



CONSTRUCTION MATERIALS

TECHNOLOGIES

LABORATORY TEST REPORT

Report for: Central States Manufacturing, Inc.
302 Jane Place
Lowell, AR 72745

Product Name: Central Snap	Manufacturer: Central States Manufacturing, Inc.
Project No.: FAE-016-02-01	Source: Central States Manufacturing, Inc.
Date Received: February 20, 2014	Dates Tested: July 1, 2014 – Feb. 18, 2014

Purpose: Determine the uplift resistance of Central States Manufacturing, Inc's Central Snap panel in accordance with **UL 580-06 Test for Uplift Resistance of Roof Assemblies** and **UL 1897-04 Uplift Tests for Roof Covering Systems**.

Test Methods: Testing was completed as described in UL 580-06 *Test for Uplift Resistance of Roof Assemblies* and UL 1897-04 *Uplift Tests for Roof Covering Systems*. Specimens were tested to the loading schedule as described in UL 580, and where applicable, incrementally loaded in accordance with UL 1897 until failure.

Sampling: Central Snap and fasteners were supplied by Central States Manufacturing, Inc from Lowell, AR. All other materials were provided by PRI Construction Materials Technologies LLC and purchased through local distribution.

Test Specimens:

Metal Panel:	24ga Central Snap panels ($F_y = \text{min. } 50 \text{ ksi}$; 1.75 in. seam; 18 in. coverage) were installed with clips spaced as specified. The female portion of the panel is lightly pressed into the male portion of panel after the clips are installed and anchored to the deck.
Clips & Fasteners:	Fixed CSLCLP Clips were installed over the male portion of the panel and anchored to the deck with (2) #10 x 1.5 in. PH screws.
Underlayment:	ASTM D 226 Type II. Underlayment installed with minimum 4" side-lap and 6" end-laps and fastened using 12 ga., 1-1/4" ring shank nails

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Underlayment (*continued*): and 1-5/8" tin caps spaced 6" o.c. in the laps and two staggered rows 12" o.c. in the field.

Deck: 15/32" APA span rated plywood. Decking attached with 0.113" x 2-3/8" ring shank nails spaced 6" o.c. along each wood joist. Wood joists were spaced 24" o.c.

Specimen Sealing: Polyethylene film; tape¹

¹It is the judgment of the test engineer that the film and tape used to seal the specimen against air leakage did not influence the results of the test.

Results:

Test data are contained in Appendix A. Photographs of specimens after testing are contained in Appendix C.

Table 1. Summary of Test Results for 24ga Central Snap

Specimen	Test Method	Passing Uplift Pressure (psf)	Failure Mode
Central Snap; 18 in. coverage; 1.75 in. seam; CSLCLP clips; 15/32 APA span rated plywood	UL 580/ 1897		
Specimen No. 1 Clips at 36 in. o.c.		90	Seam disengaged prior to reaching 120 psf combined uplift pressure
Specimen No. 2 Clips at 24 in. o.c.		135	Fastener pullout from deck prior to reaching 150 psf combined uplift pressure

Classification:

Specimen No. 1 meets **Class 90** requirements.
 Specimen No. 2 meets **Class 90** requirements

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Statement of Compliance:

Testing was conducted in accordance with **UL 580-06 Test for Uplift Resistance of Roof Assemblies** and **UL 1897-04 Uplift Tests for Roof Covering Systems**.

Signed: _____

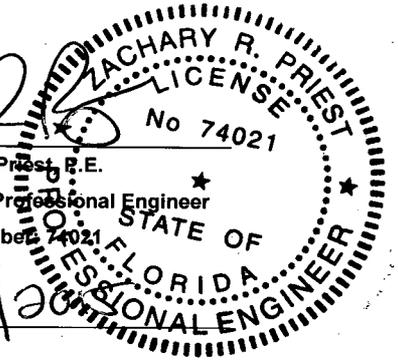

Jason Simmons
Director

Date: _____

03/02/2015

Signed: _____


Zachary Priest, P.E.
Florida Registered Professional Engineer
P.E. Number 74021



Date: _____

3/2/2015

Report Issue History:

Issue #	Date	Pages	Revision Description (if applicable)
Original	08/28/2014	6	NA
Revision 1	2/27/2015	9	Added specimen #2, editorial
Revision 2	03/02/2015	7	Editorial name correction, appendix correction editorial

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Samples:

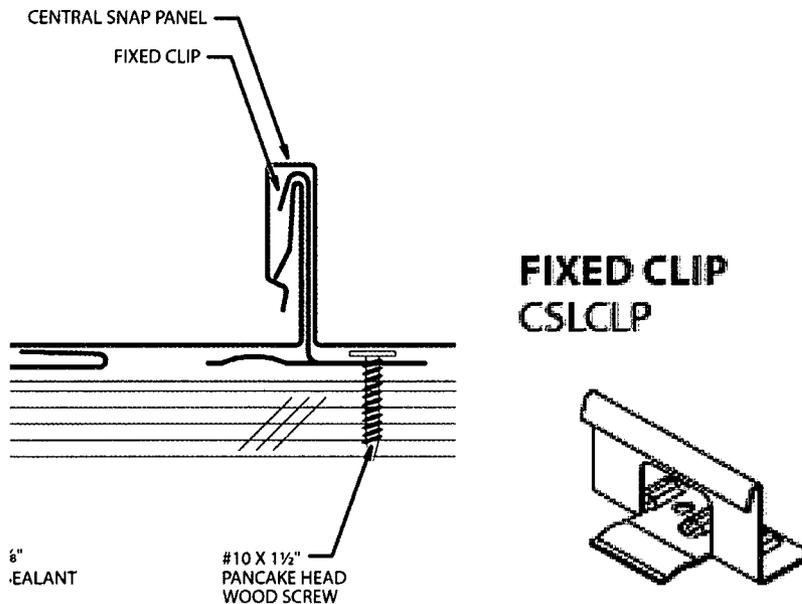
Sample No.	Description
	24ga steel

Date:	2/20/2015
Description	PRI-CMT ID No.
caliper	cmt-076
instron	cmt-102

Results:

Conditioning:	min 2h @ 73±4°F
Test Conditions:	73±4°F & 50±5%RH
Specimens:	Standard
Rate:	0.1 in/min
Date:	

Specimen	Width (in)	Thickness (in)	Gage Length (in)	Yield Strength (ksi)	Tensile Strength (ksi)	Elongation at Break (%)
1	0.4915	0.0225	2	58.1	63.4	27.5
2	0.492	0.023	2	57.4	62.0	27.2
3	0.4925	0.023	2	57.1	62.1	26.7
4	0.4915	0.0225	2	57.1	62.3	26.9
5	0.491	0.0235	2	56.5	60.8	24.1
Average				57.2	62.1	26.5
St.Dev.				0.6	0.9	1.4



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PANEL INSTALLATION

1. Align the female edge of the first panel with the chalk line that was snapped at the rake edge. This line can be 0" - 1 3/4" from the rake. Panel should hook onto roof deat or RDC trim.

2. Panels should be installed perpendicular to ridge for ridge trim attachment. Check panel alignment. If panel is properly aligned proceed.

3. Align the second panel female edge with the starter panel male edge. Panels must be flush to one another. Remember, panels should hook onto the male section at the eave.

4. Lightly compress and snap panels together at seam. Snap panels from eave to ridge. Put next set of clips in place.

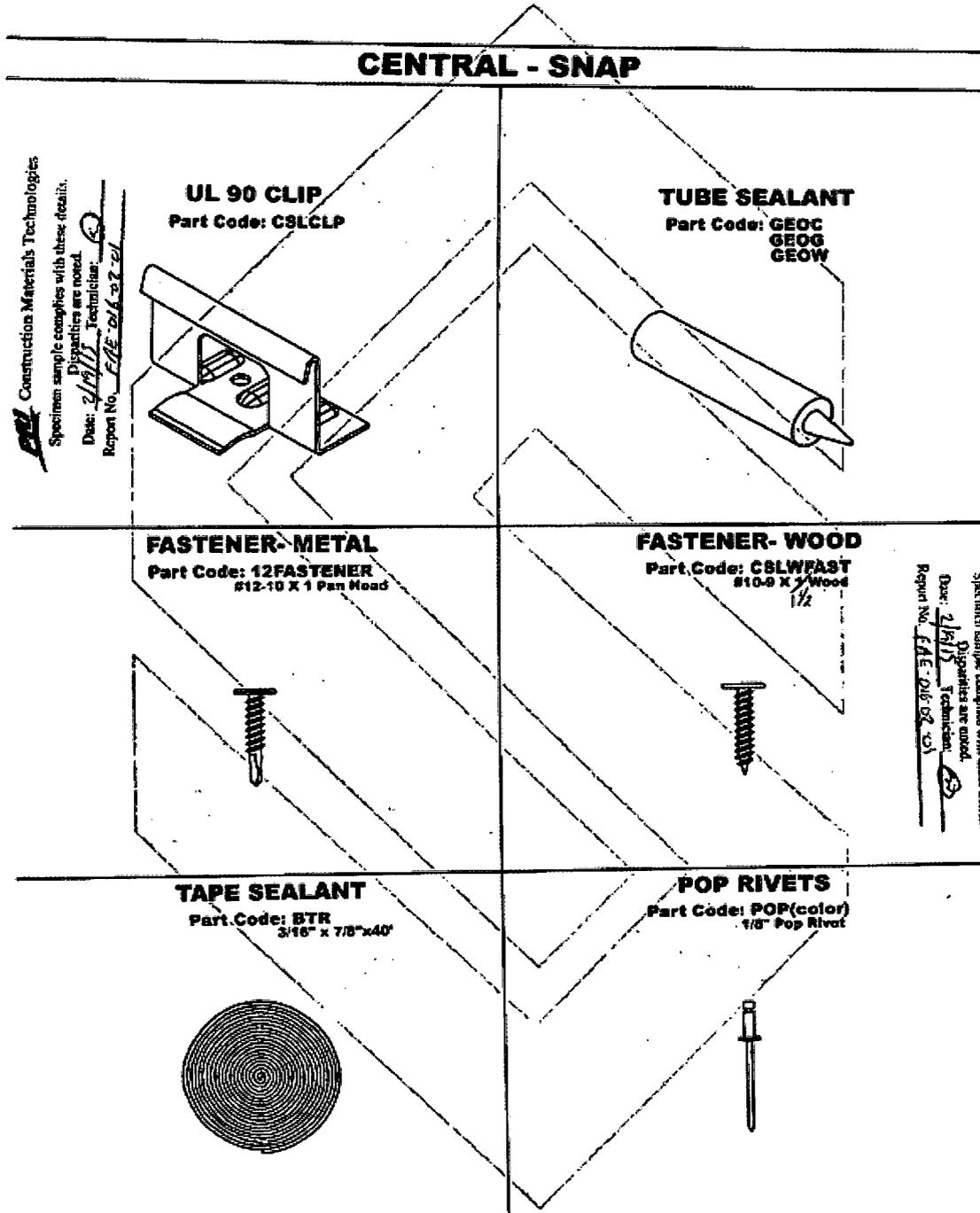
5. Continue to apply panels as in steps 3 and 4.

6. Panels at the eave can be terminated in two ways; with fasteners and without. Each will depend on aesthetic consideration determined by the installer or building owner.

FASTENER SPACING

Maximum clip spacing 3' on center,
for 16" wide 24 gauge panels with
wind loads up to 90 mph

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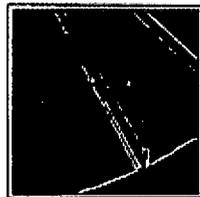
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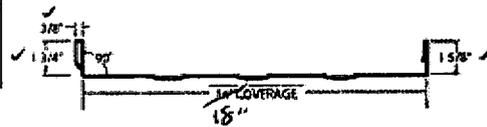
NEW - CENTRAL-SPAN
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HORIZON-LOC
 PRECISION-LOC®
 CENTRAL-LOC®
 CENTRAL SEAM PLUS®
 CENTRAL SNAP®

RESIDENTIAL
 HORIZON-LOC
 PANEL-LOC PLUS™
 PANEL-LOC™



Central Snap® is a vertical 1 3/4" snap-lock standing seam panel system that is sturdy and fire resistant, making it ideal for architectural and commercial applications. Installation is a snap, and its Galvalume substrate offers two to four times the corrosion resistance of galvanized steel. 24 Gauge Flat Sheets are also available.



General Information	Testing and Approval Data	Related Files	Available Options
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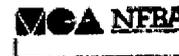
General Information

- Standing Seam Height: 1 3/4"
- Panel Coverage: Available in 18" and 18" coverage with subtle striations between ribs
- Panel Length: 36" to 52" in .5" increments
- Tensile Strength: 50,000 psi minimum
- Substrate: Galvalume
- ✓ Gauge: 24 (22 gauge material optional. Contact sales rep for more information.)
- ✓ Seam sealed with factory-applied hot melt mastic
- Available with a 1/32" notch on either end of each panel for the ease of turning under; reducing installation labor and costs.
- Recommended minimum slope: 3:12 or greater

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CENTRAL STORAGE WORKS
 1-877-770-5206



PRI Construction Materials Technologies

Specimen sample complies with these details.

Disparities are noted.

Date: 2/19/13 Technician: [Signature]

Report No. FAE-016-02-01

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