

**EVALUATION REPORT OF
UNION CORRUGATING COMPANY
'ML150 PANEL'**

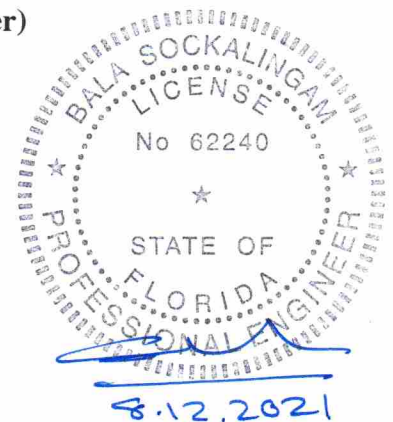
**FLORIDA BUILDING CODE 7TH EDITION (2020)
FLORIDA PRODUCT APPROVAL
FL 39390.2
ROOFING
METAL ROOFING**

**Prepared For:
Union Corrugating Company
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**This report consists of
Evaluation Report (3 Pages including cover)
Installation Details (1 Page)
Load Span Table (1 Page)**

**Report No. C2499-2
Date: 8.12.2021**



Manufacturer: Union Corrugating Company

Product Name: ML150

Panel Description: Standing seam panel with max. 16.5" wide coverage and 1.5" high ribs

Materials: Minimum 24 ga., 50 ksi steel. Galvanized coated steel (ASTM A653) or Galvalume coated steel (ASTM A792) or painted steel (ASTM A755). Corrosion resistant as per FBC 2020 Section 1507.4.3.

Deck Description: Min 22 ga. 33 ksi B-deck for new and existing construction with supports spaced at maximum 5' ft o.c. The deck and its attachment to supports must be designed by other to carry the panel loads.

Underlayment: Minimum underlayment as per FBC 2020 Section 1507.4.5.1.
For HVHZ, minimum underlayment as per FBC 2020 Section 1518.2, 1518.3 and 1518.4.

Insulation: Maximum 4" thick rigid board insulation. (Optional)
For HVHZ, min. 3/4" and max. 4" thick rigid board insulation

Slope: 1/4:12 or greater in accordance with FBC 2020 Section 1507.4.2
For HVHZ, 2:12 or greater in accordance with FBC 2020 Section 1515.2.

Design Uplift Pressure: 74.9 psf at clip spacing of 24" o.c. with 180° seam
(Factor of Safety = 2) 162.0 psf at clip spacing of 6" o.c. with 180° seam

Panel Attachment: One piece 24 ga., 3" long clip with (2) #14-13 pancake head deck fasteners through 4" x 5" x 16 ga. bearing plate, felt and rigid insulation into deck.
Fastener shall be of sufficient length to ensure a minimum penetration of 3 pitches of thread below the steel deck.
Clips, bearing plates and fasteners are corrosion resistant as per FBC 2020 Section 1506.7 and 1507.4.4, respectively.

Test Standards: Roof assembly tested in accordance with TAS 125-03 'Standard Requirements for Metal Roofing Systems', TAS 100-95 'Test Procedure for Wind and Wind Driven Rain Resistance of Discontinuous Roof Systems' and TAS 110-00 'Testing Requirements for Physical Properties of Roof Membrane, Insulation, Coatings and Other Roofing Components'.

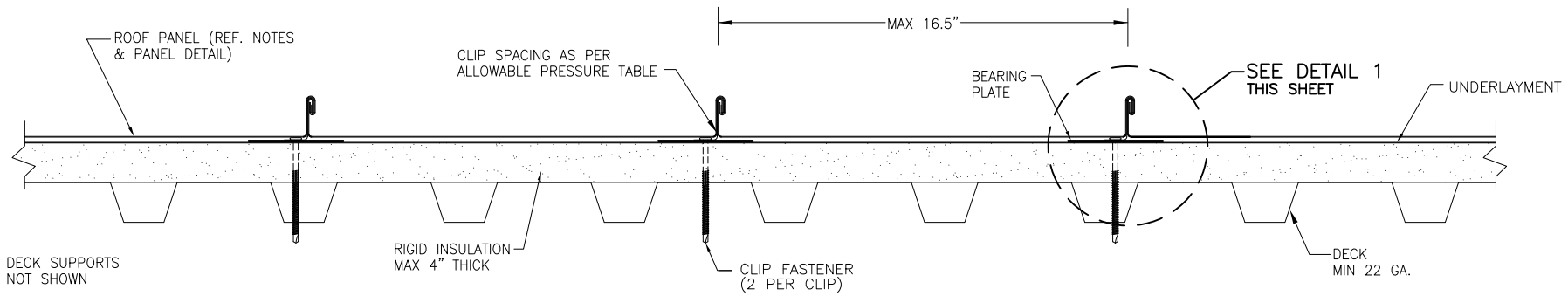
Code Compliance: The product described herein has demonstrated compliance with FBC 2020 Section 1504.3, 1507.4, 1518.9 and 1523.6.5.2.4.

Product Limitations: Design wind loads shall be determined for each project in accordance with FBC 2020 Section 1609, Section 1620 or ASCE 7-16 using allowable stress design. Maximum clip spacing listed herein shall not be exceeded. The design pressure for reduced clip spacing may be computed using rational analysis prepared by a Florida Professional Engineer or based on Union load span table. This evaluation report is applicable in High Velocity Hurricane Zone. Fire classification is not within scope of this Evaluation Report. Refer to FBC 2020 Section 1505 and current approved roofing materials directory or ASTM E108/UL790 report from an accredited laboratory for fire ratings of this product.

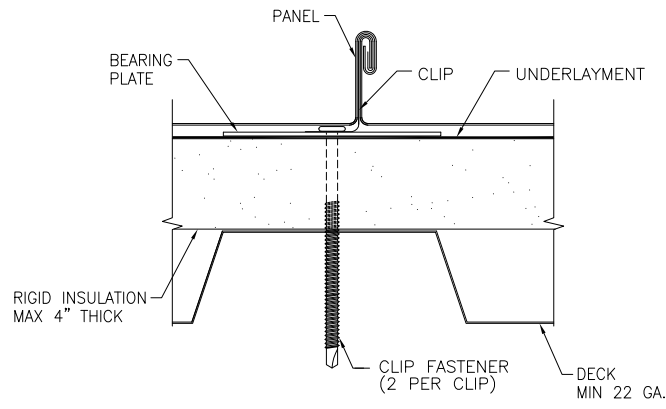
Supporting Documents: TAS 125 Test Report
Farabaugh Engineering and Testing Inc.
Project No. T218-21, Reporting Date 8/6/2021

TAS 100-95 Test Report
Farabaugh Engineering & Testing, Inc.
Report No. T219-21, Reporting Date 7/26/2021

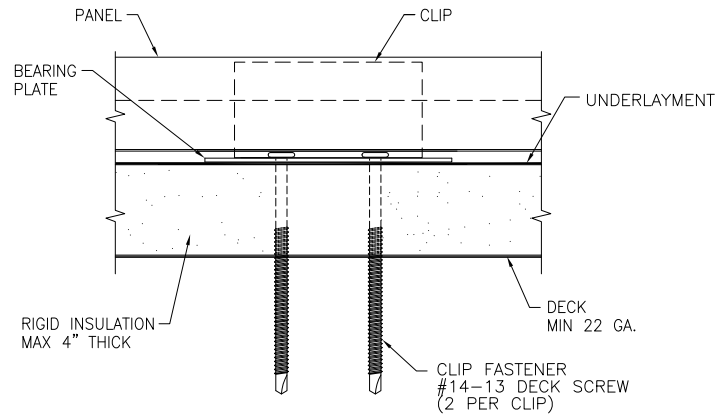
TAS 110-00 Test Report on Valspar Fluoropon coated metal panels
PRI Asphalt Technologies
Report No. VLS-004-02-01, Reporting Date 2/22/2013
Report No. VLS-005-02-01, Reporting Date 2/22/2013



TYPICAL PANEL INSTALLATION X-SECTION

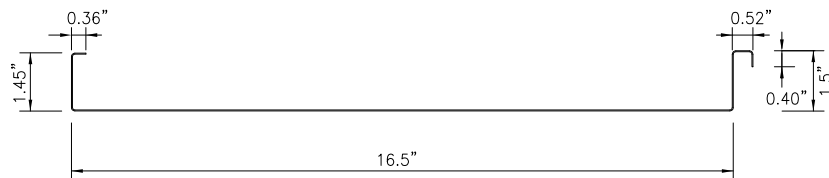


CLIP SECTION VIEW



CLIP SIDE VIEW

DETAIL 1



PANEL SECTION
(MIN 24 GA.)

GENERAL NOTES:

1. ARCHITECTURAL ROOF PANEL HAS BEEN DESIGNED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE (FBC).
2. ROOF PANELS SHALL BE 24 GA. (t = 0.023"). EFFECTIVE COVERING WIDTH OF PANEL = 16.5".
3. ROOF PANELS SHALL BE INSTALLED OVER STRUCTURE AS SPECIFIED ON THIS DRAWING.
4. REQUIRED DESIGN WIND LOADS SHALL BE DETERMINED FOR EACH PROJECT. THIS PANEL SYSTEM MAY NOT BE INSTALLED WHEN THE REQUIRED DESIGN WIND LOADS ARE GREATER THAN THE ALLOWABLE WIND LOAD TABLE.
5. CLIPS & FASTENERS MUST BE IN ACCORDANCE WITH THIS DRAWING & THE FLORIDA BUILDING CODE. IF A DIFFERENCE OCCURS BETWEEN THE MINIMUM REQUIREMENTS OF THIS DRAWING & THE CODE, THE CODE SHALL CONTROL.
6. RAFTERS/JOISTS/TRUSSES MUST BE DESIGNED TO WITHSTAND WIND LOADS AS REQUIRED FOR EACH APPLICATION AND ARE THE RESPONSIBILITY OF OTHERS.

| | |
|---|--|
| DRAWN BY: B.S. | CHECKED BY: R.B. |
| PLOT: | DATE: 8/9/21 |
| DATE | |
| BY | |
| REVISION DESCRIPTION | |
| NO. | |
| DRAWING TITLE 24 GA. ML150 STANDING SEAM PANEL | |
| CONSULTANTS BALA SOCKALINGAM, PH.D., P.E. | MANUFACTURER METAL SALES MANUFACTURING CORP. |
| 1216 N LANSING AVE., SUITE C LOUISVILLE, KY 40202 PHONE: 918-482-5992 FAX: 866-366-1543 | 545 SOUTH 3RD ST., SUITE 200 LOUISVILLE, KY 40202 502-855-4300 |
| DRAWING NO. 2499-2 | REV. |
| PAGE NO. 1 | OF 1 |

UNION CORRUGATING COMPANY
ML150 Panel Uplift Loads
Min 24 Ga.

| Description | Clip Spacing Along Panel Length (in) | Allowable Uplift Load (psf) |
|---|--|-----------------------------------|
| Max Coverage width: 16.5" Seam: 180° ML150 fixed clip 3" long, 1.5" tall, 24 ga. Clip Fasteners: (2) #14-13 long pancake head deck screws Deck: 22 ga. B-Deck | 6 | 162.0 |
| | 8 | 152.3 |
| | 9 | 147.4 |
| | 10 | 142.6 |
| | 12 | 132.9 |
| | 14 | 123.2 |
| | 15 | 118.4 |
| | 16 | 112.3 |
| | 18 | 99.8 |
| | 20 | 89.8 |
| | 21 | 85.5 |
| | 22 | 81.7 |
| | 24 | 74.9 |

Notes:

1. The bold numbers indicate design loads calculated from test data with safety factor of 2.
2. Panels must be installed as per Evaluation Report FL 39390.2 and Union current installation procedure.

