



CBUCK Engineering

Specialty Structural Engineering

CBUCK, Inc. Florida Certificate of Authorization # 8064

Evaluation Report

of

Berridge Manufacturing Company

“Bermuda Panel”

Metal Roof Assembly

for

Florida Product Approval

FL 11422.1

Florida Building Code 2007

Per Rule 9B-72

Method: 1 - D

Category: Roofing

Sub - Category: Metal Roofing

Product: *Bermuda Panel*

Material: *Steel*

Panel Thickness: *24 Gauge*

Panel Width: *11”*

Support Type: *Wood Deck*

Prepared for:

Berridge Manufacturing Company

1720 Maury Road

Houston, TX 77026

Prepared by:

James L. Buckner, P.E.

Florida Professional Engineer # 31242

Florida Evaluation ANE ID: 1916

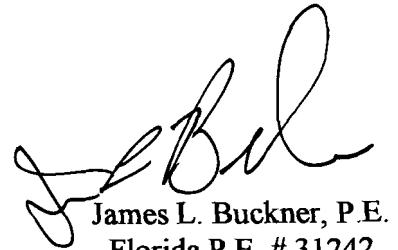
Project Manager: Diana Galloway

Report No. 08-136-Bermuda-11-S4W-ER

Date: 9 / 1 / 08

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9/17/08

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Manufacturer:	Berridge Manufacturing Company
Product Name:	“Bermuda” Panel
Product Category:	Roofing
Product Sub-Category	Metal Roofing
Compliance Method:	State Product Approval Rule 9B-72.070 (1) (d)
Panel Description:	“Bermuda”, Steel Roof Panel attached to Wood Deck with Berridge anchor clips.
Panel Material / Standards:	Material: Steel Yield Strength: 40 ksi minimum Corrosion Resistance: Material shall comply with the Florida Building Code (FBC), 2007 Section 1507.4.3.
Panel Dimension(s)	Thickness: 24 gauge minimum Width: 11” (Maximum exposure) Rib Height: 1”
Support Type:	Wood Deck (Design of support system is not included in this evaluation)
Support Description:	<ul style="list-style-type: none">• 19/32” or greater plywood, or• Wood plank
Slope Range:	Minimum slope shall comply with FBC 2007, including Sections 1507.4.2, 1504. and in accordance with the Manufacturers recommendations.
Underlayment:	Underlayment shall be per manufacturer’s guidelines as required in FBC Section 1507.4.5
Insulation:	(Optional) Rigid Insulation Board, 3” maximum thickness and with a density of 2.25 pcf (lbs/ft ³) minimum or a compressive strength of 25 psi minimum.
Fire Classification:	Fire Classification is outside the scope of Rule 9B-72, and is therefore not included in this evaluation. Additional approved substrates may be added for Fire Classification purposes.

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**Attachment Component
Description:**

Roof Panel Clips

Product Name: Berridge “Anchor Clip”
Material: Steel
Type: One-piece, fixed clip
Thickness: 24 Gauge minimum
Strength: 40 ksi minimum
Corrosion Resistance: Per FBC Section 1506.7
Standard: Per UL File TLSX.R12004

Roof Clip Fasteners

Size: #10 x 1” (3/16” minimum penetration through deck)
Type: Pancake-head wood screws
Corrosion Resistance: Per FBC Section 1507.6.6 and 1507.4.4
Standard: Per ANSI/ASME B18.6.1.

Installation:

Berridge “Bermuda” Roof Panel to Wood Deck:

- **Clip Row Spacing: 24” o.c.** maximum
(along the length of the panel and nominally within 3” from all ends)
- **One** fastener per anchor clip

Minimum fastener penetration or embedment into deck, 3/16”.

Install the system in compliance with the attached installation method.
Refer to manufacturer’s installation instructions as a supplemental guide for attachment.

Design Uplift Pressure: - 52.5 PSF (Safety Factor of 2 : 1)

Missile Impact Resistance: Meets criteria for small missile impact resistance per FBC Section 1504.7.
(Based on material thickness)

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- Quality Assurance:** The manufacturer has demonstrated compliance of roof panel products in accordance with the Florida Building Code and Rule 9B-72.070 (3) for manufacturing under a quality assurance program audited by an approved quality assurance entity through **Underwriter's Laboratories, Inc.** (FBC Organization #: QUA 1743)
- Performance Standards:** The product described herein has demonstrated compliance with:
- **UL580-94** – *Test for Uplift Resistance of Roof Assemblies—with Revisions through February 1998*
- Code Compliance:** The product described herein has demonstrated compliance with the Florida Building Code 2007, Section 1504.3.2
- Evaluation Report Scope:** This product evaluation is limited to compliance with the structural wind load requirements of the Florida Building Code, as related to Rule 9B-72.
- System Limitations:** The required design wind loads shall be determined for each project per FBC, 2007, Section 1609. Any rational analysis computations shall be prepared by a qualified design professional and in compliance with FBC 2007, Sections 104, 105, 106. The maximum fastener/clip spacing listed herein shall not be exceeded. This report does not evaluate use of this product in the High Velocity Hurricane Zone.
- Referenced Data:**
1. UL580-94 (with 1998 Revisions) Uplift Class 90
By Underwriter's Laboratories, Inc. (FBC Organization #CER ID: 1739)
UL File #TGKX.405, Current as of 9/3/08
 2. Quality Assurance
Underwriters Laboratories, Inc. (FBC Organization #QUA ID:1743)
 3. Certification of Independence
By James L. Buckner, P.E. @ CBUCK Engineering
(FBC Organization# ANE ID: 1916)

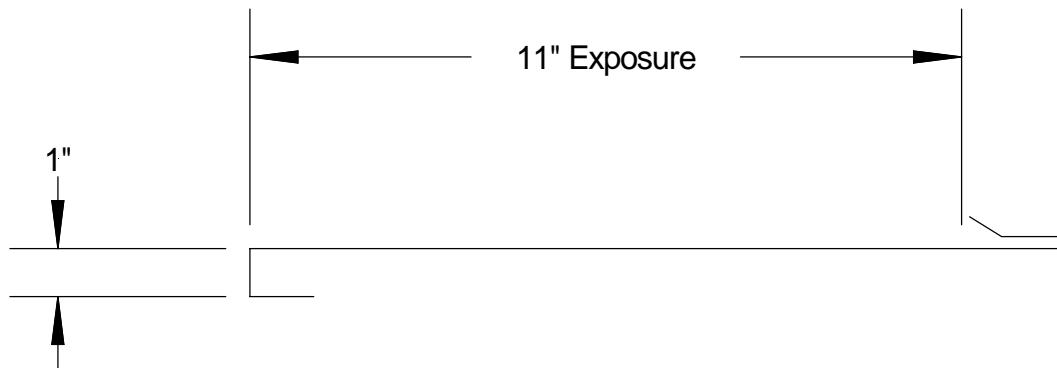
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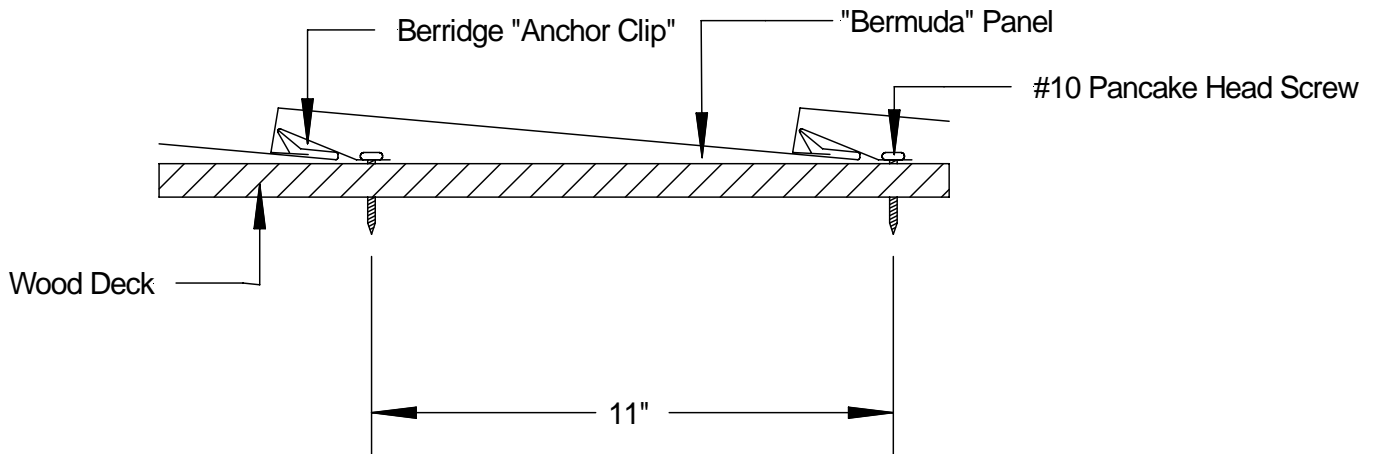
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Installation Method Berridge Manufacturing Company "Bermuda" (24 Gauge) Roof Panel Attached to Wood Deck

Profile Drawings



Typical Panel Profile View



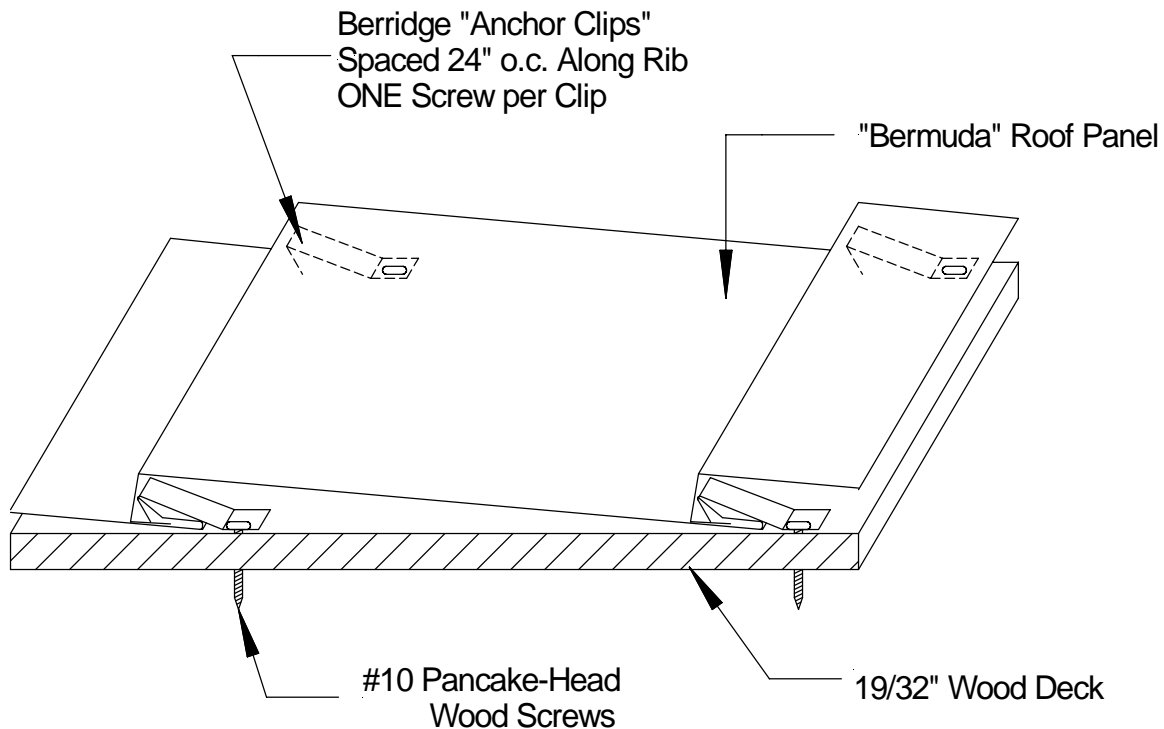
Typical Assembly Profile View

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Installation Method Berridge Manufacturing Company "Bermuda" (24 Ga. Steel) Roof Panel Attached to Wood Deck



Typical Assembly Isometric View

Optional Insulation: Rigid Insulation Board, maximum thickness of 3" and shall be a minimum density of 2.25 pcf (lbs/ft³) or a compressive strength of 25 psi minimum.