by Asphalt Coating Technologies, Akzo Nobel Coatings, Inc. dated 10/08/02
   B) ASTM B 117 by Asphalt Coating Technologies, Akzo Nobel Coating, Inc. dated 10/08/02
5. FM 4471-10, Section 4.4 Foot Traffic Resistance Test
   Force Engineering & Testing, Inc. (FBC Organization # TST-5328)
   Report No. 14-0286T-14D.
6. Miami-Dade County NOA No. 21-0419.10.
7. Certificate of Independence
   By Johnathan Green, P.E. (No. 88223) @ Force Engineering & Testing
   (FBC Organization # ANE ID: 12901)

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.

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Test Standard Equivalency:

1. The ASTM E 1592-01 test standard is equivalent to the ASTM E 1592-05 (2017) test standard.
2. The ASTM G36 test standard was superseded by ASTM G155 and is an equivalent test standard.
3. The FM 4471-10, Foot Traffic Resistance test standard is equivalent to the FM 4471-92, Foot Traffic Resistance test standard.

Minimum Slope Range: Panel may only be used on roof slopes of less than 2:12; minimum slope 1/2:12. Minimum Slope shall comply with Florida Building Code 2023, including Section 1515.2.2 and in accordance with Manufacturers recommendations. For slopes less than 3:12, lap sealant must be used in the panel side laps.

Installation: Install per manufacturer's recommended details and RAS 133.

Insulation: Manufacturer's approved product (Optional).

Fire Barrier: 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 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.