

## Evaluation Report "Centura Shingle" Metal Roof Assembly

### Manufacturer:

### Green American Home

(A division of Isaiah Industries)

8510 Industry Park Drive

Piqua, OH 45356

(888) 705-5656

*for*

### Florida Product Approval

### # FL 17418.1 R1

### Florida Building Code 5th Edition (2014)

Method: 1 - D

Category: Roofing

Sub - Category: Metal Roofing

Product: "Centura Shingle"

Material: Steel

Support: Wood Deck

### Prepared by:

James L. Buckner, P.E., SECB

Florida Professional Engineer # 31242

Florida Evaluation ANE ID: 1916

Project Manager: Diana Galloway

Report No. 15-150-CS-SW-ER

*(Revises 14-173-CS-SW-ER)*

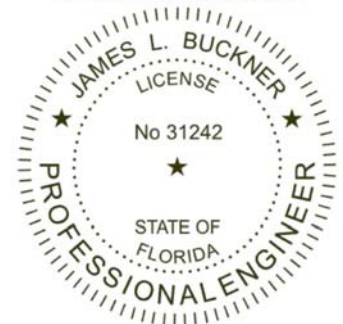
Date: 4 / 13 / 15

### Contents:

Evaluation Report

Pages 1 – 6

Secure Electronic Seal for Electronic Submittal



A handwritten signature in black ink, appearing to read "James L. Buckner".

Digitally Signed by: James L. Buckner, P.E.

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<b>Manufacturer:</b>	<b>Green American Home</b>
<b>Product Name:</b>	<b>Centura Shingle</b>
<b>Product Category:</b>	Roofing
<b>Product Sub-Category</b>	Metal Roofing
<b>Compliance Method:</b>	State Product Approval Rule: (1) (d)
<b>Product/System Description:</b>	“Centura Shingle” Steel roof panel, mechanically attached to Wood Deck with panel clips.
<b>Product Assembly as Evaluated:</b>	Refer to Page 4 of this report for product assembly components/materials & standards: <ol style="list-style-type: none"><li>1. Roof Panel</li><li>2. Panel Clips</li><li>3. Fasteners</li><li>4. Underlayment</li></ol>
<b>Support:</b>	<b>Type:</b> Wood Deck (Design of support and its attachment to support framing is outside the scope of this evaluation.) <b>Description:</b> <ul style="list-style-type: none"><li>• 15/32” or greater plywood,</li><li>• or Wood plank (min. specific gravity of 0.42)</li></ul>
<b>Slope:</b>	Minimum slope shall be In compliance with FBC Chapter 15 based on the type of roof covering, applicable code sections and in accordance with manufacturer’s recommendations.
<b>Performance:</b>	Wind Uplift Resistance: <ul style="list-style-type: none"><li>• Design Uplift Pressure: <b>- 46.85 PSF</b> (Refer to “Table A” attachment details herein)</li></ul>

- Performance Standards:** The product described herein has demonstrated compliance with:
- UL 580-06 – *Test for Uplift Resistance of Roof Assemblies*
  - UL 1897-04 – *Uplift test for roof covering systems*
- Standards Equivalency:** The UL 580-94 & UL 1897-98 standard version used to test the evaluated product assembly is equivalent with the prescribed standards in UL 580-06 & UL 1897-04 adopted by the Florida Building Code 5th Edition (2014).
- Code Compliance:** The product described herein has demonstrated compliance with Florida Building Code 5th Edition (2014), Section 1504.3.2.
- Evaluation Report Scope:** This building envelope product is evaluated for compliance with the structural wind load requirements of the Florida Building Code, as related to the scope section of the current Florida Product Approval Administrative Rule.
- Limitations and Conditions of Use:**
- 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 current Florida Product Approval Administrative Rule, the Florida Building Commission is the authority to approve products under “Optional Statewide Approval”.
  - Option for application outside “Limitations and Conditions of Use”  
Current Florida Product Approval Administrative Rule 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.
  - Design of support system is outside the scope of this report.
  - Fire Classification is outside the scope of Florida Product Approval Administrative Rule, and is therefore not included in this evaluation.
  - This evaluation report does not evaluate the use of this product for use in the High Velocity Hurricane Zone code section. (Dade & Broward Counties)
- Quality Assurance:** The manufacturer has demonstrated compliance of roof panel products in accordance with the Florida Building Code and current Florida Product Approval Administrative Rule for manufacturing under a quality assurance program audited by an approved quality assurance entity through **Farabaugh Testing & Engineering** (FBC Organization ID# QUA 7733)

**Components &  
Materials:  
(by Manufacturer)**

**Roof Panel:**

Material: Steel  
Thickness: 0.0142" (min.)  
Panel Width: 12-1/4" nominal (max.) Coverage  
Panel Length: 41.5" nominal  
Corrosion Resistance: Per FBC Section 1507.5.5

**Centura Shingle**

**Fastener:**

**Option 1:**

Type: Nails  
Annular Ring Shank Roofing Nails  
Size : 0.125" diameter (3/8" head dia.) x 1-3/4" long  
Material: Galvanized Steel or Stainless Steel  
Corrosion Resistance: Per FBC Section 1506.6 and 1507.4.4  
Standard: Per ASTM F 1667

**Option 2:**

Type: Screws  
Pancake-Head Screw with threaded points  
Size : #12  
Material: Galvanized or Stainless Steel  
Corrosion Resistance: Per FBC Section 1506.6 and 1507.4.4  
Standard: Per ANSI/ASME B18.6.1

**Components &  
Materials:  
(by Others)**

**Underlayment:**

Material and application shall be in compliance with FBC Chapter 15 based on the type of roof covering, applicable codes and in accordance with manufacturer's recommendations.

**Installation:**

**Installation Method:**

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

1. Install shingles left to right, eave to ridge.
2. Fastener spacing: 12-1/4" o.c.
3. Six (6) fasteners per shingle.  
(evenly spaced along the length of the nailing flange, along the side lock)
4. Tuck bottom lock of succeeding layer of shingles into side lock of preceding layer of shingles to form an integral interlock.
5. Stagger successive courses of shingles on a random basis, alternating in full 2/3, 1/3 stagger patterns.
6. For panel construction at the end of panels, refer to manufacturer's instructions and any site specific design.

TABLE "A" ALLOWABLE LOADS	
Design Pressure:	- 46.85 PSF
Fastener Spacing:	12-1/4"
# Fasteners per Shingle:	6
Notes: <ul style="list-style-type: none"><li>• Allowable design pressure(s) for allowable stress design (ASD).</li></ul>	

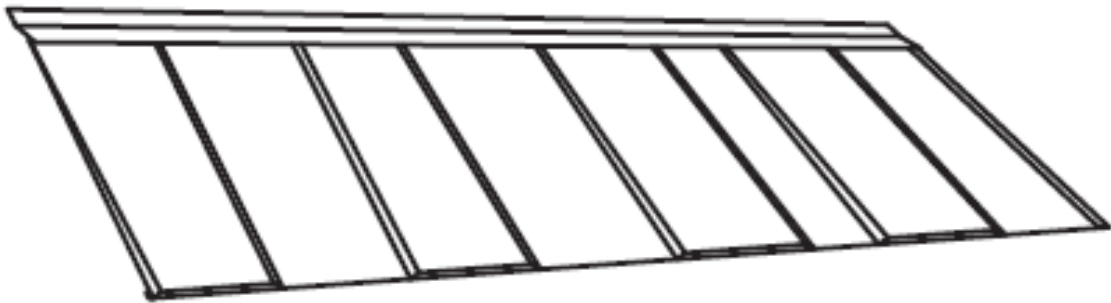
Install the "Centura Shingle" roof panel assembly in compliance with the installation method listed in this report and applicable code sections of FBC 5th Edition (2014). The installation method described herein is in accordance with the scope of this evaluation report. Refer to manufacturer's installation instructions as a supplemental guide for attachment.

**Referenced Data:**

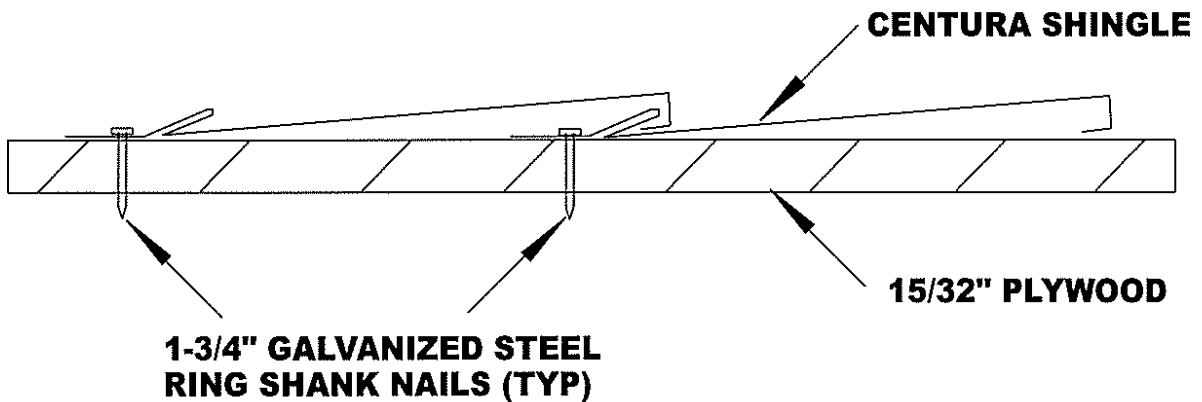
1. UL 580 & UL 1897 Uplift Test  
By Farabaugh Engineering and Testing, Inc.  
(FBC Organization #TST ID: 1654)  
Project No. T299-12, Report Date: September 14, 2012
2. Equivalency of Test Standard Certification  
By James L. Buckner, P.E. @ CBUCK Engineering  
(FBC Organization # ANE 1916)
3. Quality Assurance  
By Farabaugh Testing & Engineering (FBC Organization ID# QUA 7733)
4. Certification of Independence  
By James L. Buckner, P.E. @ CBUCK Engineering  
(FBC Organization # ANE 1916)

## Installation Method Green American Home "Centura Shingle" (0.0142" Steel) Roof Panel attached to Wood Deck

### Drawings



Typical Panel Profile



Section Plan View

TABLE "A"	
Design Pressure:	- 46.85 PSF
Fastener Spacing:	12-1/4"
# Fasteners per Shingle:	6