

Evaluation Report "Super Dutch Lap" Metal Roof Assembly

Manufacturer:
Advanced Aluminum

2941 Parkway Street
Lakeland, FL 33811
(863) 648-5787

for

Florida Product Approval
FL 32151.1 R2

Florida Building Code 8th Edition (2023)

Method: 1 - D

Category: Structural Components

Sub - Category: Roof Deck

Product: "Super Dutch Lap" Roof Panel

Material: Steel

Support: Steel Purlins

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.

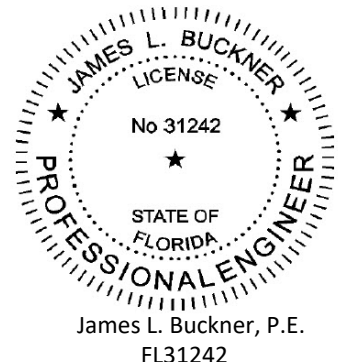
Prepared by:

James L. Buckner, P.E., S.E.C.B.
Florida Professional Engineer # 31242
Florida Evaluation ANE ID: 1916
Report No. 23-565.1-SDL-P-ER
(Revises 20-273.1-SDL-P-ER, FL32151.1 R1)
Date: 10/11/2023

Contents:

Evaluation Report

Pages 1 – 7



James L. Buckner, P.E.
FL31242

Date: 2023.10.11
'13:47:53 -04'00

Manufacturer:	Advanced Aluminum 2941 Parkway Street Lakeland, FL 33811 (863) 648-5787 www.advaluminum.com
Product Name:	“Super Dutch Lap”
Product Category:	Structural Components
Product Sub-Category	Roof Deck
Compliance Method:	State Product Approval Rule 61G20-3.005 (1) (d)
Product/System Description:	“Super Dutch Lap” Roof Panel A Heavy Duty Lapped Steel Panel with Exposed Fastener, mechanically attached to steel purlins.
Product Assembly as Evaluated:	Refer to Page 4 of this report for product assembly components/materials & standards: 1. Roof Panel 2. Fasteners
Support:	Type: Steel Purlins (Design of steel support and its attachment to support framing is outside the scope of this evaluation.) Description: • 14 Gauge minimum • Yield Strength: 50 ksi minimum
Slope:	Minimum slope shall be in compliance with FBC Chapter 15 Section 1507.4.2, applicable code sections and in accordance with manufacturer’s recommendations.
Performance:	Wind Uplift Resistance: • Design Uplift Pressure: - 67.5 PSF

Performance Standards:	The product described herein has demonstrated compliance with: • UL580-06 – <i>Test for Uplift Resistance of Roof Assemblies</i> • UL 1897-15 – <i>Uplift test for roof covering systems</i>
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 1897-15 adopted by the Florida Building Code 8th Edition (2023) for use as evaluated in this report.
Code Compliance:	The product(s) described herein have demonstrated compliance with the performance standards listed above as referenced in the: Florida Building Code 8th (2023) International Building Code 2021
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. • 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. • All metal components and fasteners shall be corrosion resistant in accordance with applicable sections of FBC, including but not limited to Sections 1504.3.2, 1506.6 and 1507.4.4. • <u>Scope of “Limitations and Conditions of Use” for this evaluation:</u> 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”. • <u>Option for application outside “Limitations and Conditions of Use”</u> 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. • Fire Classification is outside the scope of Rule 61G20-3, 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 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 through Farabaugh Engineering and Testing, Inc. (FBC Organization ID# QUA 7733).

Components/Materials: **Roof Panel:** "Super Dutch Lap"
Material: Steel
Thickness: 26 gauge min.
Panel Width: 36" (max.) Coverage
Rib Height: 7/8"
Yield Strength: 40 ksi min.
Corrosion Resistance: In compliance with FBC Section 1507.4.3

Fastener: (Panel to Support & Side laps)

Type: Hex-Head Self-drilling Screw w/WSW
Size : #12 x 1"
Corrosion Resistance: Per FBC Section 1506.6 and 1507.4.4
Standard: Approved Per FBC 1507.4.4

Installation:**Installation Method:**

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

- Purlin Spacing: **Refer to "TABLE A" Below**
- Fastener Spacing: 9" o.c. (max.)
- One (1) fastener (at each purlin intersection)
- Side Lap Spacing: 12" o.c.
(along the length of the end laps and within 3" from each end)
- Rib Interlock: Lapped
- Minimum fastener penetration thru bottom of support, 3/4".
(through flange of steel purlins)

TABLE "A" ALLOWABLE LOADS	
	METHOD 1:
Design Pressure:	- 67.5 PSF
Fastener Spacing (max.):	9"
Max. Support Spacing:	48"
Side Lap Spacing:	12"
Span Condition:	3 or more
Notes: • 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.	

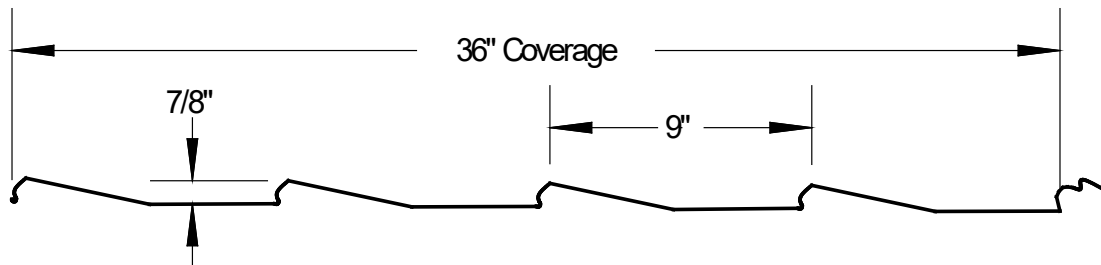
Install the "Super Dutch Lap" roof panel assembly in compliance with the installation method listed in this report and applicable code sections of FBC 8th Edition (2023). The installation method described herein is in accordance with the scope of this evaluation report. Refer to manufacturer's installation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

Referenced Data:

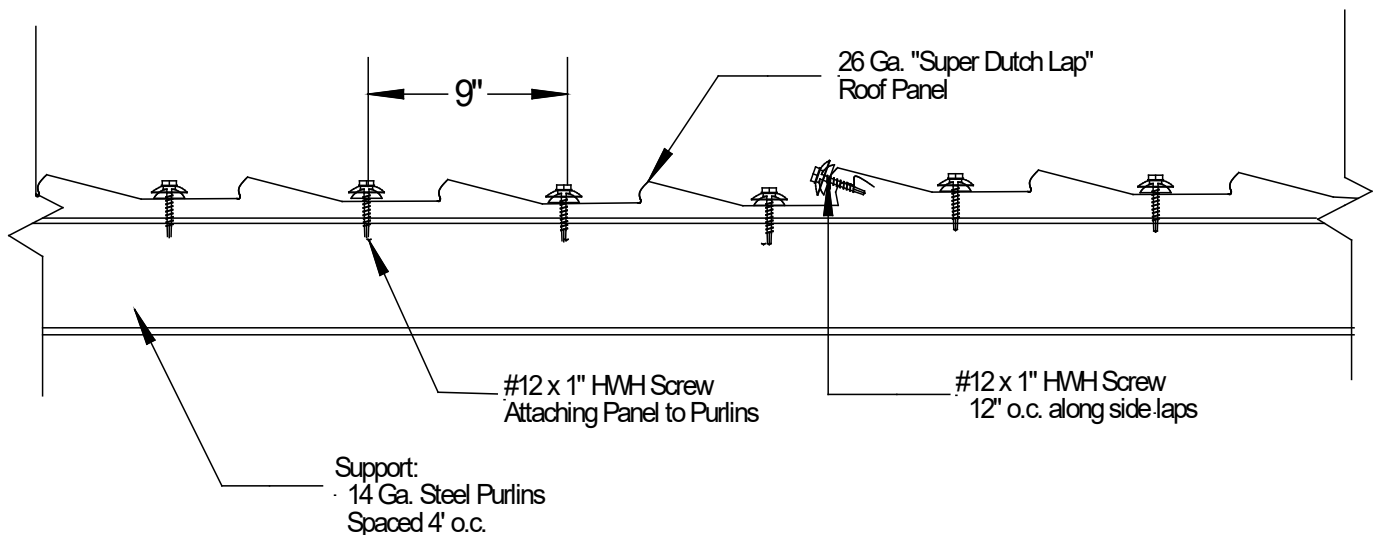
1. UL580-94/UL1897-98 Uplift Test
Architectural Testing, Inc.
(FBC Organization ID# TST 1558)
Report #70328.01-109-44 Date: 2/06/07
2. Equivalency of Test Standard Certification
By James L. Buckner, P.E. @ CBUCK Engineering
(FBC Organization #ANE 1916)
3. Quality Assurance
UL, LLC (FBC Organization ID# QUA 9625)
4. Certification of Independence
By James L. Buckner, P.E. @ CBUCK Engineering
(FBC Organization # ANE 1916)

Installation Method Advanced Aluminum "Super Dutch Lap"- Heavy Duty Steel Roof Panel attached to 14 Ga. Steel Purlins

Profile Drawings



Typical Panel Profile

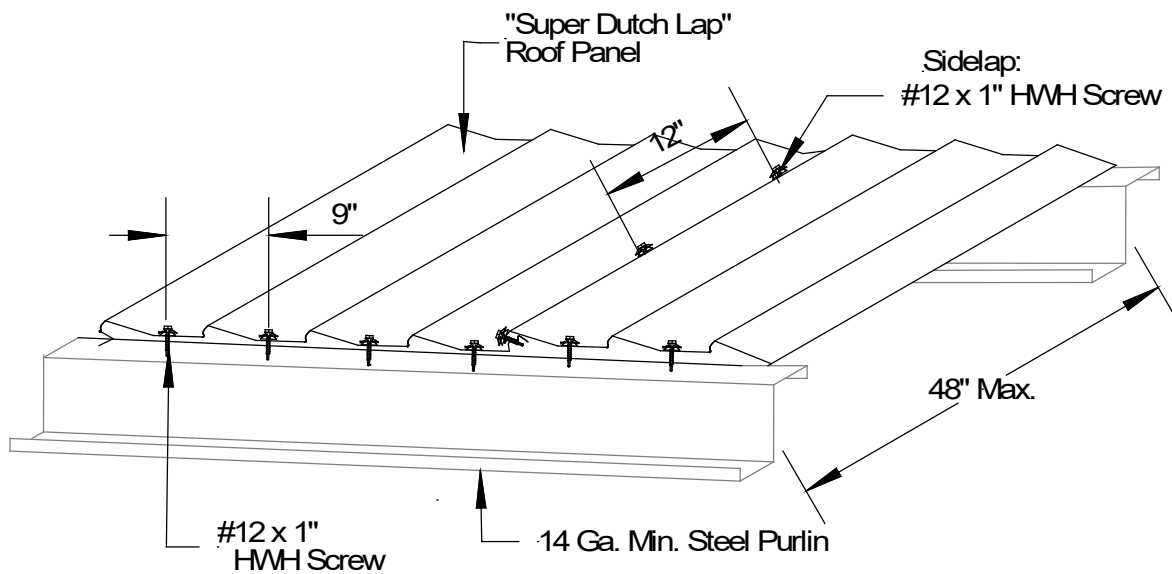


Roof Assembly Profile
Typical Fastening Pattern along Supports

Installation Method

Advanced Aluminum

"Super Dutch Lap" -Heavy Duty Steel Roof Panel attached to 14 Ga. Steel Purlins



Typical Roof Assembly Isometric View

TABLE "A"	
	METHOD 1:
Design Pressure:	- 67.5 PSF
Fastener Spacing:	9"
Max. Support Spacing:	48"
Side Lap Spacing:	12"
Span Condition:	3 or more