



# CONSTRUCTION MATERIALS

## TECHNOLOGIES

### LABORATORY TEST REPORT

**Report for:** Sheffield Metals International  
5467 Evergreen Parkway  
Sheffield Village, OH 44054

**Attention:** Adam Mazzella

<b>Product Names:</b>	WAV panel	<b>Manufacturer:</b>	Sheffield Metals International
<b>Project No.:</b>	SHMI-006-02-01	<b>Source:</b>	Sheffield Metals International
<b>Date Received:</b>	Nov. 14 – Dec. 4, 2017	<b>Date Tested:</b>	Jan. 18 – 26, 2018

**Purpose:** Evaluate the assembly described herein for wind resistance in accordance with **ASTM E 330: Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference.**

**Test Methods:** Testing was conducted in accordance with ASTM E 330-02(2010): *Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference.* Specimens were tested in accordance with Procedure B in both and positive and negative differential pressures acting on the specimen. Test pressures were incremented in 15 psf intervals.

**Sampling:** WAV panels, clips and fasteners were supplied by Sheffield Metals International. All other materials were provided by PRI Construction Materials Technologies LLC and purchased through local distribution.

SHMI-006-02-01B PRI-CMT Accreditations: AAMA; CRRC; IAS; LA-DBS; Miami-Dade; State of Florida; UL

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**Specimen #1:** Supports: 2" wide, 18 ga. hat channel spaced 1-ft o.c.

WAV panel: WAV-16-4C No Flange; Min. 0.0236" ASTM A792 SS Grade 50 steel ( $F_y = 60$  ksi); 17" wide panel with 16" wide exposure; Profile drawing is contained in Appendix A.

Fastening: 2" x 2", 24 ga. galvanized steel clip hooked to return leg of panel. Two (2) #10-16x1" fasteners installed through pre-made holes (1" apart) to secure clip to supports.

**Specimen #1:** Supports: 2" wide, 18 ga. hat channel spaced 4-ft o.c.

WAV panel: WAV-16-4C No Flange; Min. 0.0236" ASTM A792 SS Grade 50 steel ( $F_y = 60$  ksi); 17" wide panel with 16" wide exposure; Profile drawing is contained in Appendix A.

Fastening: 2" x 2", 24 ga. galvanized steel clip hooked to return leg of panel. Two (2) #10-16x1" fasteners installed through pre-made holes (1" apart) to secure clip to supports.

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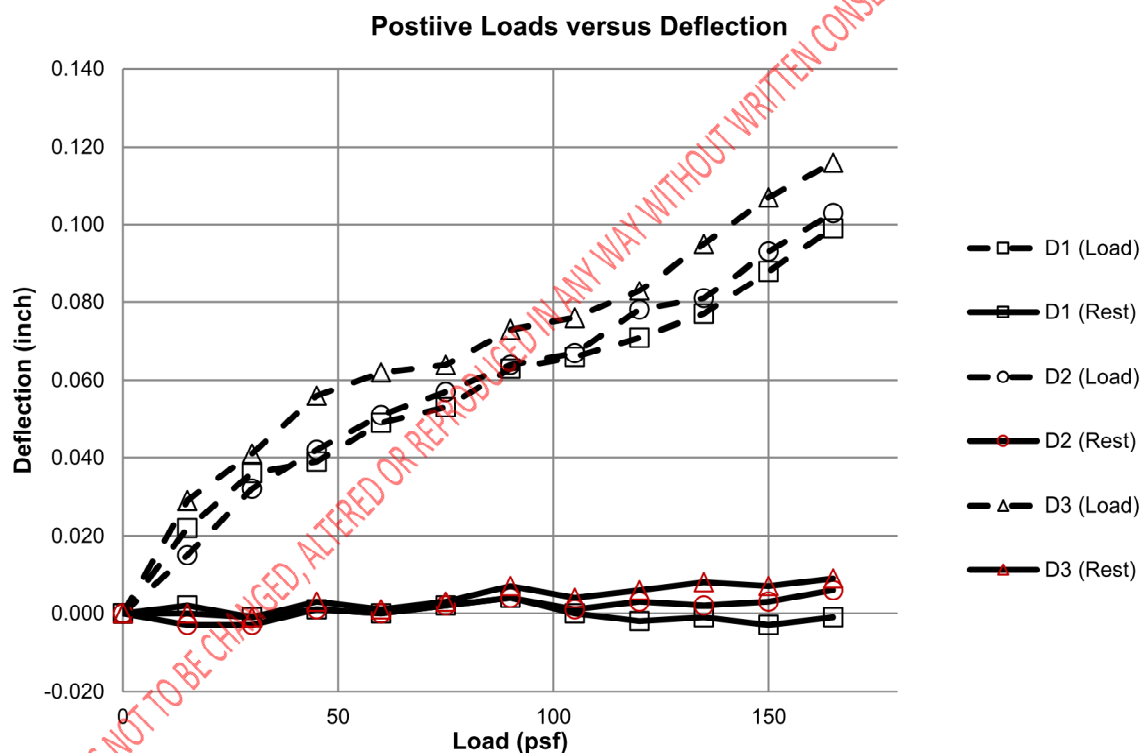
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**Results:** Results of testing are shown below. See Appendix B for location of deflection measurements.

**Table 1. Specimen #3 (WAV-16-4C No Flange @ 1-ft span)  
Highest Passing Pressure from ASTM E 330, Procedure B**

Pressure (psf)	Duration (s)	Result (Pass/Fail)
+165	10	Pass <sup>1</sup>
-75	10	Pass <sup>1</sup>

Note(s): 1) Passing pressure is based on confirmation of structural integrity and securement post-loading

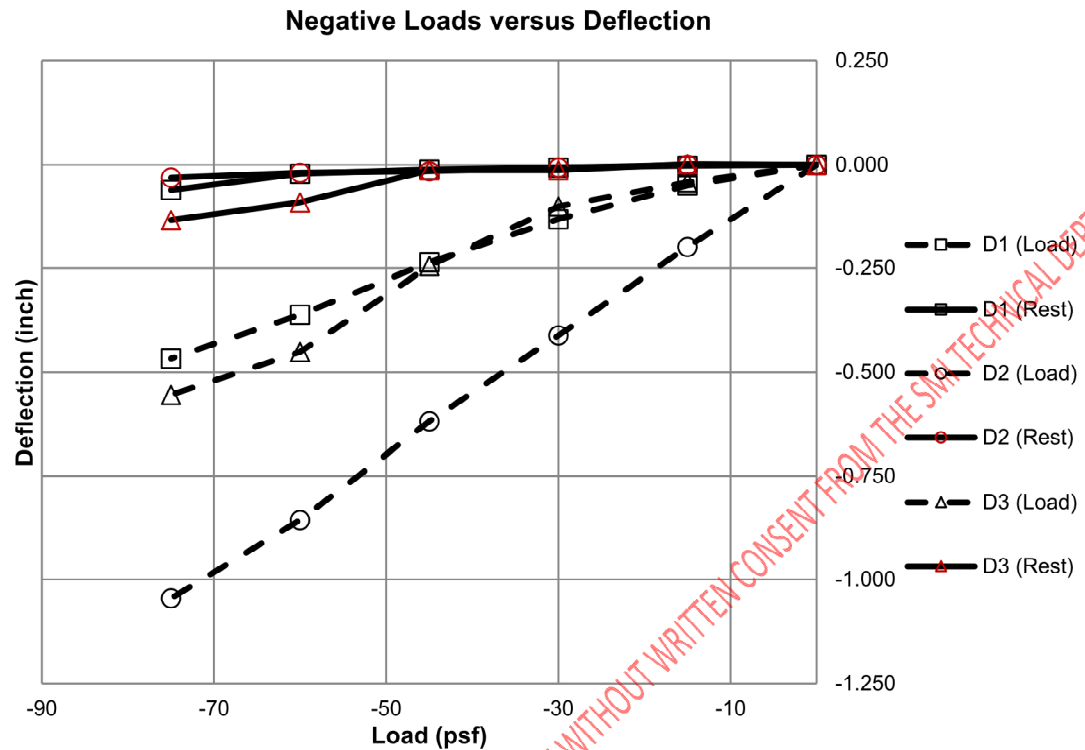


**Figure 1A. Specimen #1 Deflection and Set under Positive Loads**

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**Figure 1B. Specimen #1 Deflection and Set under Negative Loads**

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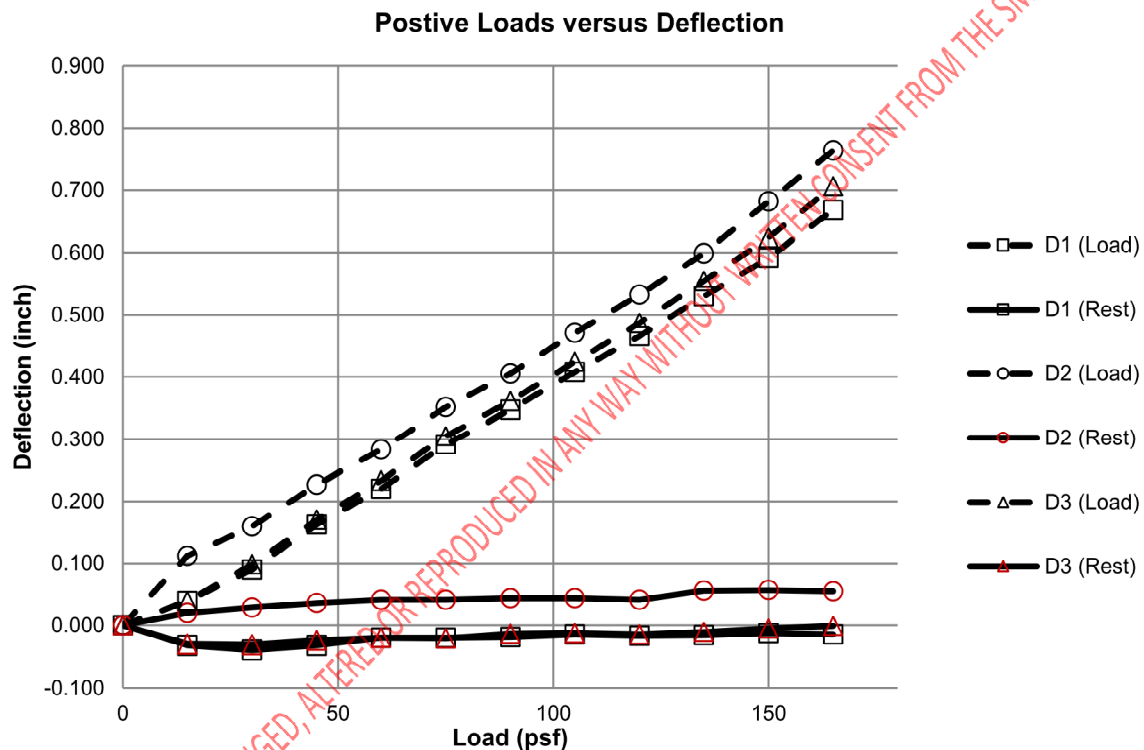
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**Table 2. Specimen #4 (WAV-16-4C No Flange @ 4-ft span)  
Highest Passing Pressure from ASTM E 330, Procedure B**

Pressure (psf)	Duration (s)	Result (Pass/Fail)
+165	10	Pass <sup>1</sup>
-60	10	Pass <sup>1</sup>

Note(s): 1) Passing pressure is based on confirmation of structural integrity and securement post-loading

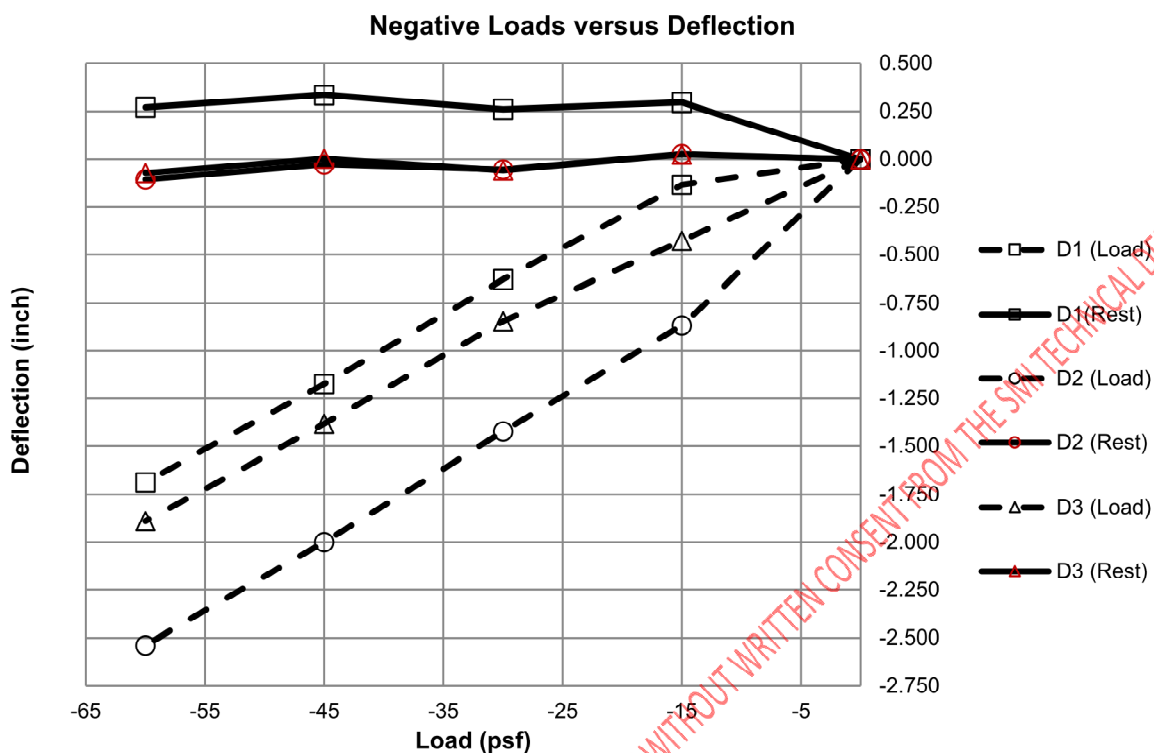


**Figure 2A. Specimen #2 Deflection and Set under Positive Loads**

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**Figure 2B. Specimen #2 Deflection and Set under Negative**

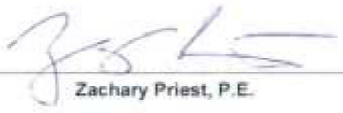
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**Statement of Attestation:**

The performance evaluation was conducted in accordance with ASTM E 330-02(2010): *Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference* as described herein. The laboratory test results presented in this report are representative of the material supplied.

Signed:   
Zachary Priest, P.E.  
Director



**Report Issue History:**

Issue #	Date	Pages	Revision Description (if applicable)
Original	03/06/2018	9	NA

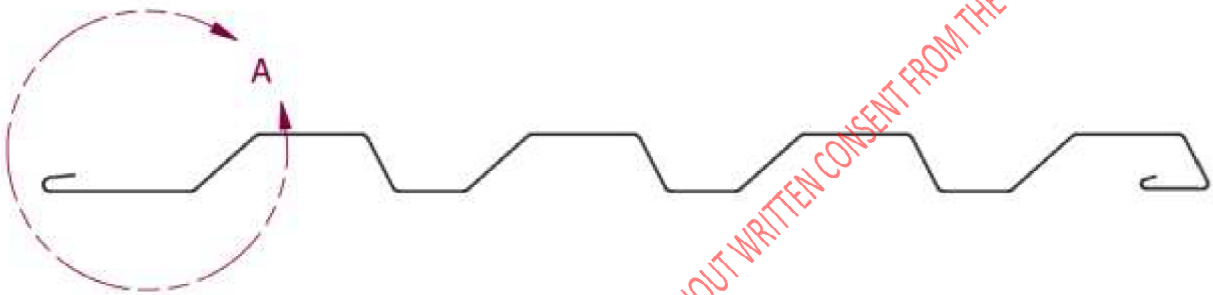
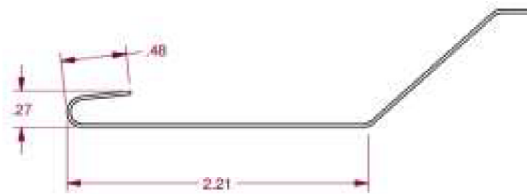
**APPENDIX FOLLOWS**

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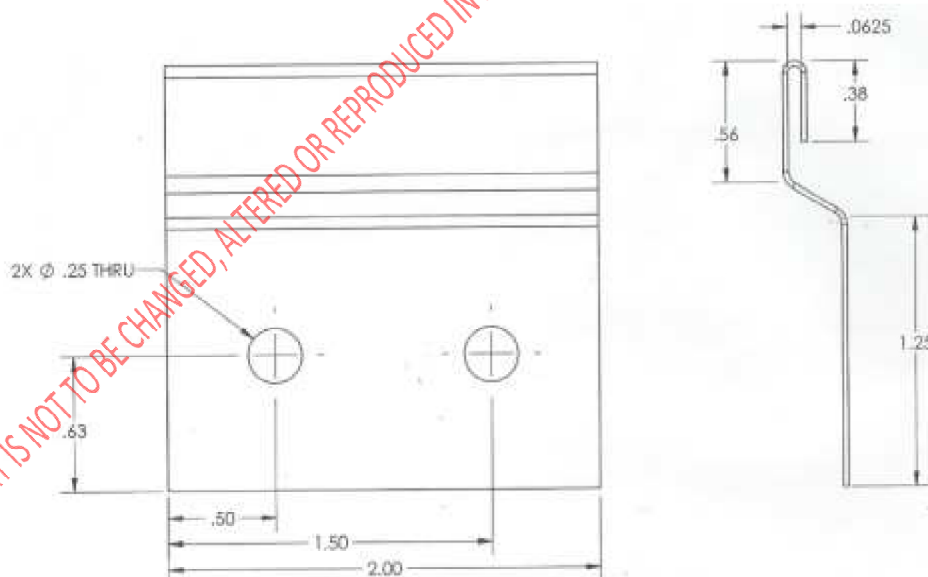
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DETAIL A



WAV Profile (WAV-16-4C No Flange)



WAV Clip

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**Deflection Measurements Location Image**

		• D1		Panel Lap
		• D2		
		• D3		Panel Lap
	Support		Support	

**Deflections Measurement Location Diagram**

**END OF REPORT**

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