

**EVALUATION REPORT OF  
UNION CORRUGATING COMPANY  
'29 GA. MASTERRIB PANEL'**

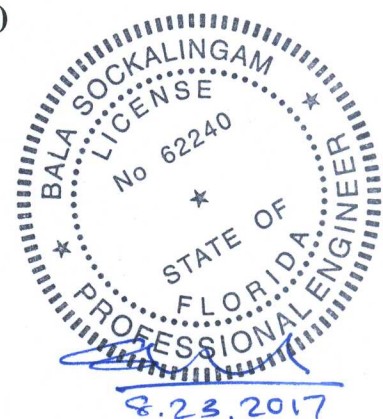
**FLORIDA BUILDING CODE 6TH EDITION (2017)  
FLORIDA PRODUCT APPROVAL  
FL 20484.5-R1  
ROOFING  
METAL ROOFING**

**Prepared For:  
Union Corrugating Company  
701 S. King St.  
Fayetteville, NC 28301  
Telephone: (910) 483-0479  
Fax: (910) 483-1091**

**Prepared By:  
Bala Sockalingam, Ph.D., P.E.  
Florida Professional Engineer #62240  
1216 N Lansing Ave., Suite C  
Tulsa, OK 74106  
Telephone: (918) 492-5992  
FAX: (866) 366-1543**

**This report consists of  
Evaluation Report (3 Pages including cover)  
Installation Details (1 Page)  
Load Span Table (1 Page)**

**Report No. C2175-5  
Date: 8.23.2017**



Manufacturer: Union Corrugating Company

Product Name: MasterRib Panel

Panel Description: 36" wide coverage with 3/4" high ribs at 9" o.c.

Materials: Minimum 29 ga., 80 ksi steel. Galvanized coated steel (ASTM A653) or Galvalume coated steel (ASTM A792) or painted steel (ASTM A755).

Deck Description: Min. 7/16" thick OSB or min. 15/32" thick APA rated plywood or min. 3/4" thick wood plank (min SG of 0.42) for new and existing constructions. Designed by others and installed as per FBC 2017.

New Underlayment: Minimum underlayment as per FBC 2017 Section 1507.4.5.1. Required for new construction.

Existing Underlayment: One layer of asphalt shingles over one layer of #30 felt. For reroofing (Optional) construction only.

Slope: 1/2:12 or greater in accordance with FBC 2017 Section 1507.4.2

Design Uplift Pressure: 56.0 psf @ fastener spacing of 24" o.c.  
(Factor of Safety = 2) 124.0 psf @ fastener spacing of 6" o.c.

Panel Attachment: #10-15 x 1.5" long wood screw with washer  
At interior @ 9" o.c. across panel width  
At panel ends @ 5.5"-3.5"-5.5" o.c. across panel width

Sidelap Attachment: 1/4"-14 x 7/8" long SDS with washer @ max 24" o.c.  
(Optional)

Test Standards: Roof assembly tested in accordance with UL580-06 'Uplift Resistance of Roof Assemblies' & UL1897-04 'Uplift Tests for Roof Covering Systems' and FM 4470 Section 5.5 'Resistance to Foot Traffic'.

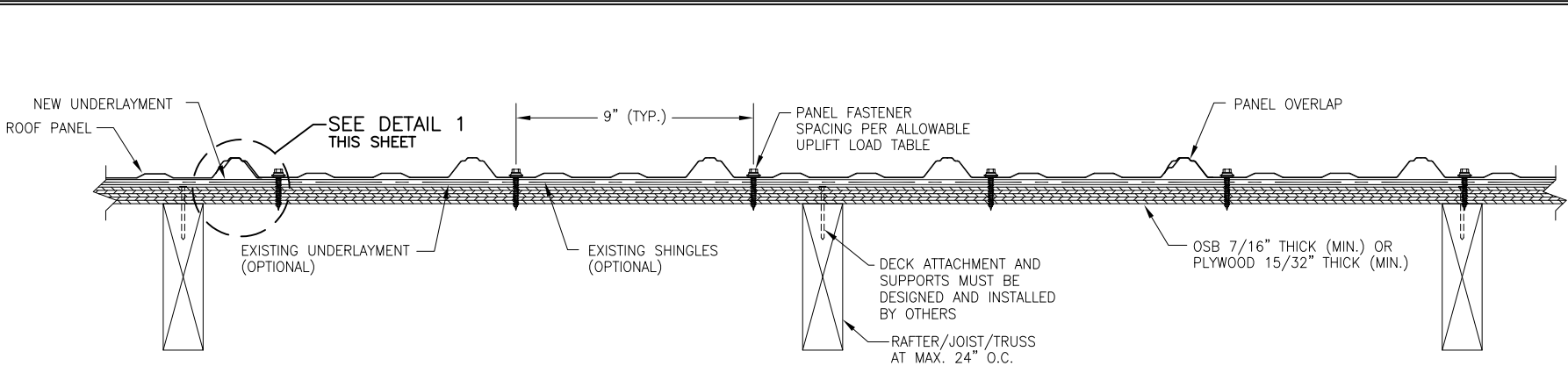
Test Equivalency: The test procedures in UL 1897-04 comply with test procedures prescribed in UL 1897-12.  
The test procedure in FM 4470 (1992) comply with test procedure prescribed in FM 4470 (2012).

Code Compliance: The product described herein has demonstrated compliance with FBC 2017 Section 1507.4.

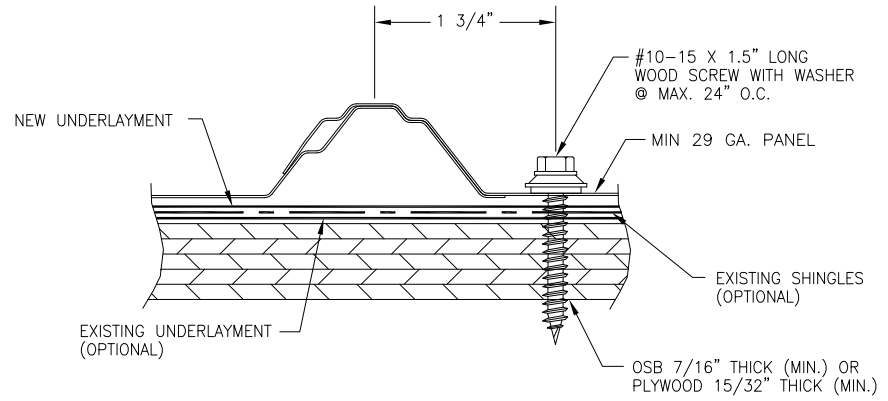
**Product Limitations:** Design wind loads shall be determined for each project in accordance with FBC 2017 Section 1609 or ASCE 7-10 using allowable stress design. The maximum fastener spacing listed herein shall not be exceeded. The design pressure for reduced fastener spacing may be computed using rational analysis prepared by a Florida Professional Engineer or based on Union load span table. This evaluation report is not applicable in High Velocity Hurricane Zone. Refer to current NOA for use of this product in High Velocity Hurricane Zone. Fire classification is not within scope of this Evaluation Report. Refer to FBC 2017 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:** UL580 & UL1897 Test Reports  
Farabaugh Engineering and Testing Inc.  
Project No. T198-16, Reporting Date 5/16/16

FM 4470 Test Report  
ENCON Technology Inc.  
C1583-2, Reporting Date 7/24/08



TYPICAL PANEL INSTALLATION X-SECTION



DETAIL 1

**GENERAL NOTES:**

1. ARCHITECTURAL ROOF PANEL HAS BEEN DESIGNED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE (FBC).
2. ROOF PANELS SHALL BE MINIMUM 29 GA. EFFECTIVE COVERING WIDTH OF PANEL = 36".
3. THE ROOF PANELS SHALL BE INSTALLED OVER SHEATHING & 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. ALL 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: J.S.				
PLOT:	DATE: 5/23/16				
NO.	REVISION	DESCRIPTION	BY	DATE	
DRAWING TITLE		MASTERRIS PANEL			
CONSULTANTS		MANUFACTURER			
BALA SOCKALINGAM, PH.D., P.E.		UNION CORRUGATING CO.			
1216 N. LANSING AVE., SUITE C FAYETTEVILLE, NC 28301 PHONE: 918-492-8992 FAX: 866-366-1543		701 S. KING STREET FAYETTEVILLE, NC 28301 910-483-2195			
DRAWING NO. C2175-5	REV.				
SHEET NO.		1 OF 1			

**UNION CORRUGATING COMPANY**

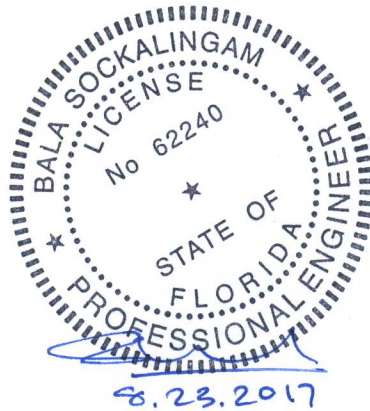
**MasterRib Panel Uplift Loads**

**(Min 29 ga.)**

Description	Fastener Spacing along Panel Length (in)	Allowable Uplift Load (psf)
Coverage width: 36"  Panel Fasteners #10-15 hex head screws with sealed washer  Panel fasteners spaced at 9" o.c. across panel width	<b>6</b>	<b>124.0</b>
	8	116.4
	10	108.9
	12	101.3
	14	93.8
	16	84.0
	18	74.7
	20	67.2
	22	61.1
	<b>24</b>	<b>56.0</b>

**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 20484.5 and Union current installation procedure.



1216 N Lansing Ave., Suite C  
 Tulsa, Ok 74106  
 918 492 5992

Bala Sockalingam, Ph.D., P.E.  
 FL 62240