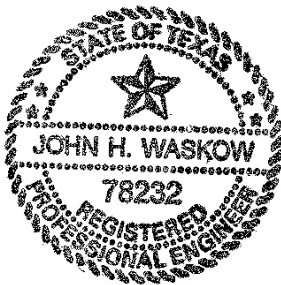


PERFORMANCE TEST REPORT

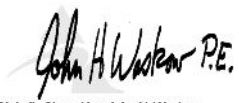
Rendered to:

BERRIDGE MANUFACTURING COMPANY

**PRODUCT: Zee-Lock Standing Seam Metal Roof Panels
with Continuous 24 ga. Zee-Rib Clip**



Texas Firm F-11869


Digitally Signed by: John H. Waskow
2013.07.02 10:44:38
-05'00'

Report No:	87170-801-44
Test Date:	11/20/08
Through:	11/22/08
Report Date:	11/24/08
Revision 1:	07/02/13
Record Retention End Date:	11/22/12

PERFORMANCE TEST REPORT

Rendered to:

BERRIDGE MANUFACTURING COMPANY
1720 Maury
Houston, TX 77026

Report No: 87170.01-801-44
Test Dates: 11/20/08
Through: 11/22/08
Report Date: 11/24/08
Revision 1: 07/02/13
Record Retention End Date: 11/22/12

Product: Zee-Lock Standing Seam Metal Roof Panels with Continuous 24 ga. Zee-Rib Clip.

Project Summary: Architectural Testing, Inc. was contracted by Berridge Manufacturing Company to evaluate their Zee-Lock standing seam metal roof panels for thermal expansion and contraction.

Test Method: The test specimens were evaluated in accordance with the following custom test method – Thermal Expansion and Contraction.

Relative panel motion $\geq 2"$ for 100,000 cycles with no indication of material wear or sealant degradation.

Product Description:

Series/Model: Zee-Lock™ with Continuous Zee-Rib™ Clip

Product Type: Standing Seam Metal Roof Panels

Overall Size: 48" wide by 36" long

Individual Panel Size: 16" wide by 36" long

Zee-Lock Panel Thickness: 0.025"

Zee-Rib Clip Thickness: 0.025"

Purlin Thickness: 0.061"

Sample Construction: Sample comprised of three interlocking Zee-Lock steel panels connected by continuous steel Zee-Rib clips. Outer two panels mounted to two steel purlins spaced 2' apart with 3/4" self tapping screws. Purlins were welded along the bottom edge to a steel plate.

Test Procedures: Center panel attached to a pneumatic and cycled over a 2" distance for 100,000 cycles.

Test Results: After 100,000 cycles there was no indication of material wear or sealant degradation.

Detailed drawings, data sheets, representative samples of test specimens, a copy of this report, or other pertinent project documentation will be retained by Architectural Testing, Inc. for a period of four years from the original test date. At the end of this retention period such materials shall be discarded without notice and the service life of this report by Architectural Testing will expire. Results obtained are tested values and were secured by using the designed test methods. This report does not constitute certification of this product nor an opinion or endorsement by this laboratory. It is the exclusive property of the client so named herein and relates only to the specimen(s) tested. This report may not be reproduced, except in full, without the written approval of Architectural Testing, Inc.

For ARCHITECTURAL TESTING, INC.:



Digitally Signed for: Anthony Brown by Andy Cost

Tony Brown
Technician



Digitally Signed by: John H. Waskow

John Waskow, P.E.
Director – Regional Operations

TB/hd

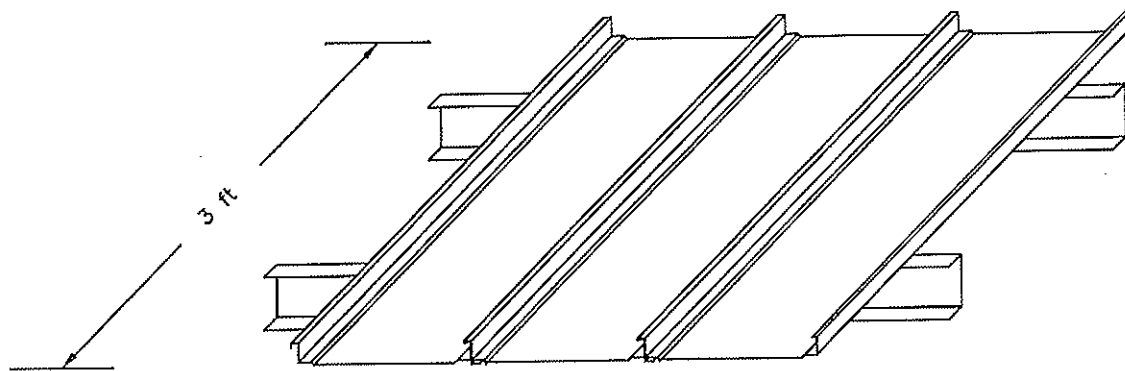
Attachments
Appendix A – Drawings (3)

Revision Log

<u>Rev. #</u>	<u>Date</u>	<u>Page(s)</u>	<u>Revision(s)</u>
0	11/24/08	N/A	Original report issue.
1	07/02/13	Cover, 1	Changed Expiration Date to Record Retention End Date.

APPENDIX A

Drawings



ZEE LOCK SINGLE LOCK

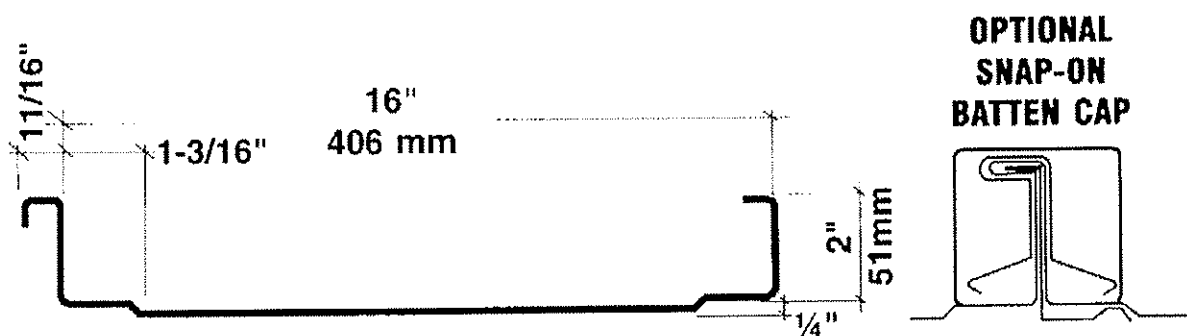
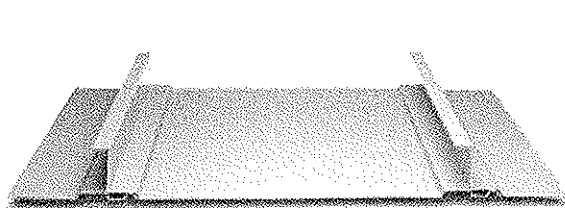


Architectural Testing

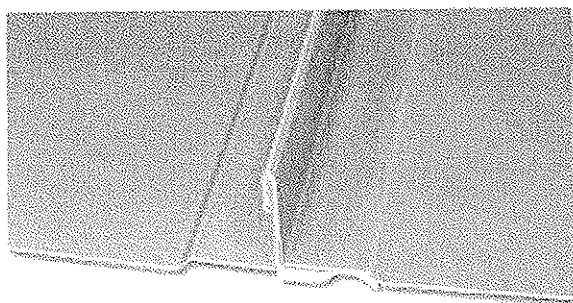
Test can be done with these details
Deviation are noted.

Report# 87170.01
Date 1-7-09 Tech HTD

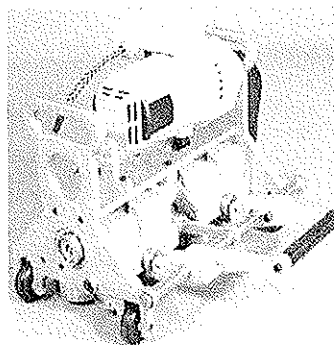
Berridge Zee-Lock Standing Seam Roof System



ZEE-LOCK PANEL CROSS-SECTION



**ZEE-LOCK MAY BE
DOUBLE LOCK SEAMED**



**ZEE-LOCK
DOUBLE LOCK
SEAMER**



Architectural Testing

Test #

These details
are to be used.

Report# 87170.01

Date 1-7-09

Tech HD

SECTION PROPERTIES BASED ON 24 GAUGE 40 K.S.I.			
ZEE-LOCK PANEL WITH CONTINUOUS 24 ZEE RIB	dl_x (In ⁴ /ft)	M_A (Ft.-lbs/Ft.)	V_A (Lbs)
POSITIVE BENDING	0.1525	184.65	990
NEGATIVE BENDING	0.1031	161.33	990

RECOMMENDED LOAD IN POUNDS PER SQUARE FOOT Panel Weight = 1.4 p.s.f.						
SPAN (Feet)	NET VERTICAL LIVE LOAD			NET VERTICAL WIND UPLIFT		
	1-SPAN	2-SPAN	3-SPAN	1-SPAN	2-SPAN	3-SPAN
2' - 0	50	70	70	90	90	90
2' - 6	45	70	70	90	90	90
3' - 0	40	70	70	90	90	90
3' - 6	35	70	70	90	90	90
4' - 0	30	60	70	85	80*	80*
4' - 6	25	50	55	65	70*	70*
5' - 0	20	40	45	55	60	65*
6' - 0		25	35		40	50
7' - 0		20	25		30	35

NOTES:

1. All loads meet L/240 Deflection Criteria.
2. Wind Load Allowable Stresses increased by 33%.
3. Resists 250 Lbs Point Load without structural failure at center of pan, however, foot traffic on panels during or after installation can cause deformations which may lead to aesthetic failure.
4. * Denotes loads controlled by Standard UL-90 Connection.
5. Values based on 1986 edition of AISI, March 1987 & good engineering practice.

Architectural/Structural Standing Seam Roof System for use over open purlin framing or solid sheathing. Mechanically-seamed sidelap with Patented Vinyl Weatherseal. Panel width is 16" with 2" seam height. May be site-formed in continuous lengths with Berridge Model SP-21 Portable Roll Former.

- Extruded patented Vinyl Weatherseal strip
- Mechanically seamed sidelap
- 2" High Standing Seam Sidelap
- UL90 & UL Fire Resistance listed
- ASTM air & water tested
- ASTM E-1592 tested
- FM I-120 rated (applies to Double-Lock seamed only)
- May be Double-Lock Seamed (consult Berridge)



Architectural Testing

Test specimens shall comply with these details
Deviation are noted.

Report# 87170.01

Date 1-7-09 Tech HS