

Force Engineering & Testing

19530 Ramblewood Drive

Humble, Texas 77338

Phone: (281) 540-6603 FAX: (281) 540-9966

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Product Evaluation Report

WHIRLWIND STEEL BUILDINGS, INC.

24ga Super Span X Steel Wall Panel System Over Open Framing

Florida Product Approval # 17702.1 R5

Florida Building Code 2023

Per Rule 61G20-3

Method: 2 –B

Category: Structural Components

Subcategory: Structural Wall

Compliance Method: 61G20-3.005(2)(B)

HVHZ

Product Manufacturer:

Whirlwind Steel Buildings, Inc.

8234 Hansen Road

Houston, Texas 77075

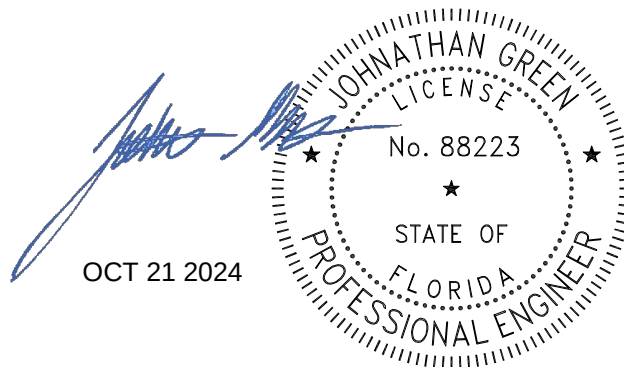
Engineer Evaluator:

Johnathan Green, P.E. #88223

Florida Evaluation ANE ID: 12901

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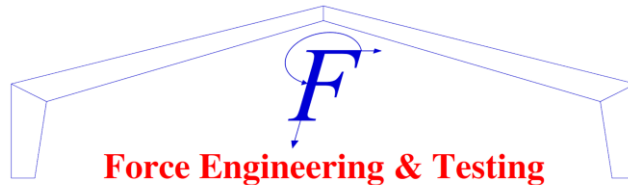


THIS DOCUMENT HAS BEEN DIGITALLY SIGNED AND SEALED BY JOHNATHAN GREEN ON THE DATE ADJACENT TO THE SEAL.

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Compliance Statement:	The product as described in this report has demonstrated compliance with the Florida Building Code 2023, Sections 1709.2.
Product Description:	Super Span X, 29 Ga. Steel, 36" Wide, through fastened structural wall panel. Structural Application.
Panel Material/Standards:	Material: 24 Ga. Steel, ASTM A792 or ASTM A653 G90 panel material shall comply with Florida Building Code 2023 Section 1405.2. Paint finish optional. Yield Strength: Minimum 50.0 ksi
Panel Dimension(s):	Thickness: 0.024" min. Width: 36" maximum 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 sealing washer or approved equal. Screw pattern 12", 12", 12" in the field and 7", 5", 7", 5", 7", 5" pattern at panel ends and endlaps. Panel side laps fastened together w/ 1/4-14 x 7/8" zinc head "HTZ" HWH SDS lap screw with sealing washer at 12" O.C. Corrosion Resistance: Per Florida Building Code 2023.
Substrate Description:	16 Ga. Grade 50 Steel Framing. See Table A & B for steel gauge. Framing must be designed in accordance w/ Florida Building Code 2023.



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Allowable Design Uplift Pressures:

Panel Allowables for Design Pressures:

Maximum Bending Moment of the panel at Support: 166.25 lbs-ft

Maximum Bending Moment of the panel at Mid Span: 93.50 lbs-ft

Maximum Panel Support Reaction: 332.50 lbs

Maximum Allowable Deflection of Roof Panel = $L/240$

Panel EI Value: 1,247,944.00 lbs-in²

Maximum Allowable Design Pressures for Panel:

Purlin Spacing	Design Pressure	Fastener Pattern
5'-0"	+/-53.2 psf	12", 12", 12" Interior areas 7", 5", 7", 5", 7", 5" Panel ends

Allowable uplift pressure includes a Safety Factor = 1.5.

Code Compliance:

The product described herein has demonstrated compliance with The Florida Building Code 2023, Section 1709.2.

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:

- TAS 201-94 – Impact Testing
- TAS 202-94 – Uniform Static Air Testing
- TAS 203-94 – Cyclic Testing.
- TAS 110-00 – Accel. Weathering ASTM G155/Salt Spray ASTM B117



Reference Data:

1. TAS 201-94
Large Missile Impact Test
Farabaugh Engineering and Testing, Inc.
Report No. T299-07, dated 09/28/2007
2. TAS 202-94
Uniform Static Air Pressure Difference
Farabaugh Engineering and Testing, Inc.
Report No. T299-07, date 09/28/2007
3. TAS 203-94
Cyclic Testing
Farabaugh Engineering and Testing, Inc.
Report No. T299-07, dated 09/28/2007
4. TAS 110-00; ASTM G26 (superseded by ASTM G155)
Asphalt Technologies, Azko Nobel Coatings, Inc., dated 10/08/2002
5. TAS 110-00; ASTM B117
Asphalt Technologies, Azko Nobel Coatings, Inc., dated 10/08/2002
6. Miami-Dade County NOA No. 21-0419.11.
7. Certificate of Independence
By Johnathan Green, P.E. (No. 88223) @ Force Engineering & Testing
(FBC Organization # ANE ID: 12901)

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.

Quality Assurance Entity:

The manufacturer has established compliance of wall 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.

Installation:

Install per manufacturer's recommended details.

Insulation:

Manufacturer's approved product (Optional)

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 wall cladding wind loads. These component wind loads for wall 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, and Chapter 16 for structural loading.