# CBUCK Engineering

### Specialty Structural Engineering

CBUCK, Inc. Certificate of Authorization #8064

# **Evaluation Report**

"Thin-Line"

**Metal Wall Assembly** 

#### Manufacturer:

**Berridge Manufacturing Company** 

1720 Maury Road Houston, TX 77026 (800) 231-8127

for

Florida Product Approval

# FL 14669.7 R5

Florida Building Code 8th Edition (2023)

Method: 1 - D

**Category: Structural Components** 

Sub - Category: Structural Wall

**Product:** "Thin-Line" Wall Panel

Material: Steel

#### Prepared by:

James L. Buckner, P.E., S.E.C.B. Florida Professional Engineer # 31242 Florida Evaluation ANE ID: 1916 Project Manager: Diana Galloway Report No. 23-542- TL-S4G-ER

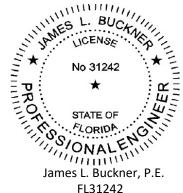
(Revises 20-227-TL-S4G-ER, FL14669.7 R4)

Date: 09/26/2023

**Contents:** 

Evaluation Report Pages 1-7

This item has been digitally signed and sealed by James L. Buckner, P.E., on this date below. Printed copies of this document are not considered signed and sealed, and the signature must be verified on any electronic copies.



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Manufacturer: Berridge Manufacturing Company

1720 Maury Road Houston, TX 77026 (800) 231-8127 www.berridge.com

Product Name: "Thin-Line"

**Product Category:** Structural Components

**Product Sub-Category** Structural Wall

Compliance Method: State Product Approval Rule 61G20-3.005 (1) (d)

Product/System

"Thin-Line" Wall Panel

**Description:** Steel lapped wall panel fastened into Steel Supports.

Product Assembly as Evaluated:

Refer to Page 4 of this report for product assembly components/materials &

standards:

Wall Panel
 Fasteners

Support: Type:

Steel Supports

(Design of steel support and its attachment to support framing is outside the

scope of this evaluation.)

**Description:** 

Material: Steel

Thickness: 24 Gauge minimum Yield Strength: 40 ksi minimum

Girt/Stud Size: 2" min. flange bearing

**Performance:** Wind Resistance:

• Design Pressure: Positive: +187 PSF

(Refer to "Table A" attachment details herein) Negative: - 153 PSF



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**Performance Standards:** 

The product described herein has demonstrated compliance with:

 ASTM E330-14 - Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure

Difference

**Standard Equivalency:** 

The ASTM E330-02 standard version used to test the evaluated product assembly is equivalent with the prescribed standards in ASTM E330-14 adopted by the Florida Building Code 8th Edition (2023).

**Code Compliance:** 

The product(s) described herein have demonstrated compliance with the performance standards listed above as referenced in the Florida Building Code 8th Edition (2023).

**Evaluation Report** Scope:

This product evaluation is limited to compliance with the structural requirements of the Florida Building Code, as related to the scope section to Florida Product Approval Rule 61G20-3.001.

Limitations and Conditions of Use:

- Diaphragm and axial load capacity is outside the scope of this evaluation.
- Scope of "Limitations and Conditions of Use" for this evaluation: This evaluation report for "Optional Statewide Approval" contains technical documentation, specifications and installation method(s) which include "Limitations and Conditions of Use" throughout the report in accordance with Rule 61G20-3.005. Per Rule 61G20-3.004, the Florida Building Commission is the authority to approve products under "Optional Statewide Approval".
- Option for application outside "Limitations and Conditions of Use" Rule 61G20-3.005(1)(e) allows engineering analysis for "project specific approval by the local authorities having jurisdiction in accordance with the alternate methods and materials authorized in the Code". Any modification of the product as evaluated in this report and approved by the Florida Building Commission is outside the scope of this evaluation and will be the responsibility of others.
- This report is a building code product evaluation per FLPE rule (FAC) 61G15-36 to comply with Florida product approval rule (FAC) 61G20-3. This evaluation report is part of the Florida Building Commission approval for the listed code related criteria. This report by James Buckner, P.E. and CBUCK Engineering is not a design certification of code compliance construction submittal documentation, per FBC section 107, for any individual structure, site specific or permit design.
- All metal components and fasteners shall be corrosion resistant in accordance with applicable sections of FBC.
- Design of support system is outside the scope of this report. Support shall be designed by others and shall comply with the FBC Chapters 22 for steel and Chapter 16 for structural loading.
- Fire Classification is outside the scope of Rule 61G20-3, and is therefore not included in this evaluation.



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**Quality Assurance:** 

The manufacturer has demonstrated compliance of wall panel products in accordance with the Florida Building Code and Rule 61G20-3.0005 (3) for manufacturing under a quality assurance program audited by an approved quality assurance entity through **UL, LLC (FBC Organization #: QUA 9625)**.

Components/Materials (by Manufacturer):

Wall Panel: Berridge "Thin-Line"

Material: Steel

Thickness: 24 gauge (min.)

Panel Width: 3-5/8" (max.) Coverage

Rib Height: 3/8"
Yield Strength: 40 ksi min.

Steel Grade: 40

Corrosion Resistance: In compliance with FBC Section 1405.2

Fastener:

Type: Pancake-Head Self-Drilling Screw

Size: 10 x 1"

Corrosion Resistance: Per FBC Section 1405.17

Standard: Approved per FBC Section 1405.17

Installation:

#### **Installation Method:**

(Refer to "TABLE A" below and drawings at the end of this report.)

- Girt/Support Spacing: Refer to "TABLE A" Below
- Fastener spacing: Refer to "TABLE A" Below (along the girt, in the groove of the male leg)
- Panel ribs shall be fully engaged to form an integral interlock.
- Minimum fastener penetration thru support, 3/4". (through flange of steel supports)

TABLE "A" ALLOWABLE LOADS		
	METHOD 1:	
Design Pressure:	Positive:	Negative:
	+ 187 PSF	- 153 PSF
Max. Support Spacing:	24" (2′- 0")	
Fastener Spacing:	3-5/8"	
Span Condition:	3 or more	

#### Notes:

- Positive Pressure Inward/Negative Pressure Outward
- Allowable design pressure(s) for allowable stress design (ASD).
- Fastener Attachment to Steel Supports May Be Designed By A
   Qualified Design Professional As Required By The Florida Building
   Code For Site Specific Projects.
- Diaphragm and axial load capacity are not included in this evaluation.



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Install the "Thin-Line" wall panel assembly in compliance with the installation method listed in this report and applicable code sections of FBC 8th Edition (2023). The installation method described herein is in accordance with the scope of this evaluation report. Refer to manufacturer's installation instructions as a supplemental guide for attachment.

#### **Referenced Data:**

 ASTM E330-02 Test & Uniform Static Air Pressure portion of TAS 202-94 Test By Hurricane Test Laboratory, LLC (FBC Organization #TST ID:1527) Report #: 0307-0712-05, Report Date: 12/16/05

2. Quality Assurance
UL, LLC (FBC Organization #: QUA 9625)

Test Specimen(s) 11, 12

Certification of Independence
 By James L. Buckner, P.E. @ CBUCK Engineering
 (FBC Organization # ANE 1916)

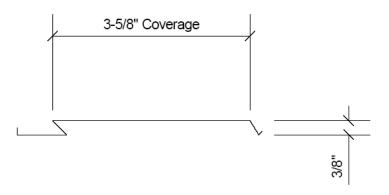
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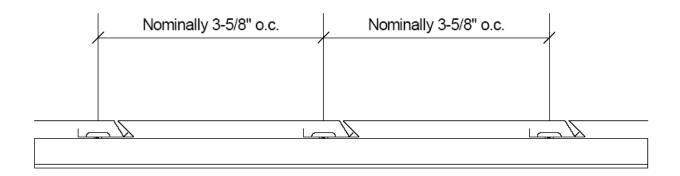
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# Installation Method Berridge Manufacturing Company "Thin-Line" Steel Wall Panel attached to Steel Supports

#### **Drawings**



**Typical Panel Profile** 



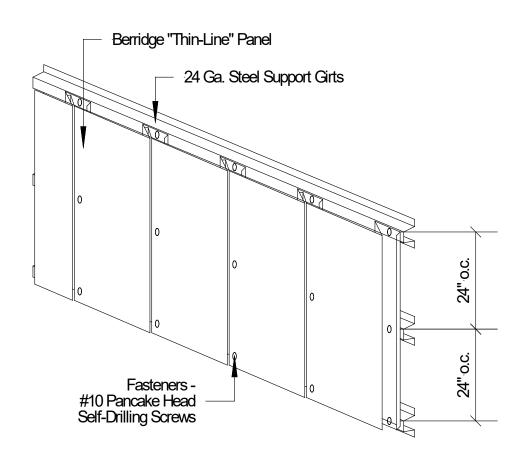
Assembly Profile View
Typical Fastening Pattern Across Supports

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# Installation Method Berridge Manufacturing Company "Thin-Line" Steel Wall Panel attached to Steel Supports



Typical Elevation View Outside Of Wall Assembly