

	Document Title:	Doc No: <b>FRM B1-02</b>		
	<b>Structural Performance Certification Authorization Report</b>	Rev No: 7	Page: 1	Of: 1
Required By: PRO B1-03				

CAR & Product ID Number: 757 - 119.0  
 Issue Date: 10/21/2015  
 Revision Date: 10/21/2015  
 Expiration Date: 7/31/2019  
 Company Code: 757

This Certification Authorization Report (CAR) is issued by Keystone Certifications, Inc. (KCI) after full validation review, and is based on a standardized evaluation of the product conducted by an independent accredited laboratory in accordance with the specified referenced standard. Actual fenestration product performance may vary based on many factors, including installation, condition of the wall/roof substrate and the age of the product and installation components.

This report indicates the product is eligible for the application of Keystone Certification Program certification labels. Licensee stipulates in affixing certification labels to products, that those products are representative of the specimen evaluated and documented for certification authorization. Only products bearing such a certification label shall be considered certified. The information in this report can be verified at [www.keystonecerts.com](http://www.keystonecerts.com).

Licensee Information:	Product Information:
Pocahontas Aluminum Company, Inc. 2001 Industrial Drive PO Box 756 Pocahontas AR 72455	Model: SHL21WW PVC Single Hung Operator Type: H Config: EM/IM, GS-1/8" Ann IG Max Width: 48 Max Height: 72


Referenced Standard:	Product Rating:
AAMA 1701.1-12 / FMHC&S Std. 3280.403	Wind Zone II @ 38 psf, 48x72

Qualifying Test Information:	
Test Report No:	ATI-E9099.03-501-47
Test Report Expiration:	7/31/2019

**Authorized Signature:**

**Keystone Certifications, Inc.**

564 Old York Road, Suite 5  
 Etners, Pennsylvania 17319  
 Phone: 717-932-8500  
 Fax: 717-932-8501

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Licensee Information:	Product Information:
Pocahontas Aluminum Company, Inc. 2001 Industrial Drive PO Box 756 Pocahontas AR 72455	Model: SHL21WW PVC Single Hung Operator Type: H Config: EM/IM Max Width: 36 Max Height: 54

Referenced Standard:	Product Rating:
AAMA 1701.1-12 / FMHC&S Std. 3280.403	Wind Zone III @ 58 psf, 36x54

Qualifying Test Information:	
Test Report No:	ATI-E9099.03-501-47
Test Report Expiration:	7/31/2019

**Authorized Signature:**

**Keystone Certifications, Inc.**

564 Old York Road, Suite 5  
 Etners, Pennsylvania 17319  
 Phone: 717-932-8500  
 Fax: 717-932-8501



## TEST REPORT

**Report No.:** E9099.03-501-47

**Rendered to:**

POCAHONTAS ALUMINUM COMPANY, INC.  
Pocahontas, Arizona

**PRODUCT TYPE:** PVC Single Hung Window  
**SERIES/MODEL:** SHL21WW

**SPECIFICATIONS:** AAMA 1701.2-12, *Voluntary Standard for Utilization in Manufactured Housing for Primary Windows and Sliding Glass Doors.*

AAMA 1704-01, *Voluntary Standard for Egress Window Systems for Utilization in Manufactured Housing.*

**Test Dates:** 06/22/15  
**Through:** 06/24/15  
**Report Date:** 07/31/15

- 1.0 Report Issued To:** Pocahontas Aluminum Co., Inc.  
2001 Industrial Drive  
Pocahontas, Arizona 72455
- 2.0 Test Laboratory:** Architectural Testing, Inc., a subsidiary of Intertek (Intertek-ATI)  
1140 Lincoln Avenue  
Springdale, Pennsylvania 15144  
724-275-7100

### 3.0 Project Summary:

**3.1 Product Type:** PVC Single Hung Window

**3.2 Series/Model:** SHL21WW

**3.3 Compliance Statement:** Results obtained are tested values and were secured by using the designated test method(s). The sample tested successfully met the performance requirements listed in the referenced specification(s).

**3.4 Test Dates:** 06/22/2015 – 06/24/2015

**3.5 Test Record Retention End Date:** All test records for this report will be retained until June 24, 2019.

**3.6 Test Location:** Veka Inc. test facility in Fombell, Pennsylvania.

**3.7 Test Sample Source:** The test specimens were provided by the client. Representative samples of the test specimen(s) will be retained by Intertek-ATI for a minimum of four years from the test completion date.

**3.8 Drawing Reference:** The test specimen drawings have been reviewed by Intertek-ATI and are representative of the test specimen(s) reported herein. Test specimen construction was verified by Intertek-ATI per the drawings located in Appendix A. Any deviations are documented herein or on the drawings.

### 3.9 List of Official Observers:

<u>Name</u>	<u>Company</u>
Doug Merry	Veka Inc.
Cornell Charles	Veka Inc.
Joseph Allison	Intertek-ATI

#### 4.0 Test Specification(s):

AAMA 1701.2-12, *Voluntary Standard for Utilization in Manufactured Housing for Primary Windows and Sliding Glass Doors.*

AAMA 1704-01, *Voluntary Standard for Egress Window Systems for Utilization in Manufactured Housing.*

Code of Federal Regulations, Part 3280 - *Manufactured Home Construction and Safety Standards*, Subpart D, Section 3280.305(c)(1)(ii)(B).

#### 5.0 Test Specimen Description:

##### 5.1 Product Sizes:

###### Test Specimen #1:

Overall Area: 2.2 m <sup>2</sup> (24.0 ft <sup>2</sup> )	Width		Height	
	millimeters	inches	millimeters	inches
Overall size	1219	48	1829	72
Sash size	1168	46	924	36-3/8
Screen size	1181	46-1/2	895	35-1/4

###### Test Specimen #2:

Overall Area: 2.1 m <sup>2</sup> (22.2 ft <sup>2</sup> )	Width		Height	
	millimeters	inches	millimeters	inches
Overall size	914	36	1372	54
Sash size	864	34	695	27-3/8
Screen size	876	34-1/2	667	26-1/4

*The following descriptions apply to all specimens.*

##### 5.2 Frame Construction:

Frame Member	Material	Description
Head, sill, jambs, fixed rail	PVC	Extruded

	Joinery Type	Detail
All corners	Mitered	Thermally welded
Fixed rail	Square-cut and coped	Fastened with four #8 x 2" truss head screws, two at each end, and sealed with a silicone sealant

## 5.0 Test Specimen Description: (Continued)

### 5.3 Sash Construction:

Sash Member	Material	Description
All rails and stiles	PVC	Extruded

	Joinery Type	Detail
All corners	Mitered	Thermally welded

### 5.4 Weatherstripping:

Description	Quantity	Location
0.187" backed x 0.250" high center fin pile	1 Row	Top rail, bottom rail, stiles

**5.5 Glazing:** *No conclusions of any kind regarding the adequacy or inadequacy of the glass in any glazed test specimen(s) can be made.*

#### Test Specimen #1:

Glass Type	Spacer Type	Interior Lite	Exterior Lite	Glazing Method
5/8" IG	Rectangular-shaped steel, single sealed	1/8" annealed	1/8" annealed	The glass was set from the exterior against a silicone sealant and secured with rigid PVC glazing beads

#### Test Specimen #2:

Glass Type	Spacer Type	Interior Lite	Exterior Lite	Glazing Method
5/8" IG	Rectangular-shaped steel, single sealed	3/32" annealed	3/32" annealed	The glass was set from the exterior against a silicone sealant and secured with rigid PVC glazing beads

Location	Quantity	Daylight Opening		Glass Bite
		millimeters	inches	
Specimen #1 sash	1	1089 x 845	42-7/8 x 33-1/4	5/8"
Specimen #1 frame	1	1149 x 845	45-1/4 x 33-1/4	5/8"
Specimen #1 sash	1	784 x 616	30-7/8 x 24-1/4	5/8"
Specimen #1 frame	1	845 x 616	33-1/4 x 24-1/4	5/8"

## 5.0 Test Specimen Description: (Continued)

### 5.6 Drainage:

Drainage Method	Size	Quantity	Location
Weepslot	9/16" wide by 5/32" high	2	Exterior sill face, one 2" in from each end.
Weepslot	9/16" wide by 5/32" deep	2	Interior sill track, one at each end.

### 5.7 Hardware:

Description	Quantity	Location
Metal cam lock	2	Lock rail, one 10" in from each end with mating metal keepers on the fixed meeting rail.
Metal surface mount tilt latch	2	Top rail, one at each end
Metal tilt pin	2	Bottom rail, one at each end
Block and tackle balance system	2	One per jamb

### 5.8 Reinforcement:

Drawing Number	Location	Material
S-3832	Fixed rail, lock rail	Extruded aluminum

### 5.9 Screen Construction:

Frame Material	Corner Construction	Mesh Type	Mesh Attachment Method
Roll-formed aluminum	Square-cut and secured with snap-in plastic corner keys	Fiber	Flexible vinyl spline

## 6.0 Installation:

The specimen was installed into a Spruce-Pine-Fir wood buck. The rough opening allowed for a 1/8" shim space. The nail fin perimeter of the window was sealed with a silicone sealant.

Location	Anchor Description	Anchor Location
Integral nail fin	#8 x 2" long truss head screws	Nominally spaced at 9" on center, and beginning 2" in from each corner, with an additional three screw cluster at each end of the fixed meeting rail



**7.0 Test Results:** The temperature during testing was 21°C (70°F). The results are tabulated as follows:

**Test Specimen #1:**

Title of Test	Results	Allowed	Note
<b>Structural Performance,</b> per ASTM E 330 +1190 Pa (+25.0 psf) -595 Pa (-12.5 psf)	Pass	No damage	2, 3
<b>Air Leakage,</b> per ASTM E 283 at 75 Pa (1.57 psf)	1.5 L/s/m <sup>2</sup> (0.30 cfm/ft <sup>2</sup> )	2.5 L/s/m <sup>2</sup> (0.5 cfm/ft <sup>2</sup> ) max.	
<b>Water Penetration,</b> per ASTM E 547 at 150 Pa (3.13 psf)	Pass	No leakage	1
<b>Optional Performance (24 CFR 3280.305(c))</b>			
<b>Uniform Load Structural,</b> per ASTM E 330 +1815 Pa (+37.91 psf) -1815 Pa (-37.91 psf)	Pass	No damage	2, 3

**Test Specimen #2:**

Title of Test	Results	Allowed	Note
<b>Structural Performance,</b> per ASTM E 330 +1190 Pa (+25.0 psf) -595 Pa (-12.5 psf)	Pass	No damage	2, 3
<b>Air Leakage,</b> per ASTM E 283 at 75 Pa (1.57 psf)	1.4 L/s/m <sup>2</sup> (0.27 cfm/ft <sup>2</sup> )	2.5 L/s/m <sup>2</sup> (0.5 cfm/ft <sup>2</sup> ) max.	
<b>Water Penetration,</b> per ASTM E 547 at 150 Pa (3.13 psf)	Pass	No leakage	1
<b>Optional Performance (24 CFR 3280.305(c))</b>			
<b>Uniform Load Structural,</b> per ASTM E 330 +2770 Pa (+57.85 psf) -2770 Pa (-57.85 psf)	Pass	No damage	2, 3

## 7.0 Test Results: (Continued)

### Test Specimen #2: (Continued)

<b>AAMA 1704-01</b>			
<b>Clear Opening Width</b>	848 mm (33-3/8")	510 mm (20")	
<b>Clear Opening Height</b>	610 mm (24")	610 mm (24")	
<b>Clear Opening Area</b>			
<b>Locks and Latches</b>	44 N (10 lbf)	90 N (20 lbf) max.	
<b>Operable Sash</b>	89 N (20 lbf)	90 N (20 lbf) max.	
<b>Removable Screen</b>	22 kg (0.5 lb)	9 kg (20 lb) max.	

*Note 1: With and without insect screen.*

*Note 2: Loads were held for 10 seconds.*

*Note 3: Tape and film were used to seal against air leakage during structural testing. In our opinion, the tape and film did not influence the results of the test.*



Intertek-ATI will service this report for the entire test record retention period. Test records that are retained such as detailed drawings, datasheets, representative samples of test specimens, or other pertinent project documentation will be retained by Intertek-ATI for the entire test record retention period.

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 Intertek-ATI.

For INTERTEK-ATI

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Joseph E. Allison  
Senior Technician

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Lynn George  
Director – Regional Operations

JEA:sld

Attachments (pages): This report is complete only when all attachments listed are included.  
Appendix-A: Drawings (2) Complete drawings packet on file with Intertek-ATI



Test Report No.: E9099.03-501-47

Report Date: 07/31/15

Architectural Testing

## **Appendix A**

### **Drawings**

*Note: Complete drawings packet on file with Intertek-ATI*

**NOTE:**  
 FOR OTHER PROFILE, GLAZING BEAD,  
 & GLASS OPTIONS, PLEASE SEE THE  
 LINEAL PROFILE CHARTS FOR THIS  
 SYSTEM.

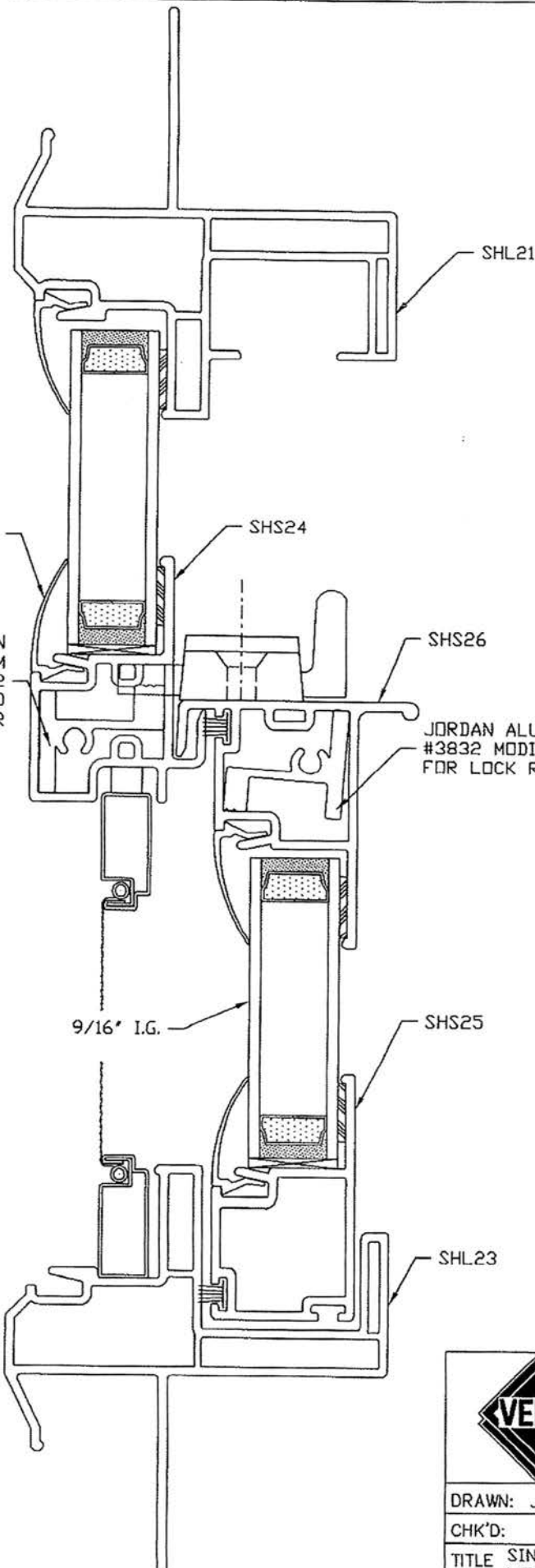


Test sample complies with these details.  
 Deviations are noted.

Report# E9099  
 Date 6/30/15 Tech JGA

JORDAN  
 ALUMINUM  
 #3832  
 MODIFIED  
 FOR MR

JORDAN ALUMINUM  
 #3832 MODIFIED  
 FOR LOCK RAIL



POCAHONTAS

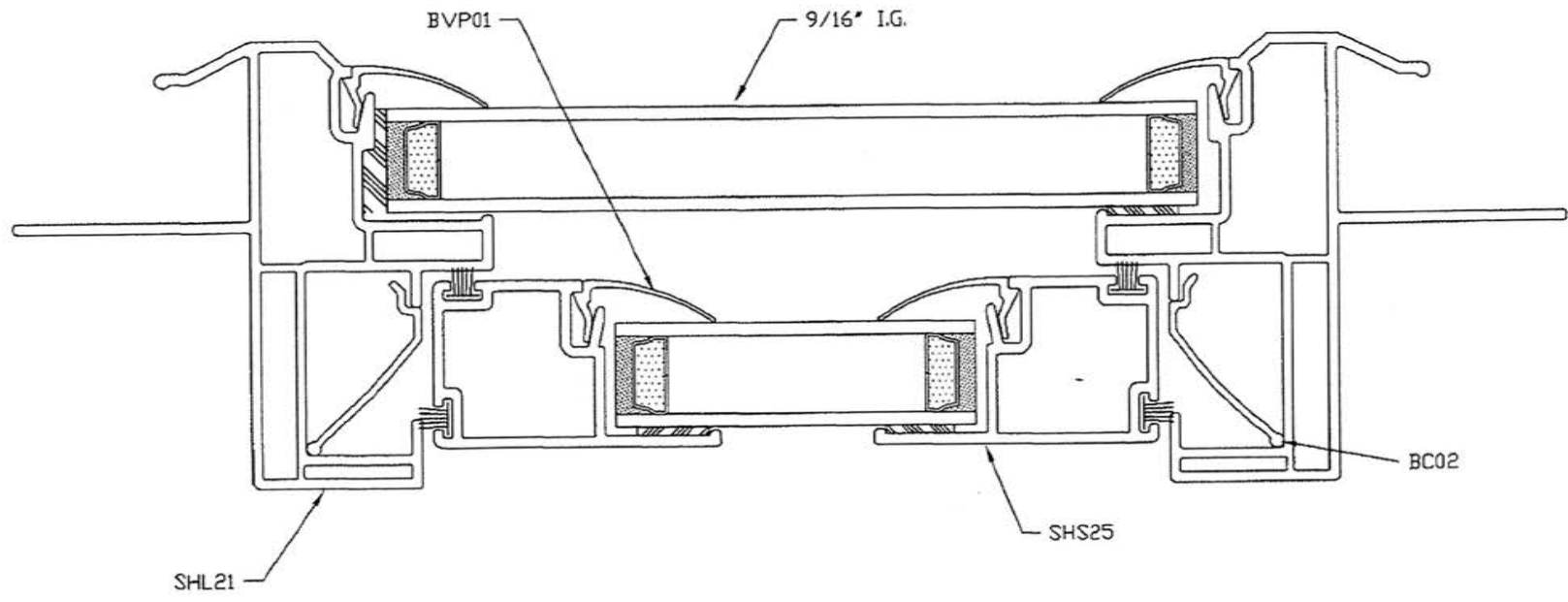
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**VEKA INC.**  
 100 VEKA DRIVE  
 FOMBELL, PA 16123

DRAWN: JMN	DATE: 14 AUG 00	SCALE: FULL
CHK'D:	DATE:	APPV'D:
TITLE SINGLE HUNG SHL21WW VERTICAL ASSEMBLY		DWG. #SHL21WW-V

NOTE:  
 FOR OTHER PROFILE, GLAZING BEAD,  
 & GLASS OPTIONS, PLEASE SEE THE  
 LINEAL PROFILE CHARTS FOR THIS  
 SYSTEM.




 **Architectural Testing**

Test sample complies with these details.  
 Deviations are noted.

Report# E9099  
 Date 6/30/15 Tech JJA

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 <b>VEKA INC.</b> 100 VEKA DRIVE FOMBELL, PA 16123				
			DRAWN: JMN	DATE: 14 AUG 00
CHK'D:		DATE:	APPV'D:	
TITLE: SINGLE HUNG SHL21WW HORIZONTAL ASSEMBLY			DWG. # SHL21WW-H	