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- ▶ EMERGENCY MANAGEMENT
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FL #	FL7807
Application Type	New
Code Version	2004
Application Status	Approved
Comments	
Archived	<input type="checkbox"/>
Product Manufacturer	Rare Manufacturing, Inc.
Address/Phone/Email	19154 - 95 A. Ave Surrey, NON-US 00000 (604) 882-2888 holly@raremanufacturing.com
Authorized Signature	James L. Buckner P.E. @CBUCK Engineering jimmy@cbuckinc.net
Technical Representative	
Address/Phone/Email	
Quality Assurance Representative	
Address/Phone/Email	
Category	Roofing
Subcategory	Metal Roofing
Compliance Method	Evaluation Report from a Florida Registered Architect or a Licensed Florida Professional Engineer <input checked="" type="checkbox"/> Evaluation Report - Hardcopy Received
Florida Engineer or Architect Name who developed the Evaluation Report	James L. Buckner, P.E. @ C-Buck, Inc.
Florida License	PE-31242
Quality Assurance Entity	Intertek Testing Services NA Inc.- ETL/Warnock Hersey
Quality Assurance Contract Expiration Date	
Validated By	Do Yeon Kim, P.E. <input type="checkbox"/> Validation Checklist - Hardcopy Received
Certificate of Independence	FL7807_R0_COI_CertificateOfIndependence.pdf
Referenced Standard and Year (of Standard)	Standard UL-1897
	Year 1998
Equivalence of Product Standards	
Certified By	
Sections from the Code	

Product Approval Method	Method 1 Option D
Date Submitted	11/13/2006
Date Validated	12/03/2006
Date Pending FBC Approval	12/11/2006
Date Approved	02/07/2007

Summary of Products

FL #	Model, Number or Name	Description
7807.1	Ironwood Shake	Minimum 28 Gauge Steel, Max. 48" long by 12" Wide Panel Attached to Plywood Deck
<p>Limits of Use Approved for use in HVHZ: No Approved for use outside HVHZ: Yes Impact Resistant: No Design Pressure: +N/A/-72.5 Other: The required design wind loads shall be determined for each project per FBC, 2004, Section 1603.1.4. Any rational analysis computations shall be prepared by a qualified design professional, as required by FBC, Section 105 or 106. The maximum fastener spacing listed herein shall not be exceeded.</p>		<p>Installation Instructions FL7807_R0_II_FL7807.1-IronwoodShake-Ply-INSTALLATION.pdf Verified By: James L. Buckner, P.E. @ C-Buck, Inc. P.E. #31242 Created by Independent Third Party: Evaluation Reports FL7807_R0_AE_FL7807.1-IronwoodShake-Ply-EVALREPORT.pdf Created by Independent Third Party:</p>

Contact Us :: Phone: 850-487-1824 1940 North Monroe Street, Tallahassee FL 32399

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Product Approval Accepts:





C-BUCK Engineering

Specialty Structural Engineering

C-Buck, Inc. Florida Certificate of Authorization # 8064

Certificate of Independence for Evaluation

for

FL 7807

Rare Manufacturing, Inc.

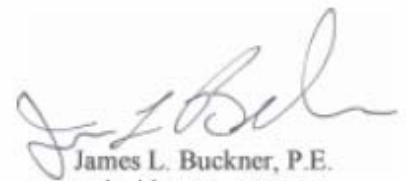
19154 – 95 A. Avenue

Surrey, British Columbia

Canada V4N 4P2

James L. Buckner, P.E. – C-Buck, Inc., Engineering – ANE 1916

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James L. Buckner, P.E.
Florida P.E. # 31242
11/10/06

C-BUCK Engineering

Specialty Structural Engineering

C-Buck, Inc. Florida Certificate of Authorization # 8064

Installation Method *of*

Rare Manufacturing, Inc.

“Ironwood Shake”

Metal Roof Assembly

for

Florida Product Approval

FL 7807.1

Florida Building Code 2004

Method: 1 - D

Category: Roofing

Sub - Category: Metal Roofing (Non-Structural)

Product: *Ironwood Shake (Shingle Panel)*

Material: *Steel*

Panel Dimensions: *48” x 12” (Net Coverage)*

Support Type: *Wood Deck*

Prepared for:

Rare Manufacturing, Inc.

19154 – 95 A. Avenue

Surrey, British Columbia

Canada V4N 4P2

Prepared by:

James L. Buckner, P.E.

Florida Professional Engineer # 31242

Florida Evaluation ANE ID: 1916

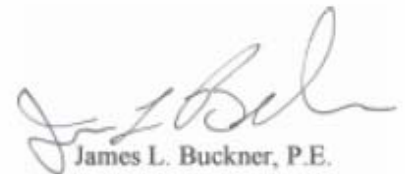
Project Manager: Diana Galloway

Report No. 06-329-Ironwood-48-SW-IM

Date: 10 / 25 / 06

Contents:

Installation Method Pages 1 – 5



James L. Buckner, P.E.
Florida P.E. # 31242

11/10/06



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Evaluated Installation Method

Evaluated Installation Method:

Fastener Description:

“**Ironwood Shake**” shingle panels shall be through-fastened to the plywood deck with #8-14 low profile, pan-head, corrosion resistant, woodgrip screws of sufficient length to **penetrate through the deck a minimum of 3/16” per ANSI/ASME B18.6.4**

Attachment:

Install the “**Ironwood Shake**” shingle panels to plywood deck with fasteners as described in this evaluation report, minimum fastener penetration through deck, 3/16”. Shingle panels shall be through-fastened to the plywood deck spaced **maximum 12” o.c between fasteners**.

Install system in compliance with the attached installation method.

Manufacturer’s Installation Instructions:

Refer to the manufacturer’s installation instructions as a supplemental guide for attachment.

Evaluation Report:

Conditions and Limitations of the Evaluation Report apply.

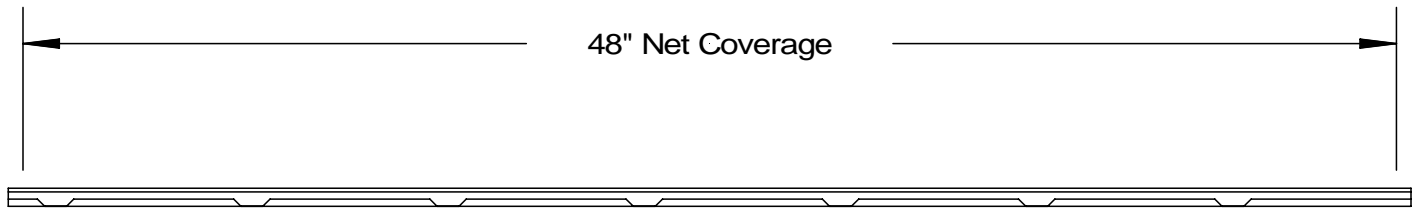
C-BUCK Engineering

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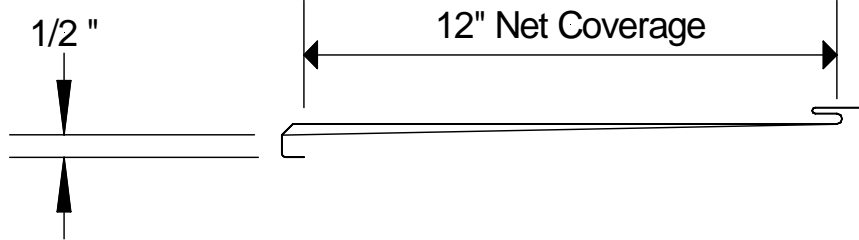
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Installation Method Rare Manufacturing, Inc. “Ironwood Shake”(Steel Shingle Panel) Attached to Plywood Deck

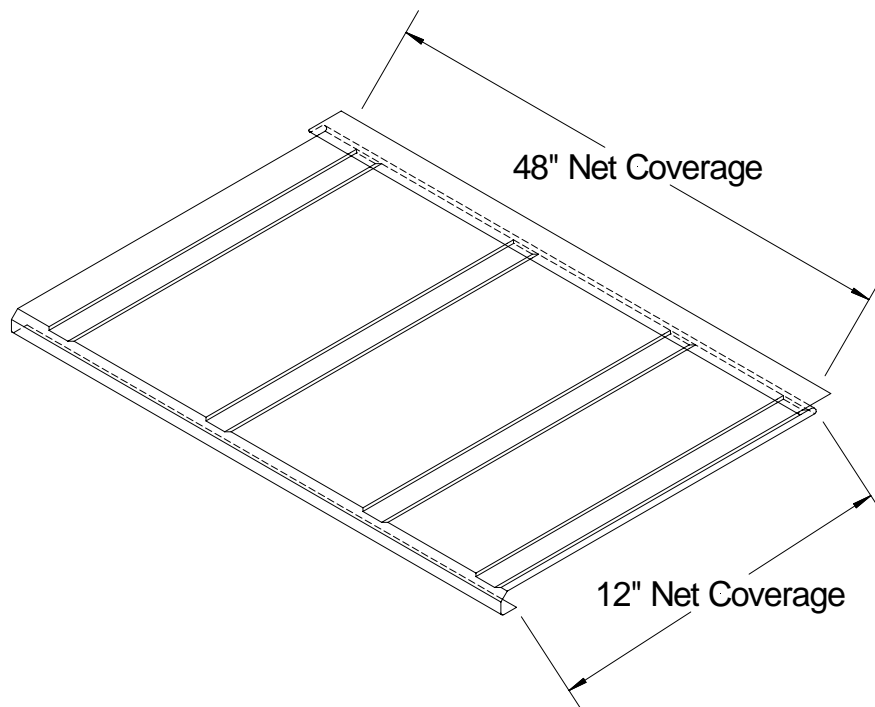
Profile Drawings



“Ironwood Shake” Shingle Panel Profile View - Length



“Ironwood Shake” Shingle Panel Profile View – Width



“Ironwood Shake” Shingle Panel Isometric View

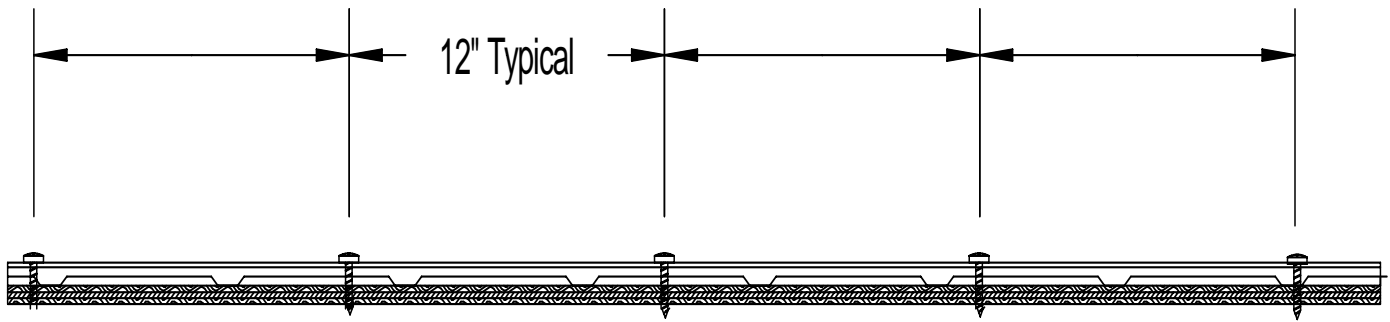
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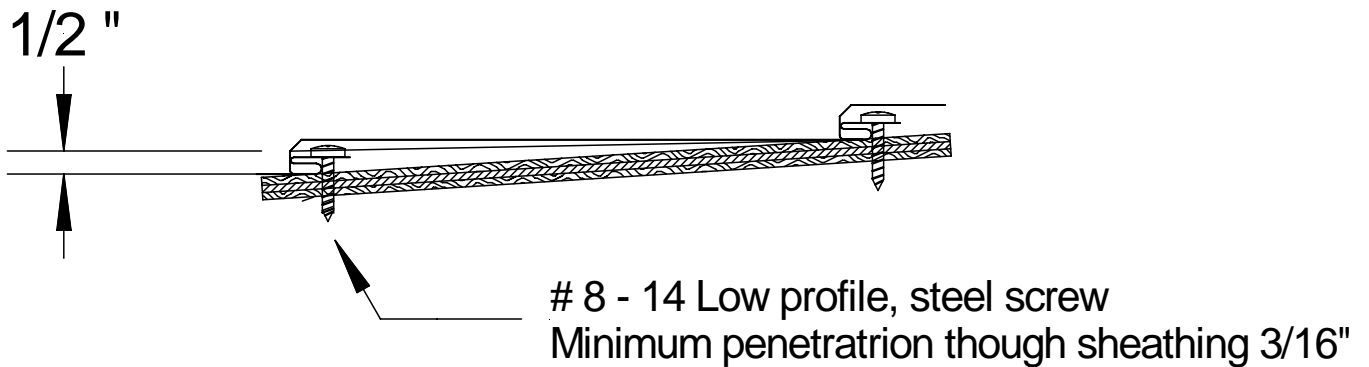
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Installation Method (Continued) Rare Manufacturing, Inc. “Ironwood Shake”(Steel Shingle Panel) Attached to Plywood Deck

Assembly Profile Drawings



Assembly Profile View (Typical Fastening Pattern Along Row – Interior)



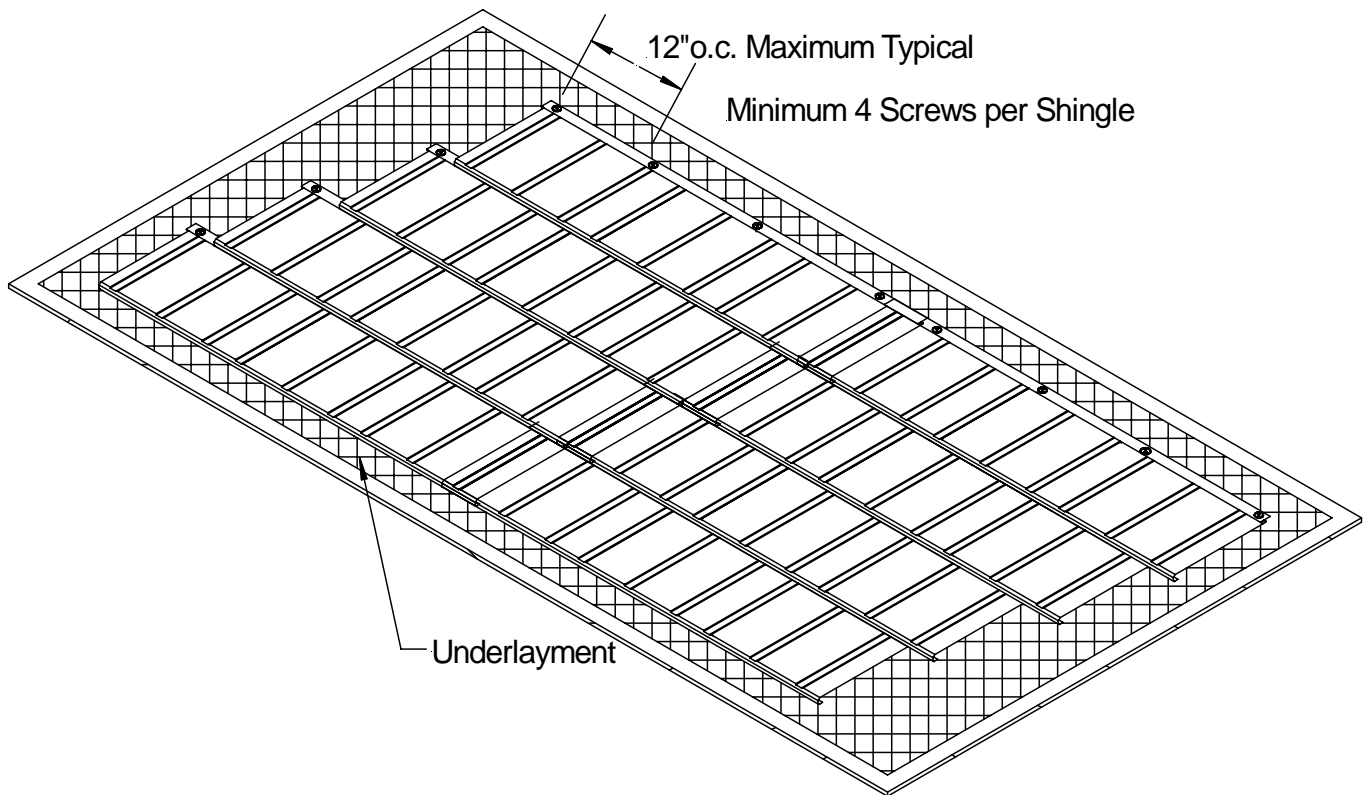
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Installation Method (Continued) Rare Manufacturing, Inc. “Ironwood Shake”(Steel Shingle Panel) Attached to Plywood Deck

Assembly Isometric Drawing



Typical Assembly Isometric View

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Evaluation Report

of

Rare Manufacturing, Inc.

“Ironwood Shake”

Metal Roof Assembly

for

Florida Product Approval

FL 7807.1

Florida Building Code 2004

Method: 1 - D

Category: Roofing

Sub - Category: Metal Roofing (Non-Structural)

Product: *Ironwood Shake (Shingle Panel)*

Material: *Steel*

Panel Dimensions: *48” x 12” (Net Coverage)*

Support Type: *Wood Deck*

Prepared for:

Rare Manufacturing, Inc.

19154 – 95 A. Avenue

Surrey, British Columbia

Canada V4N 4P2

Prepared by:

James L. Buckner, P.E.

Florida Professional Engineer # 31242

Florida Evaluation ANE ID: 1916

Project Manager: Diana Galloway

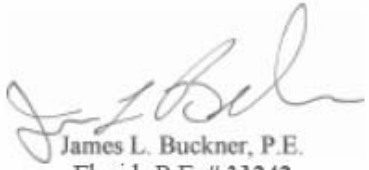
Report No. 06-329-Ironwood-48-SW

Date: 10 / 25 / 06

Contents:

Evaluation Report Pages 1 – 3

Installation Method Pages 4 – 6


James L. Buckner, P.E.
Florida P.E. # 31242
11/10/06



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Manufacturer:	Rare Manufacturing, Inc.
Product Name:	Ironwood Shake
Product Category:	Roofing
Product Sub-Category	Metal Roofing (Non-Structural)
Compliance Method:	1-D per Rule 9B-72
Panel Type:	Interlocked, Shingle Panels
Panel Material / Standards:	Steel (in compliance with ASTM A653 or ASTM A792) Material shall comply with Table 1507.4.3 of the Florida Building Code (FBC), 2004
Panel Dimensions:	Thickness: Nominal 28 Gauge (0.015" Base Metal Minimum) Length: 48" Net Coverage Length (51") Width: 12" Net Coverage Width (13 ½") Height: ½"
Support Type:	Wood Deck (Design of support system is not included in this evaluation)
Support Description:	<ul style="list-style-type: none">• 15/32" or greater plywood,• or Wood plank
Slope Range:	3 : 12 or Greater
Design Uplift Pressure:	72.5 PSF (Safety Factor of 2:1)
Underlayment:	Minimum underlayment shall be per FBC 2004, Section 1507.4.5
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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- Fastener Description:** “Ironwood Shake” shingle panels shall be through-fastened to the plywood deck with #8-14 low profile, pan-head, corrosion resistant, woodgrip screws of sufficient length to **penetrate through the deck a minimum of 3/16” per ANSI/ASME B18.6.4**
- Installation:** Install the “Ironwood Shake” shingle panel to plywood deck with fasteners as described in this evaluation report, minimum fastener penetration through deck, 3/16”. Shingle panels shall be through-fastened to the plywood deck spaced **maximum 12” o.c between fasteners.**
- 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 **Intertek Testing Services-ETL/Warnock Hersey** (QUA 1673).
- Performance Standards:** The roof assembly described herein has been tested in accordance with:
- **UL 1897-98, Uplift Tests for Roof Covering Systems – with Revisions through December 1999**
- Code Compliance:** The product described herein has demonstrated compliance with the **Florida Building Code 2004, (with 2006 Supplements) Section 1504.3.1.**
- 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, 2004, Section 1603.1.4. Any rational analysis computations shall be prepared by a qualified design professional, as required by FBC, 2004, Section 105 or 106. The maximum fastener spacing listed herein shall not be exceeded. This product is not approved for use in the High Velocity Hurricane Zone.



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Referenced Data:

1. UL 1897 Uplift Test
By Intertek Testing Services - ETL / Warnick Hersey (TST 1509)
 - Report # 3056606, Report Date: 10/11/05
2. Quality Assurance
By Intertek Testing Services – ETL / Warnick Hersey (QUA 1673)
3. Certification of Independence
By James L. Buckner, P.E. @ C-Buck Engineering (ANE 1916)
4. Engineering Calculations
By C-Buck Engineering
 - Report #C06-329-IS-48-SW-P, Dated: 10/25/06

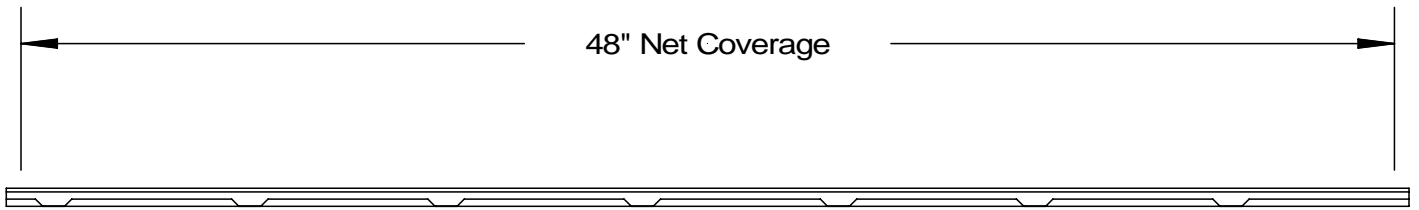
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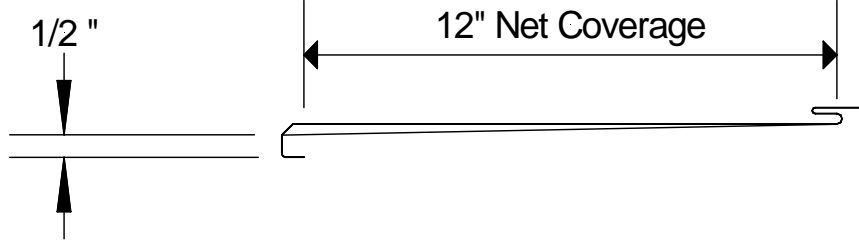
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Installation Method Rare Manufacturing, Inc. “Ironwood Shake”(Steel Shingle Panel) Attached to Plywood Deck

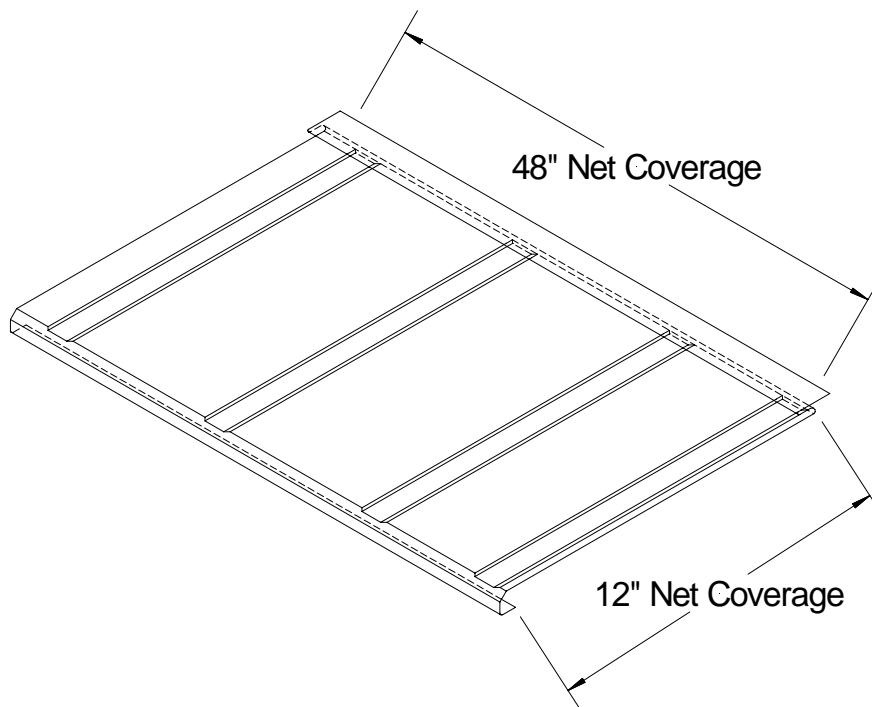
Profile Drawings



“Ironwood Shake” Shingle Panel Profile View - Length



“Ironwood Shake” Shingle Panel Profile View – Width



“Ironwood Shake” Shingle Panel Isometric View

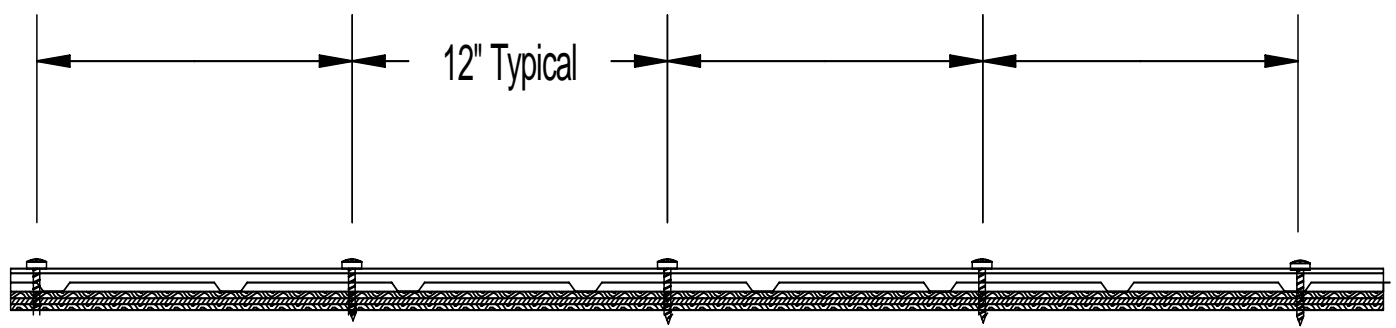
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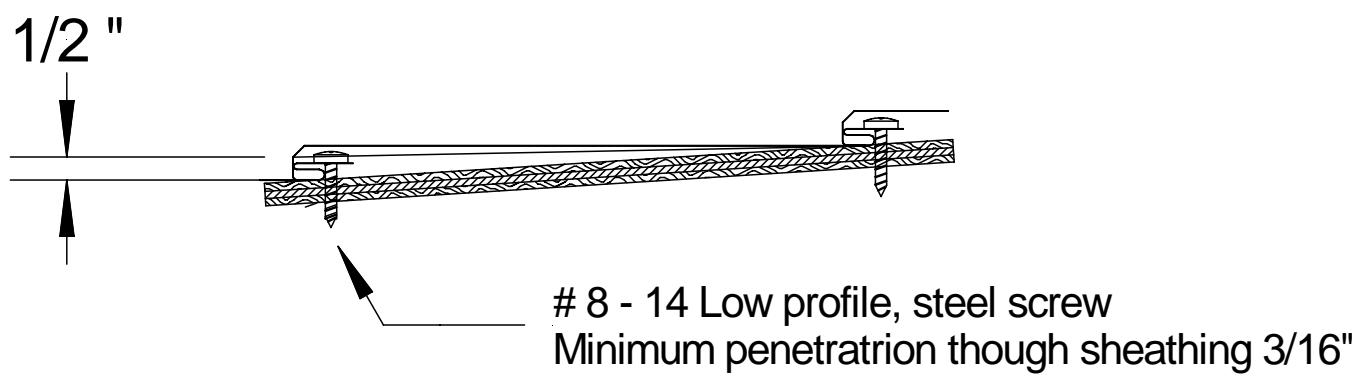
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Installation Method (Continued) Rare Manufacturing, Inc. "Ironwood Shake"(Steel Shingle Panel) Attached to Plywood Deck

Assembly Profile Drawings



Assembly Profile View
(Typical Fastening Pattern Along Row – Interior)



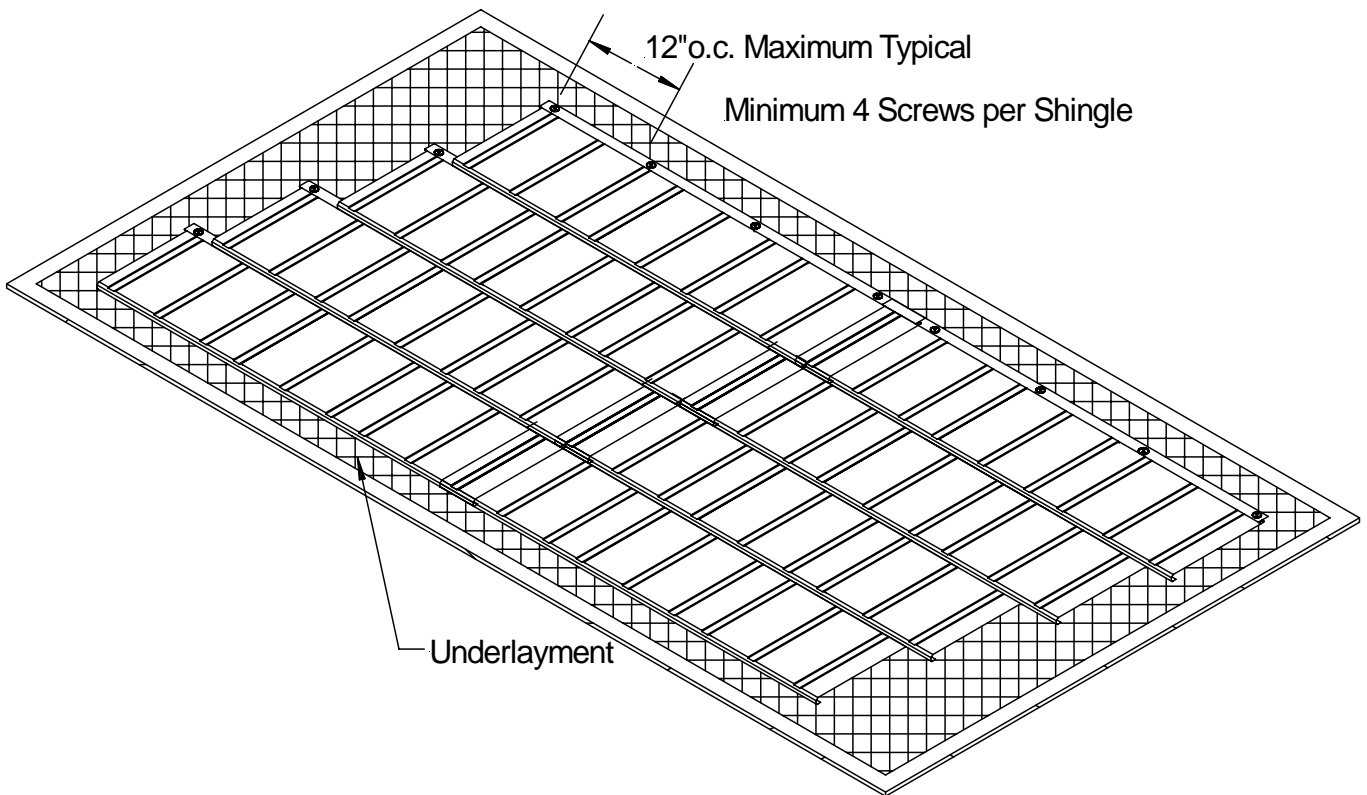
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Installation Method (Continued) Rare Manufacturing, Inc. “Ironwood Shake”(Steel Shingle Panel) Attached to Plywood Deck

Assembly Isometric Drawing



Typical Assembly Isometric View