Series 3000 1 5/8" Aluminum Windows

Product Specifications | Extrusion Details | Test Reports

Quality. Care. Commitment.
series 3000 windows | uncommon value

Series **3000** 1 5/8" Aluminum Windows

Introduction

Our Series 3000 1 5/8" product line uses 6063 extruded aluminum and are age hardened to a T-6 rating for strength and durability. The Series 3000 windows have integral extrusion walls with a nominal web thickness of .125" , and a wall thickness of .094". The nailing fins will be .050" thick. The material thickness on all wall sections meets or exceeds commercial window standards.

The Series 3000 1 5/8" window line is available in the following finishes:

- Class I Clear Anodized**
- Class I Bronze Anodized**
- Standard White
- Custom Anodized
- 70% Kynar Paint Color

*** Indicates Finishes In Stock.*

Testing

Our Series 3000 projected, casement and fixed windows have been tested to AAMA/WDMA/CSA101/1.5.2/A440-05 standards as listed below: (Please see test reports located in the back of this section for window sizes, configurations, and hardware used.)

- Fixed - F-C60
- Casement Combination Window OO/XO/OO - C-30
- Casement Combination Window XOXX - C-30
- Awning Window Combination Double Fixed / Double Awning - C-30
- Hopper Window Combination Awning / Awning / Fixed / Hopper - C-30

All Weather has comprehensive files containing all historical testing. Each of the tests in the proceeding list are current, however, our archived testing may be more specific for your particular project and will be provided upon request.

Construction

Corners of frame and ventilators are mitered and welded for structural integrity. All muntin and other intermediate bars are firmly attached to their cross joints and their abutting sash sections. The frame sill, vents, and intermediate bars contain weep provisions and are sloped for positive drainage to the exterior. Frames are drilled and tapped to receive screen attachment hardware as required. All surfaces to be glazed have a bead retaining notch.

Hardware

Projected & Casement Windows: Vents shall operate on 4-bar heavy duty stainless steel hinges, and have die cast zinc cam handles with pole ring. Project-in type units use a snaplock or cam handle with pawl. White bronze hardware or brushed nickel hardware is available upon request.

Series 3000 awning and casement alternate: A worm gear rotary control operator with butt hinges and side mounted locking handle is provided for each casement ventilator. Casements can have a multipoint lock system upon request. Awnings can also be equipped with worm gear rotary hardware with loose pin/concealed hinges and locking handles on the jambs.

Screens

Screens are made of painted roll formed aluminum to match the window frame and use charcoal fiberglass mesh with plastic wicket doors. Wire mesh and Ultraview mesh screens are available upon request. The screens are installed and are removable from the inside of the building (Exception: Our project-in hopper screen is mounted on the exterior).

Series 3000 rotary casement and awning windows will have flat screens, also removable from inside the building.

Glazing

Glazing options offered for single glazed or 15/16" OA Insulated units

Square Bead

- 1/4"
- 3/8"
- 1/2"
- 15/16"

Weather-stripping

Our Series 3000 casement, awnings, and project-in windows are weather stripped with a santoprene, 64A durometer black bulb insert. It is inserted in an extruded slot at the perimeter of the vent or opening. Two (2) rows are used to ensure low air infiltration and weather penetration prevention. The bulb seal can be replaced in the field after installation, if necessary, for maintenance purposes.

Installation Guidelines

- All windows must be installed in prepared openings in accordance with AAMA recommendations and the below-listed manufacturers' recommendations (If shop drawings are required, please refer to approved shop drawings for installation):
- All vent panels must be closed and locked.
- Each unit must be installed level, plumb and square with a ¼" clearance on the jambs and the header of the window.
- Remove wet plaster, mortar, stucco and cement immediately.
  (Note: windows should only be cleaned with mild soap and water.)
- Do not set items on the sill.
- In nail-on applications, a bead of caulking material should be applied to the inside nail-on fin just before installation to insure a water tight seal between the building and the window. In an equal leg window a bead of caulking material should also be applied.
- Any attachment screws or bolts should be sealed during the process of installation.
- After installation is complete, building paper and stucco wire (if a stucco application) should overlap the window nail-on flange.

Care & Maintenance

- Windows should be kept free of all dust, dirt, paint and plaster.
- The sill should be kept clean at all times. A vacuum cleaner with a crevice attachment is recommended.
- Window should only be cleaned with mild soap and water.
- **Caution:** Damage will occur to the frame finish, and to the sealed glass unit, if solvents, petroleum products, or caustic chemicals such as acetone or paint thinner are used to clean window frames. Damage caused by this type of abuse is not covered under warranty.

Series **3000** Limited Warranty

ALUMINUM WINDOWS One (1) year limited warranty

Every All Weather Architectural Aluminum, Inc., window is guaranteed to meet industry standards for performance against defects in material or workmanship for a period of one (1) year. Broken glass or damage due to improper installation or abuse are not covered by this warranty. Industry standards are defined by the American Architectural Manufacturers Association (AAMA), WDMA (Window & Door Manufactures Association and CSA (Canadian Standards Association), (AAMA/WDMA/CSA 101/I.S.2/A440-05)

INSULATED GLASS Ten (10) year limited warranty

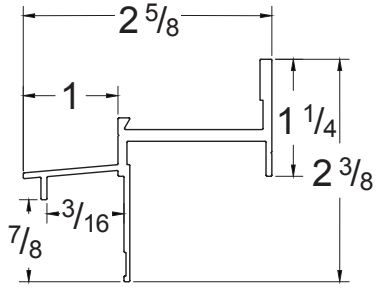
Every All Weather insulated glass unit is warranted for a period of ten (10) years from the date of manufacture except in the case of insulating glass containing decorative internal grids which are warranted for a period of one (1) year. All Weather warrants that under normal conditions of residential or light commercial use and service, moisture condensation, dust, and other foreign particles inside of the dead air space and/or loss of insulating value due to leakage of the unit at the sealed edges will not occur. In the event of a failed unit, All Weather will provide a replacement unit at no cost to the customer, or at its option, refund the original purchase price of said unit. This warranty applies to original units only and does not include removal or reinstallation.

WARRANTY IS SUBJECT TO THE FOLLOWING CONDITIONS AND TERMS

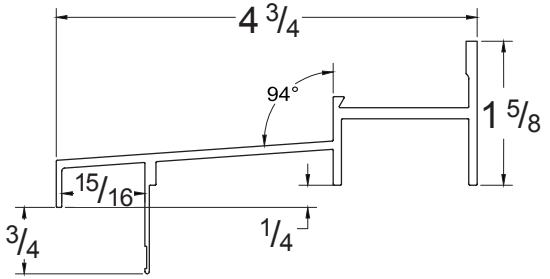
- All Weather must be paid in full for the products to qualify.
- The warranty on replacement units is limited to the remainder of the warranty period on the original units. Replacement units will be shipped F.O.B. original customer.
- This warranty does not include removal or reinstallation.
- All Weather will not assume liability for glass breakage or damage caused by improper glazing, All Weather windows shipped open for field glaze, improper installation, vandalism, misuse, abuse, or acts of nature including earthquake, flood, and fire, or damage resulting from use in sloped glazing installations or improper treatment including exposure to any chemicals or substances detrimental to the insulating seal of the units; faulty building construction or design; or in conditions where water or moisture can accumulate and remain around the sealed edges of the units. This warranty does not cover single pane glass or IG units that are field glazed, regardless of glass supplier, to include All Weather supplied glass / units. Customer supplied glass is also not covered.
- The warranty applies only to the original registered owner-occupant at the location where the products were originally installed and is not transferable.
- The paint surface of any special painted material is not covered under this warranty. Warranty claims for special paint must be filed with the paint vendor and are subject to their warranty terms and conditions.
- This warranty is void where units are installed in other than a normal residential or light commercial application or in any environment where units are exposed to excessive temperature gradients from surface to surface.

There are no warranties which extend beyond the description on the face hereof. All Weather will not be liable for any subsequent expenses involved in the removal of defective units, installation of replacement units or any other incidental or consequential damages, including but not limited to those for personal injury, arising from or alleged to have arisen from any breach of the warranty contained herein. The purchaser's exclusive remedy is limited to the legal remedies described in this warranty. All Weather makes no other warranty, either express or implied, regarding our product, its merchantability or fitness for a particular purpose. No employee representative, or dealer of All Weather is authorized to modify or change this warranty.

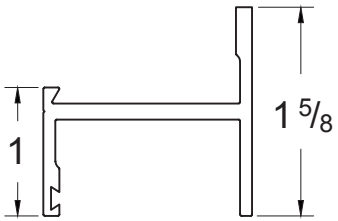
301 NAIL ON FRAME BAR



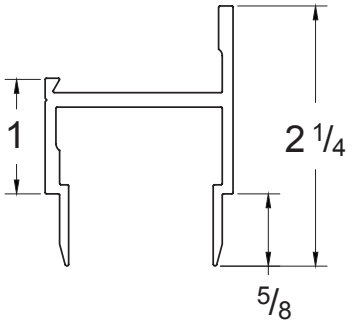
350 PANNING FRAME



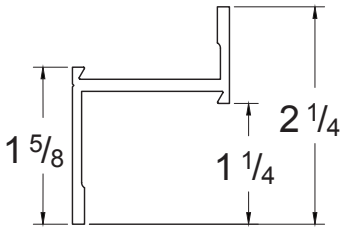
302 EQUAL LEG FRAME BAR



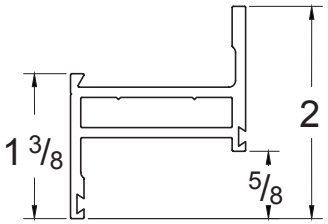
310A EQUAL LEG FRAME CONNECTOR



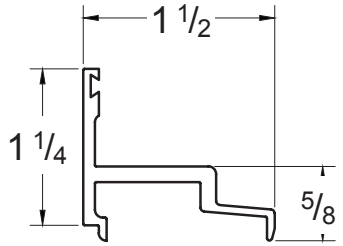
339 LONG LEG Z BAR



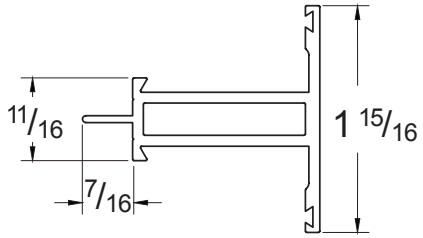
303T TUBULAR VENT BAR



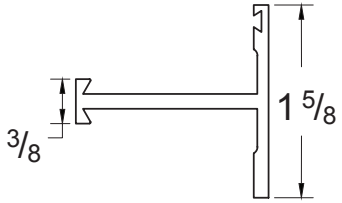
307 INVERT BAR



308T TUBULAR HOPPER VENT SILL



306W TEE BAR



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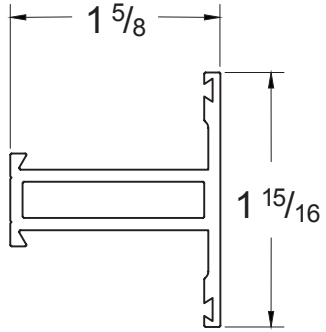
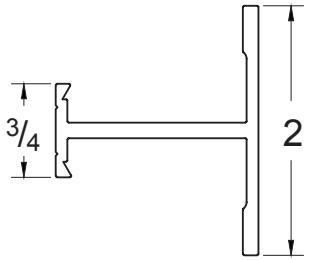
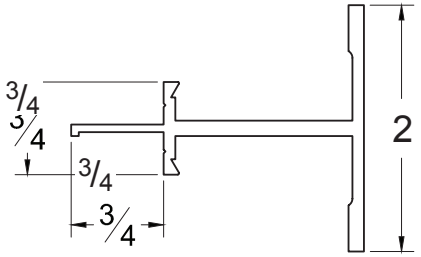


305 DOUBLE MEETING RAIL

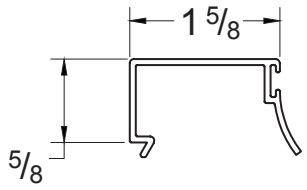


315 DOUBLE MEETING RAIL WITH DRIP



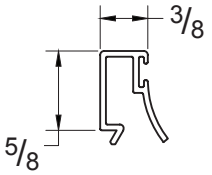
325 SQUARE BEAD

FOR 1/4" GLASS



326 SQUARE BEAD

FOR 15/16 " OA GLASS



327 SQUARE BEAD

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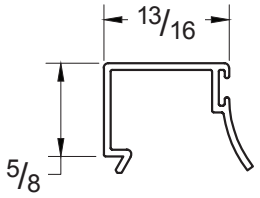
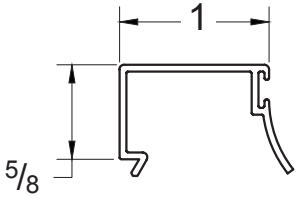


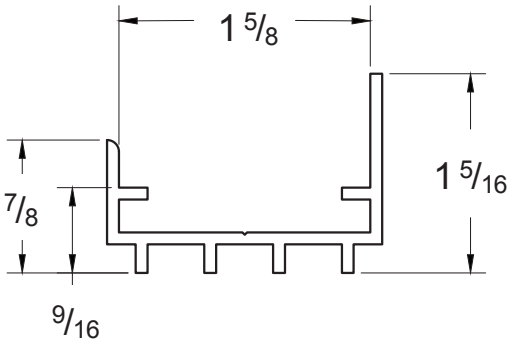
328 SQUARE BEAD

FOR 3/8" GLASS



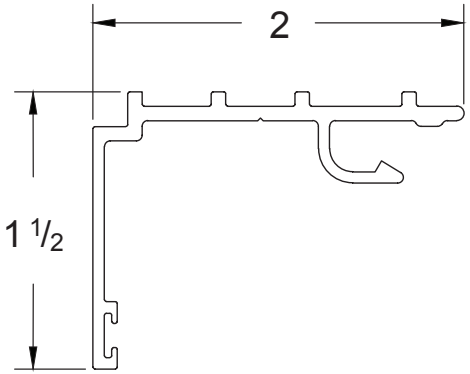
320 COMPENSATION CHANNEL

SILL



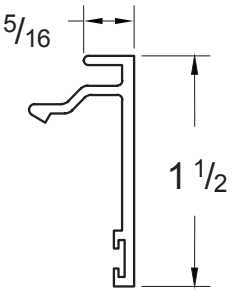
321 COMPENSATION CHANNEL

HEAD / JAMB



322 COMPENSATION CHANNEL

SNAP FACE



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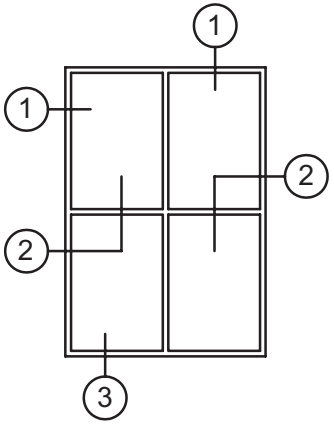
NAIL ON FIXED

#2 ALTERNATIVES: 2a - TUBULAR TEE BAR

2b - 302 / 310 INTERSECTION



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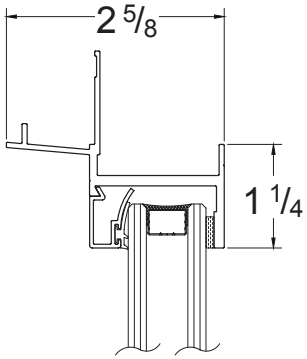

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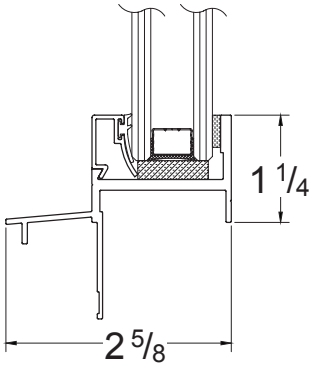

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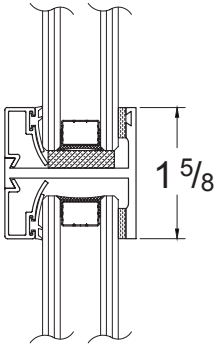

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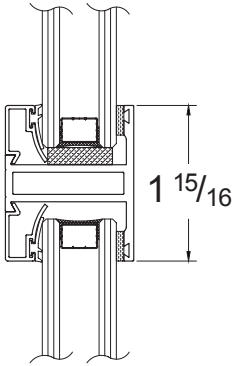

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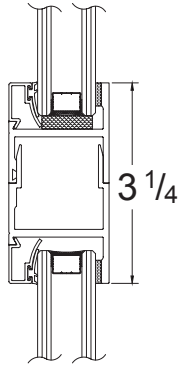
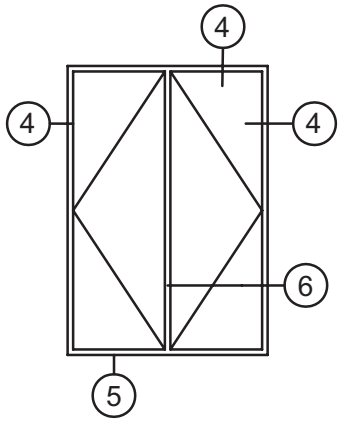


NAIL ON CASEMENT

CSMT HL / CSMT HR



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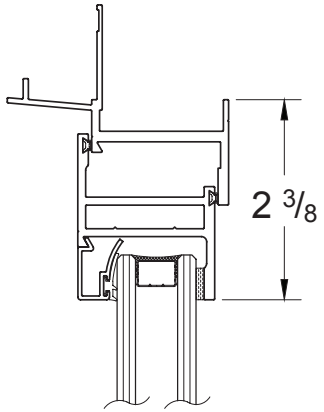

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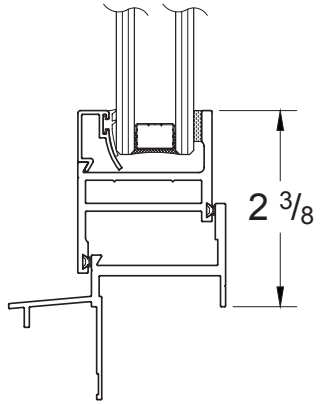

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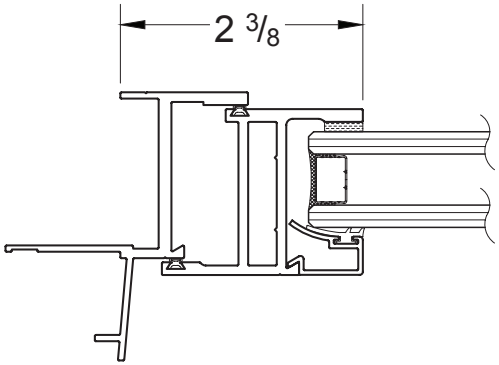

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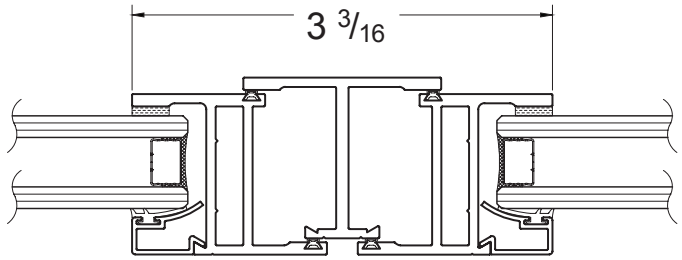

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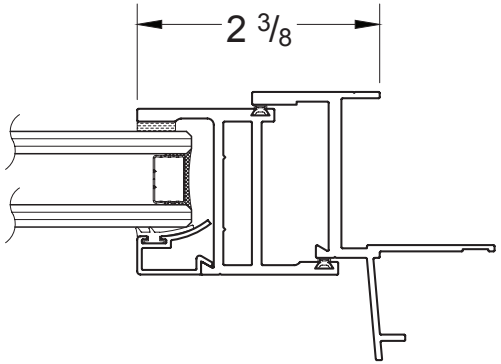
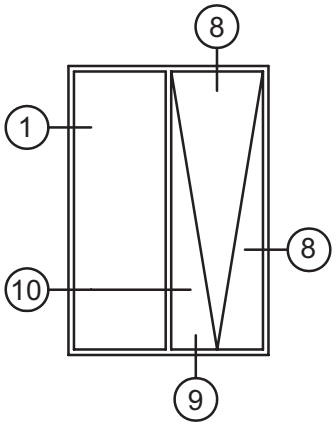


NAIL ON HOPPER

FIXED / HOPPER



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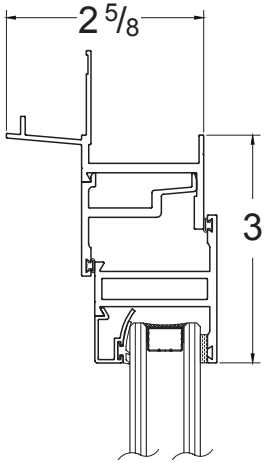

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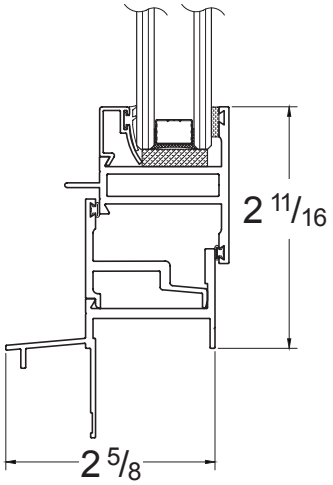

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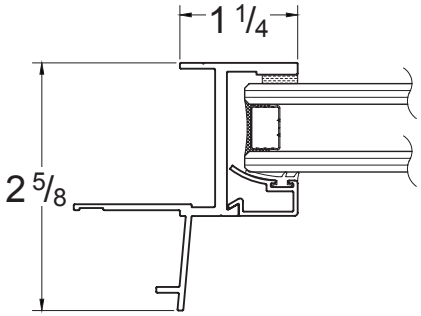

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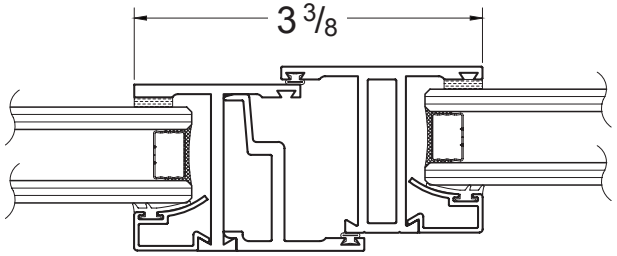

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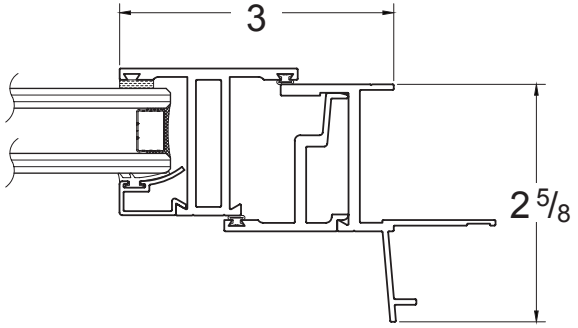
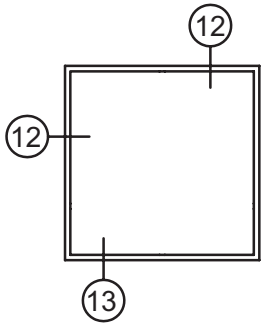


NAIL ON FIXED

PANNING SYSTEM



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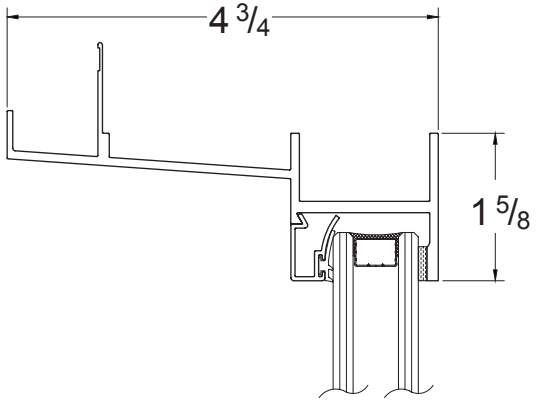

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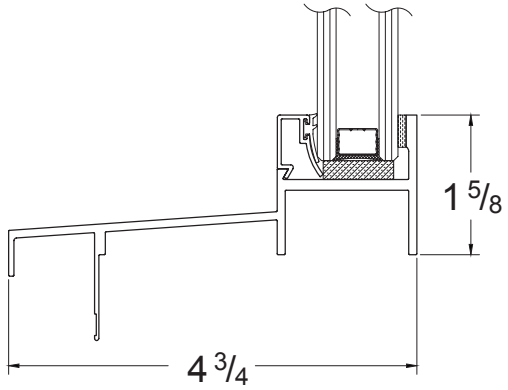
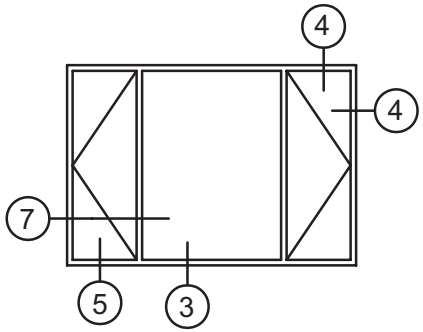


NAIL ON CASEMENT

CSMT HL / FIXED / CSMT HR



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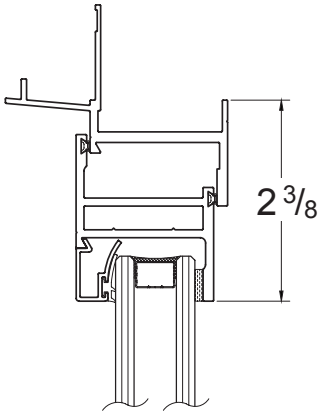

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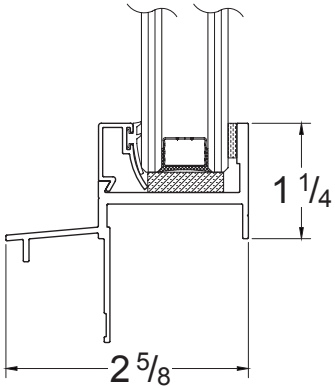

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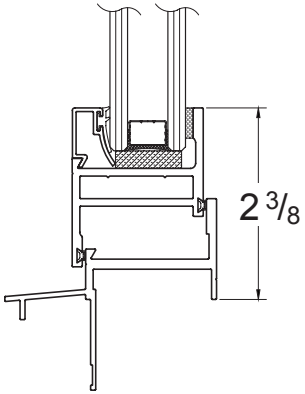

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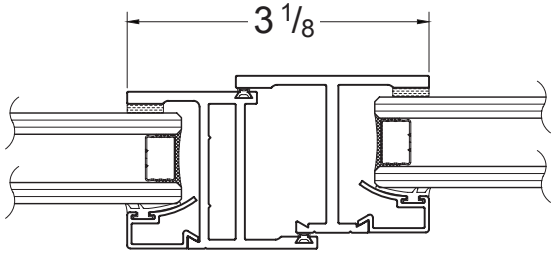
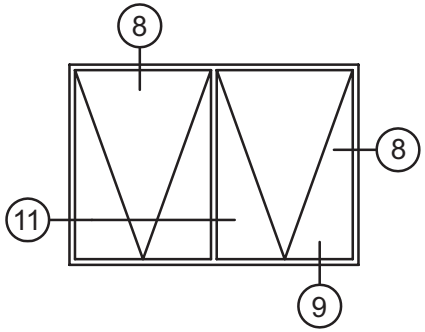


NAIL ON HOPPER

HOPPER / HOPPER



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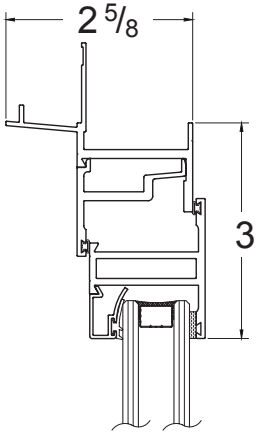

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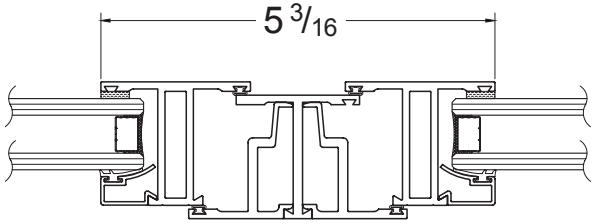

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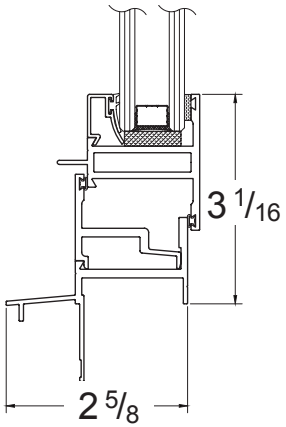
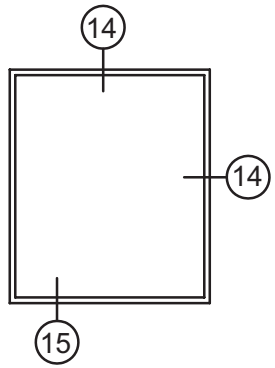


EQUAL LEG FIXED

14a & 15a SHOWN WITH COMP CHANNEL



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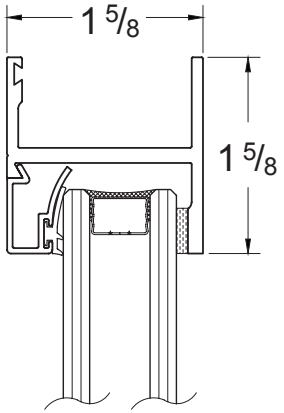

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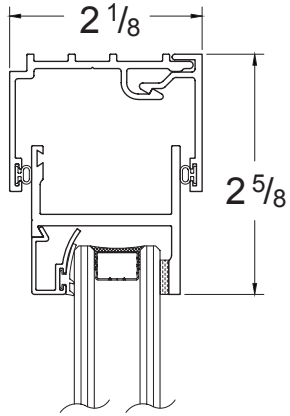

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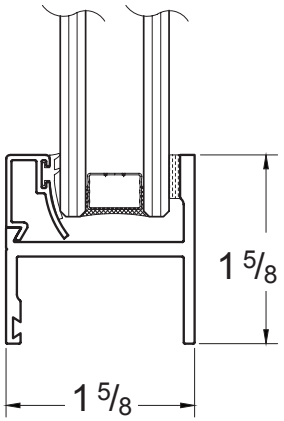

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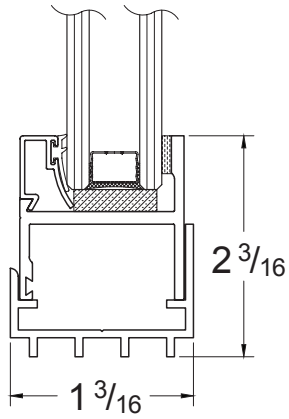
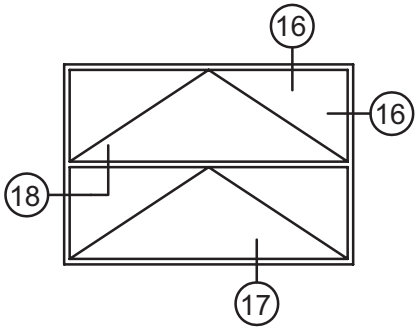


EQUAL LEG AWNING

AWNING / AWNING

#16 SHOWN WITH TUBULAR VENT



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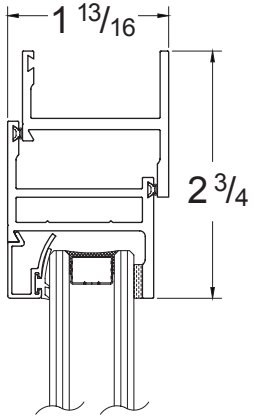

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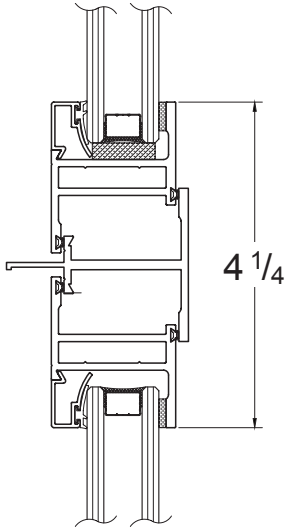

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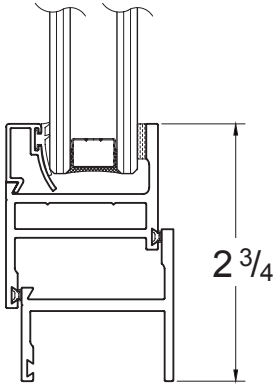
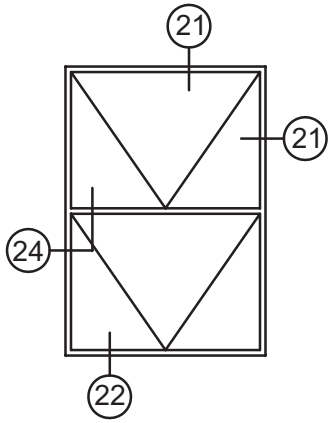


EQUAL LEG HOPPER

HOPPER / HOPPER



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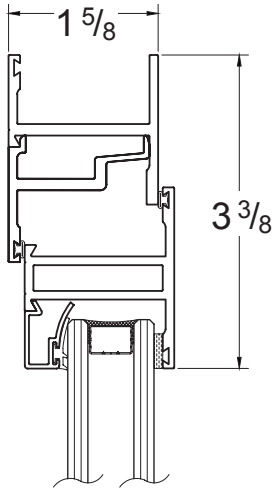

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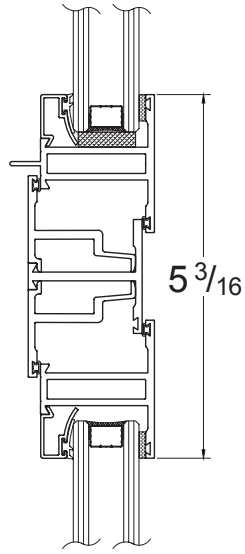

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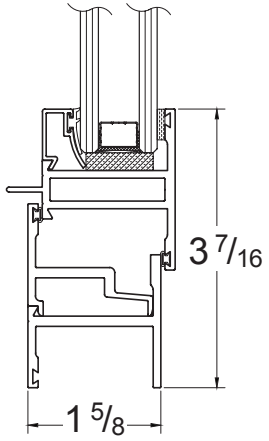
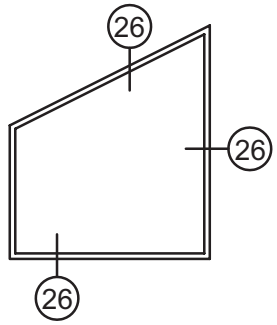
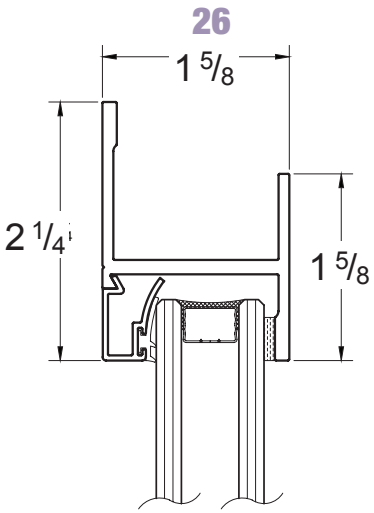
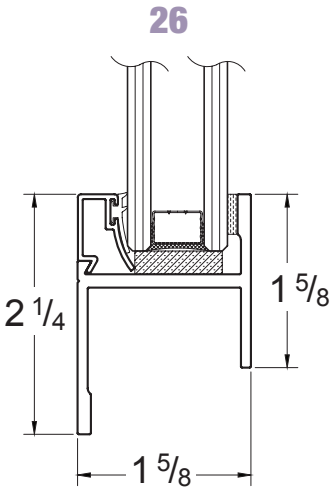


RETRO FIT FIXED

Shown With #309

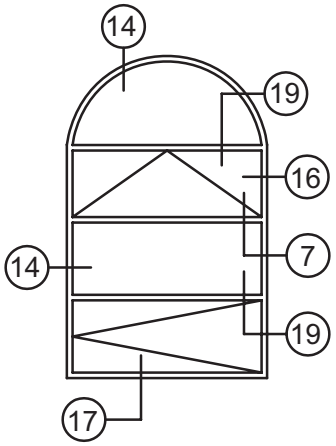






EQUAL LEG AWNING

FIXED / AWNING / FIXED / CASEMENT



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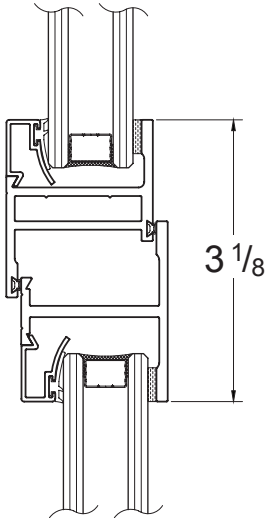

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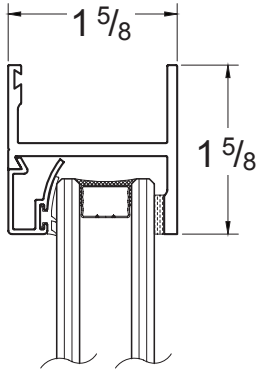

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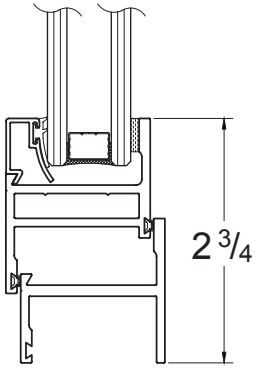

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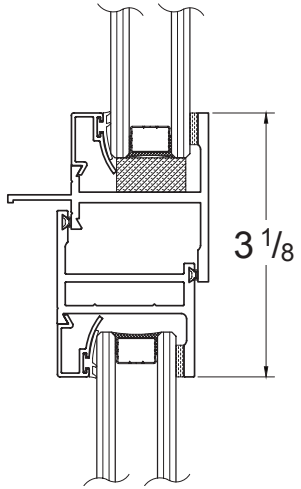
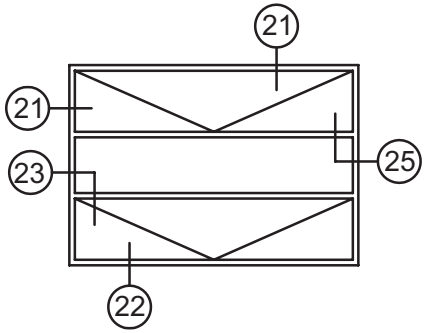


EQUAL LEG HOPPER

HOPPER / FIXED / HOPPER



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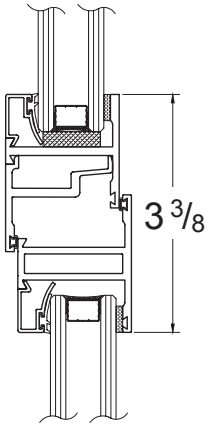

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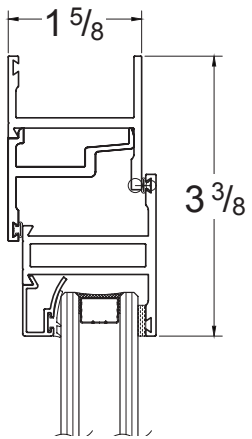

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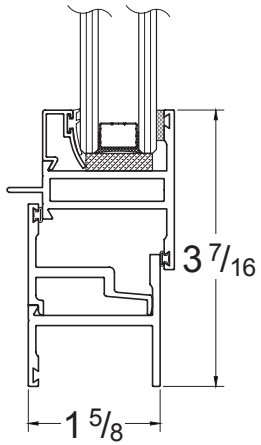

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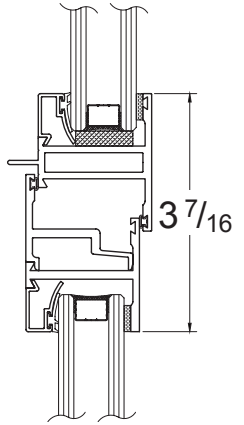
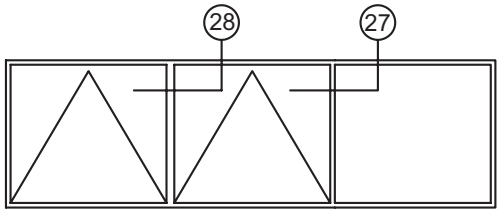


EQUAL LEG AWNING

AWNING / AWNING



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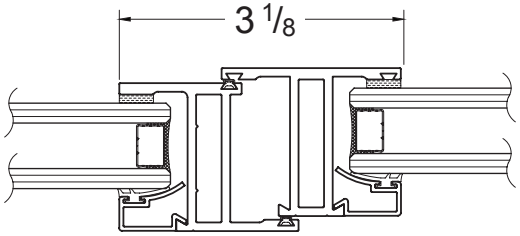

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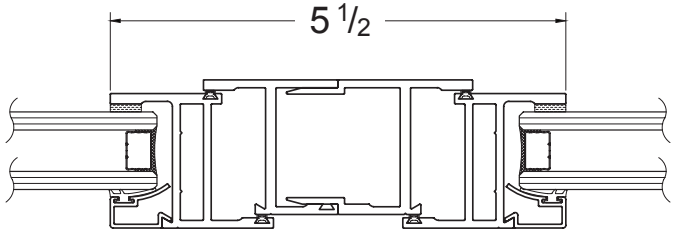

Series **3000** Testing

Architectural Testing

TEST REPORT

Report No.: C9433.01-301-44

Rendered to:

ALL WEATHER ARCHITECTURAL ALUMINUM
Vacaville, California

PRODUCT TYPE: Aluminum Fixed Window

SERIES/MODEL: 3000 Series

SPECIFICATION: AAMA/WDMA/CSA 101/I.S.2/A440-08, *NAFS - North American Fenestration Standard/Specification for Windows, Doors, and Skylights*
AND
AAMA/WDMA/CSA 101/I.S.2/A440-05, *Standard/Specification for Windows, Doors, and Unit Skylights.*

Title	Summary of Results
Primary Product Designator, AAMA/WDMA/CSA 101/I.S.2/A440-08	Class C – PG60: Size Tested 1503 x 1501 (59 x 59) – Type FW
Primary Product Designator, AAMA/WDMA/CSA 101/I.S.2/A440-05	FW – C60 1503 x 1501 (59 x 59)
Design Pressure	±2880 Pa (±60.15 psf)
Air Infiltration	0.0 L/s/m² 0.00 cfm/ft²)
Water Penetration Resistance Test Pressure	440 Pa (9.19 psf)

Test Completion Date: 06/17/2013

Reference must be made to Report No. C9433.01-301-44 dated 01/24/14 for complete test specimen description and detailed test results.

Architectural Testing

Test Report No.: C9433.01-301-44
Report Date: 01/24/14
Record Retention End Date: 06/17/17
Page 1 of 5

1.0 Report Issued To: All Weather Architectural Aluminum
777 Aldridge Road
Vacaville, California 95688

2.0 Test Laboratory: Architectural Testing, Inc.
2524 East Jensen Avenue
Fresno, California 93706
559-233-8705

3.0 Project Summary:

3.1 Series/Model: 3000 Series

3.2 Product Type: Aluminum Fixed Window

3.3 Compliance Statement: Results obtained are tested values and were secured by using the designated test methods. The specimen tested successfully met the performance requirements for an AAMA/WDMA/CSA 101/I.S.2/A440-08 rating of **Class C – PG60: Size Tested 1503 x 1501 (59 x 59) – Type FW**, and an AAMA/WDMA/CSA 101/I.S.2/A440-05 rating of **FW – C60 1503 x 1501 (59 x 59)**.

3.4 Test Date: 06/17/2013

3.5 Test Record Retention End Date: All test records for this report will be retained until June 17, 2017.

3.6 Test Location: Architectural Testing, Inc. test facility in Fresno, California.

3.7 Test Sample Source: The test specimen was provided by the client.

3.8 Drawing Reference: The test specimen drawings have been reviewed by Architectural Testing and are representative of the test specimen reported herein. Test specimen construction was verified by Architectural Testing per the drawings located in Appendix B. Any deviations are documented herein or on the drawings.

3.9 List of Official Observers:

Name	Company
Seamus Porter	All Weather Architectural Aluminum
David Douglass	Architectural Testing, Inc.

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Series **3000** Testing

4.0 Test Specifications:

AAMA/WDMA/CSA 101/I.S.2/A440-08, *NAFS - North American Fenestration Standard/Specification for Windows, Doors, and Skylights*

AAMA/WDMA/CSA 101/I.S.2/A440-05, *Standard/Specification for Windows, Doors, and Unit Skylights.*

5.0 Test Specimen Description:

5.1 Product Sizes:

Overall Area: 2.26 m^2 (24.3 ft^2)	Width		Height	
	millimeters	inches	millimeters	inches
Overall size	1503	59-3/16	1501	59-1/8

5.2 Frame Construction:

Frame Member	Material	Description
Head and Sill	Aluminum	Extruded aluminum
Jambs	Aluminum	Extruded aluminum

	Joinery Type	Detail
Frame corners	Mitered	Corners were welded and sealed with seam sealer.

5.3 Panel Construction: No panel was utilized.

5.4 Weatherstripping: No weatherstripping was utilized.

5.0 Test Specimen Description: (Continued)

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

Glass Type	Spacer Type	Interior Lite	Exterior Lite	Glazing Method
15/16" IG	Aluminum	3/16" clear annealed	3/16" clear annealed	Glazing was direct set to the frame from the exterior onto double-sided foam tape, sealed at the corners with silicone, and secured with a snap-fit glazing bead. Each glazing bead utilized a rubber gasket against the glass.

Location	Quantity	Daylight Opening		Glass Bite
		millimeters	inches	
Fixed lite	1	1439 x 1438	56-5/8 x 56-5/8	5/8"

5.6 Drainage:

Drainage Method	Size	Quantity	Location
Weep Notch	7/16" x 1/8"	2	Sill at fixed lite, 1" from each corner.

5.7 Hardware: No hardware was utilized

5.8 Reinforcement: No reinforcement was utilized.

5.9 Screen Construction: No screen was utilized.

6.0 Installation:

The specimen was installed into a Douglas fir test buck. The rough opening allowed for a 1/4" shim space. The exterior perimeter of the window was sealed with silicone.

Location	Anchor Description	Anchor Location
Nail fin	1/4" x 2" Phillips flat head screw	1-1/2" from each corner and spaced 12" on center.

Series **3000** Testing

Architectural Testing

Test Report No.: C9433.01-301-44
Report Date: 01/24/14
Record Retention End Date: 06/17/17
Page 4 of 5

7.0 Test Results: The temperature during testing was 21°C (69°F). The results are tabulated as follows:

Title of Test	Results	Allowed	Note
Air Leakage, Infiltration per ASTM E 283 at 75 Pa (1.57 psf)	0.0 L/s/m² (0.00 cfm/ft²)	1.5 L/s/m² (0.3 cfm/ft²) max.	1
Water Penetration, per ASTM E 547	N/A	N/A	2
Uniform Load Deflection, per ASTM E 330	N/A	N/A	2
Uniform Load Structural, per ASTM E 330	N/A	N/A	2
Forced Entry Resistance, per ASTM F 588, Type D, Grade 40	Pass	No entry	
Optional Performance			
Water Penetration, per ASTM E 547 at 440 Pa (9.19 psf)	Pass	No leakage	3
Uniform Load Deflection, per ASTM E 330 Frame			
-2880 Pa (-60.15 psf)	0.1 mm (0.01")	1.7 mm (0.07")	
+2880 Pa (+60.15 psf)	0.1 mm (0.01")	1.7 mm (0.07")	4, 5, 6
Uniform Load Structural, per ASTM E 330 Frame			
-4320 Pa (-90.23 psf)	0.0 mm (0.00")	0.9 mm (0.04")	
+4320 Pa (+90.23 psf)	0.0 mm (0.00")	0.9 mm (0.04")	5, 6

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Architectural Testing

Test Report No.: C9433.01-301-44
Report Date: 01/24/14
Record Retention End Date: 06/17/17
Page 5 of 5

7.0 Test Results: (Continued)

Note 1: *The tested specimen meets (or exceeds) the performance levels specified in AAMA/WDMA/CSA 101/I.S.2/A440 for air leakage resistance.*

Note 2: *The client opted to start at a pressure higher than the minimum required. Test results are reported under Optional Performance.*

Note 3: *Without insect screen.*

Note 4: *The deflections reported are given different allowable limits by the stated specifications. The allowable limits reported are the more restrictive. The deflection data in this report may also be used for special code compliance or information purposes.*

Note 5: *Loads were held for 10 seconds.*

Note 6: *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.*

Architectural Testing 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 Architectural Testing, Inc. 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 Architectural Testing, Inc.

For ARCHITECTURAL TESTING, Inc.

Digitally Signed by: David Douglass
David Douglass
Project Manager

Digitally Signed by: Leaton Kirk
Leaton Kirk
Director – Regional Operations

DD: ms

Attachments (pages): This report is complete only when all attachments listed are included.
Appendix-A: Alteration Addendum (1)
Appendix-B: Drawings (4)

This report produced from controlled document template ATI 00438, issued 01/31/12.

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Series **3000** Testing

Architectural Testing

TEST REPORT

Report No.: C7730.01-301-44

Rendered to:

ALL WEATHER ARCHITECTURAL ALUMINUM
Vacaville, California

SERIES/MODEL: 3000 Series
PRODUCT TYPE: Aluminum Combination Fixed & Casement Window OO/XO/OO

SPECIFICATIONS: AAMA/WDMA/CSA 101/I.S.2/A440-08, *NAFS – North American Fenestration Standard/Specification for Windows, Doors, and Skylights*
AND
AAMA/WDMA/CSA 101/I.S.2/A440-05, *Standard/Specification for Windows, Doors, and Unit Skylights*

Title	Summary of Results
Primary Product Designator, AAMA/WDMA/CSA 101/I.S.2/A440-08	Class LC – PG30: Size Tested 1613 x 3354 (64 x 132) – Type C
Primary Product Designator, AAMA/WDMA/CSA 101/I.S.2/A440-05	C – C30 1613 x 3354 (64 x 132)
Design Pressure	±1440 Pa (±30.08 psf)
Air Infiltration	0.04 L/s/m² (0.01 cfm/ft²)
Water Penetration Resistance Test Pressure	220 Pa (4.59 psf)

Test Completion Date: 07/26/2013

Reference must be made to Report No. C7730.01-301-44 dated 01/23/14 for complete test specimen description and detailed test results.

Architectural Testing

Test Report No.: C7730.01-301-44
Report Date: 01/23/14
Record Retention End Date: 07/26/17
Page 1 of 7

1.0 Report Issued To: All Weather Architectural Aluminum
777 Aldridge Road
Vacaville, California 95688

2.0 Test Laboratory: Architectural Testing, Inc.
2524 East Jensen Avenue
Fresno, California 93706
559-233-8705

3.0 Project Summary:

3.1 Series/Model: 3000 Series

3.2 Product Type: Aluminum Combination Fixed & Casement Window OO/XO/OO

3.3 Compliance Statement: Results obtained are tested values and were secured by using the designated test methods. The specimen tested successfully met the performance requirements for an AAMA/WDMA/CSA 101/I.S.2/A440-08 rating of **Class LC – PG30: Size Tested 1613 x 3354 (64 x 132) – Type C**, and an AAMA/WDMA/CSA 101/I.S.2/A440-05 rating of **C – C30 1613 x 3354 (64 x 132).**

3.4 Test Dates: 04/18/2013 – 07/26/2013

3.5 Test Record Retention End Date: All test records for this report will be retained until July 26, 2017.

3.6 Test Location: Architectural Testing, Inc. test facility in Fresno, California.

3.7 Test Sample Source: The test specimen was provided by the client.

3.8 Drawing Reference: The test specimen drawings have been reviewed by Architectural Testing and are representative of the test specimen reported herein. Test specimen construction was verified by Architectural Testing per the drawings located in Appendix B. Any deviations are documented herein or on the drawings.

3.9 List of Official Observers:

Name	Company
Seamus Porter	All Weather Architectural Aluminum
Jay Ratliff	Architectural Testing, Inc.
David Douglass	Architectural Testing, Inc.

www.archtest.com

Series **3000** Testing

Architectural Testing

Test Report No.: C7730.01-301-44
Report Date: 01/23/14
Record Retention End Date: 07/26/17

4.0 Test Specifications:

AAMA/WDMA/CSA 101/I.S.2/A440-08, *NAFS - North American Fenestration Standard/Specification for Windows, Doors, and Skylights*

AAMA/WDMA/CSA 101/I.S.2/A440-05, *Standard/Specification for Windows, Doors, and Unit Skylights.*

5.0 Test Specimen Description:

5.1 Product Sizes:

Overall Area: 5.41 m² (58.23 ft)	Width		Height	
	millimeters	inches	millimeters	inches
Overall size	1613	63-1/2	3354	132
Active Panel	793	31-1/4	1519	59-13/16

5.2 Frame Construction:

Frame Member	Material	Description
Head and Sill	Aluminum	Extruded aluminum
Jambs	Aluminum	Extruded aluminum
Mullions	Aluminum	Extruded aluminum

	Joinery Type	Detail
Frame corners	Mitered	Corners were welded; sealed with seam sealer.
Horizontal Mullion joints	Coped	Horizontal mullion ends were coped and staked through slots in jambs and butt-welded at vertical mullions; sealed with seam sealer.
Vertical Mullion Joints	Coped	Mullion ends were coped and staked through slots in the head and sill; sealed with seam sealer.

Architectural Testing

Test Report No.: C7730.01-301-44
Report Date: 01/23/14
Record Retention End Date: 07/26/17

5.0 Test Specimen Description: (Continued)

5.3 Panel Construction:

Panel Member	Material	Description
Rails and stiles	Aluminum	Extruded aluminum

	Joinery Type	Detail
Panel corners	Miter	Corners were welded; sealed with seam sealer.

5.4 Weatherstripping:

Description	Quantity	Location
Panel stiles and rails	2 rows	Interior face of panel perimeter

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.*

Glass Type	Spacer Type	Interior Lite	Exterior Lite	Glazing Method
15/16" IG	Aluminum	1/8" clear annealed	1/8" clear annealed	Glazing was set from the exterior onto double-sided foam tape, sealed with silicone at the corners, and secured with a snap-fit aluminum glazing bead. Each glazing bead utilized a rubber gasket against the glass.

Lite	Quantity	Daylight Opening		Glass Bite
		millimeters	inches	
Top left, bottom left	2	750 x 858	29-1/2 x 33-3/4	9/16"
Top right, bottom right	2	749 x 858	29-1/2 x 33-3/4	9/16"
Middle active panel	1	694 x 1419	27-5/16 x 55-7/8	9/16"
Middle fixed	1	751 x 1472	29-9/16 x 57-15/16	9/16"

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Architectural Testing

Test Report No.: C7730.01-301-44
Report Date: 01/23/14
Record Retention End Date: 07/26/17

5.0 Test Specimen Description: (Continued)

5.6 Drainage:

Drainage Method	Size	Quantity	Location
Weep Notch	7/16" x 1/8"	10	Exterior leg of glazing track in sill and horizontal mullions, 2 notches per lite 7/8" from each corner.
Weep Notch	7/16" x 1/8"	2	Exterior leg of glazing track in bottom rail, 7/8" from each corner.

5.7 Hardware:

Description	Quantity	Location
3-Point Lock	1	Attached to the vertical mullion, through sliding lock bar with six #10-24 x 5/16" Phillips flat head screws, through handle with two #10-24 x 5/8" Phillips flat head screws.
Keepers	3	Lock stile, 9" from top corner and 22" on center, each attached with three #10-24 x 5/16" Phillips flat head screws.
Roto-Operator	1	Attached to bottom rail with two #10 x 5/16" square drive pan head self-drilling screws and the horizontal mullion with four #10-24 x 5/8" Phillips flat head screws.
Butt hinges	3	Mid-span and 5-1/4" from corners, each attached with three #10-32 x 3/8" square-drive pan head screws through the stile and three #10-32 x 1/2" square-drive pan head screws through the frame.
Friction stay-bar	1	Attached to horizontal mullion and top rail with two #10 x 7/16" square drive pan head self-drilling screws in each member.

5.8 Reinforcement: No reinforcement was utilized.

5.9 Screen Construction: No screen was utilized.

Architectural Testing

Test Report No.: C7730.01-301-44
Report Date: 01/23/14
Record Retention End Date: 07/26/17

6.0 Installation:

The specimen was installed into a Douglas fir buck. The rough opening allowed for a 1/4" shim space. The exterior perimeter of the window was sealed with silicone.

Location	Anchor Description	Anchor Location
Nail fin	1/4" x 2" Phillips flat head screw	1" – 2" from each corner, spaced 10" – 16" on center.

7.0 Test Results: The temperature during testing was 26°C (79°F). The results are tabulated as follows:

Title of Test	Results	Allowed	Note
Operating Force, per ASTM E 2068	Initiate motion: 2 N (0.5 lbf) Maintain motion: 7 N (1.5 lbf) Locks: 17 N (3.75 lbf)	N/A 45 N (10.1 lbf) max. 100 N (22.5 lbf) max.	
Air Leakage, Infiltration per ASTM E 283 at 75 Pa (1.57 psf)	0.04 L/s/m² (0.01 cfm/ft²)	1.5 L/s/m² (0.3 cfm/ft²) max.	1
Water Penetration, per ASTM E 547 at 220 Pa (4.59 psf)	Pass	No leakage	2
Uniform Load Deflection, per ASTM E 330 taken at bottom rail +1440 Pa (+30.08 psf) -1440 Pa (-30.08 psf) taken at horizontal mullion +1440 Pa (+30.08 psf) -1440 Pa (-30.08 psf)	 0.6 mm (0.03") 1.0 mm (0.04") 20.3 mm (0.80") 21.3 mm (0.84")	 N/A	 3, 4, 5
Uniform Load Structural, per ASTM E 330 taken at bottom rail +2160 Pa (+45.11 psf) -2160 Pa (-45.11 psf) taken at horizontal mullion +2160 Pa (+45.11 psf) -2160 Pa (-45.11 psf)	 0.0 mm (0.00") 0.1 mm (0.01") 2.0 mm (0.08") 4.6 mm (0.18")	 2.4 mm (0.09") max. 2.4 mm (0.09") max. 4.7 mm (0.19") max. 4.7 mm (0.19") max.	 4, 5

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Test Report No.: C7730.01-301-44
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7.0 Test Results: (Continued)

Title of Test	Results	Allowed	Note
Forced Entry Resistance, per ASTM F 588, Type B, Grade 10 and per CAWM-301, Type II	Pass Pass	No entry	
Sash Vertical Deflection 270 N (60.7 lbf)	1.0 mm (0.04")	15.9 mm (0.62") max.	
Distributed Load 300 Pa (6.27 psf)	Pass	No damage	

Note 1: *The tested specimen meets (or exceeds) the performance levels specified in AAMA/WDMA/CSA 101/I.S.2/A440 for air leakage resistance.*

Note 2: *Without insect screen.*

Note 3: *The deflections reported are not limited by AAMA/WDMA/CSA 101/I.S.2/A440 for the product designations shown. Deflection data are reported for special code compliance and information only.*

Note 4: *Loads were held for 10 seconds.*

Note 5: *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.*

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Test Report No.: C7730.01-301-44
Report Date: 01/23/14
Record Retention End Date: 07/26/17
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Architectural Testing 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 Architectural Testing, Inc. for the entire test record retention period.

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For ARCHITECTURAL TESTING, Inc.

Digitally Signed by: David Douglass
David Douglass
Project Manager

Digitally Signed by:Leaton Kirk
Leaton Kirk
Director – Regional Operations

DD: ms

Attachments (pages): This report is complete only when all attachments listed are included.
Appendix-A: Alteration Addendum (1)
Appendix-B: Drawings (8)

This report produced from controlled document template ATI 00438, issued 01/31/12.

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Series **3000** Testing

Architectural Testing

TEST REPORT

Report No.: C9430.01-301-44

Rendered to:

ALL WEATHER ARCHITECTURAL ALUMINUM
Vacaville, California

SERIES/MODEL: 3000 Series
PRODUCT TYPE: Aluminum XOXX Casement Combination Window

SPECIFICATION: AAMA/WDMA/CSA 101/I.S.2/A440-08, *NAFS - North American Fenestration Standard/Specification for Windows, Doors, and Skylights*
AND
AAMA/WDMA/CSA 101/I.S.2/A440-05, *Standard/Specification for Windows, Doors, and Unit Skylights*

Title	Summary of Results
Primary Product Designator, AAMA/WDMA/CSA 101/I.S.2/A440-08	Class LC – PG30: Size Tested 3252 x 1512 (128 x 60) – Type C
Primary Product Designator, AAMA/WDMA/CSA 101/I.S.2/A440-05	C – C30 3252 x 1512 (128 x 60)
Design Pressure	±1440 Pa (±30.08 psf)
Air Infiltration	0.38 L/s/m² (0.07 cfm/ft²)
Water Penetration Resistance Test Pressure	220 Pa (4.59 psf)

Test Completion Date: 06/21/2013

Reference must be made to Report No. C9430.01-301-44, dated 01/23/14 for complete test specimen description and detailed test results.

Architectural Testing

Test Report No.: C9430.01-301-44
Report Date: 01/23/14
Record Retention End Date: 06/21/17
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1.0 Report Issued To: All Weather Architectural Aluminum
777 Aldridge Road
Vacaville, California 95688

2.0 Test Laboratory: Architectural Testing, Inc.
2524 East Jensen Avenue
Fresno, California 93706
559-233-8705

3.0 Project Summary:

3.1 Series/Model: 3000 Series

3.2 Product Type: Aluminum XOXX Casement Combination Window

3.3 Compliance Statement: Results obtained are tested values and were secured by using the designated test methods. The specimen tested successfully met the performance requirements for an AAMA/WDMA/CSA 101/I.S.2/A440-08 rating of **Class LC – PG30: Size Tested 3252 x 1512 (128 x 60) – Type C**, and an AAMA/WDMA/CSA 101/I.S.2/A440-05 rating of **C – C30 3252 x 1512 (128 x 60)**.

3.4 Test Dates: 06/17/2013 – 06/21/2013

3.5 Test Record Retention End Date: All test records for this report will be retained until June 21, 2017.

3.6 Test Location: Architectural Testing, Inc. test facility in Fresno, California.

3.7 Test Sample Source: The test specimen was provided by the client.

3.8 Drawing Reference: The test specimen drawings have been reviewed by Architectural Testing and are representative of the test specimen reported herein. Test specimen construction was verified by Architectural Testing per the drawings located in Appendix B. Any deviations are documented herein or on the drawings.

3.9 List of Official Observers:

Name	Company
Seamus Porter	All Weather Architectural Aluminum
Jay Ratliff	Architectural Testing, Inc.
Jeff Osugi	Architectural Testing, Inc.
David Douglass	Architectural Testing, Inc.

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Series **3000** Testing

Architectural Testing

Test Report No.: C9430.01-301-44
Report Date: 01/23/14
Record Retention End Date: 06/21/17

4.0 Test Specifications:

AAMA/WDMA/CSA 101/I.S.2/A440-08, *NAFS - North American Fenestration Standard/Specification for Windows, Doors, and Skylights*

AAMA/WDMA/CSA 101/I.S.2/A440-05, *Standard/Specification for Windows, Doors, and Unit Skylights.*

5.0 Test Specimen Description:

5.1 Product Sizes:

Overall Area: 4.92 m^2 (52.9 ft^2)	Width		Height	
	millimeters	inches	millimeters	inches
Overall size	3252	128	1512	59-1/2
Panels (3)	804	31-5/8	1492	58-3/4

5.2 Frame Construction:

Frame Member	Material	Description
Head and Sill	Aluminum	Extruded aluminum
Jambs	Aluminum	Extruded aluminum
Mullions	Aluminum	Extruded aluminum

	Joinery Type	Detail
Frame corners	Mitered	Corners were welded; sealed with seam sealer.
Vertical Mullion joints	Coped	Mullions were coped and staked at tabs through slots in head and sill; sealed with seam sealer.

5.3 Panel Construction:

Panel/Member	Material	Description
Rails and stiles	Aluminum	Extruded aluminum

	Joinery Type	Detail
Panel Corners	Miter	Corners were welded; sealed with seam sealer.

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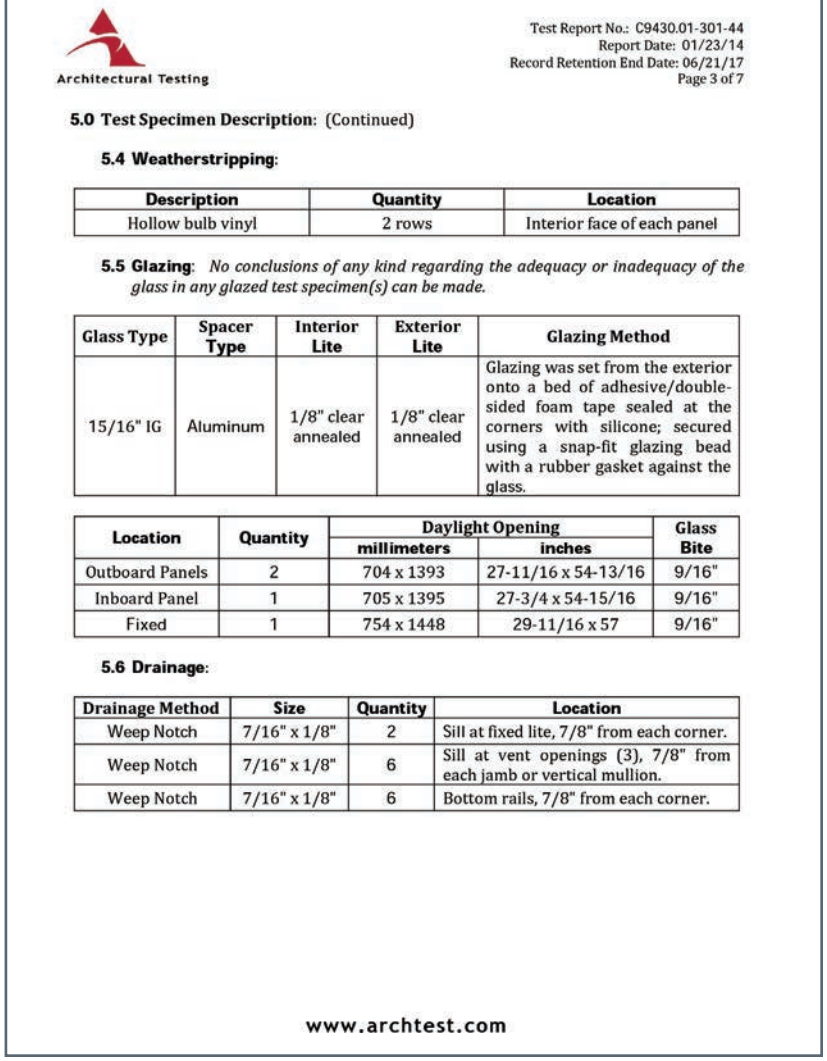

Architectural Testing

Test Report No.: C9430.01-301-44
Report Date: 01/23/14
Record Retention End Date: 06/21/17

5.0 Test Specimen Description: (Continued)

5.4 Weatherstripping:

Description	Quantity	Location
Hollow bulb vinyl	2 rows	Interior face of each panel

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.*

Glass Type	Spacer Type	Interior Lite	Exterior Lite	Glazing Method
15/16" IG	Aluminum	1/8" clear annealed	1/8" clear annealed	Glazing was set from the exterior onto a bed of adhesive/double-sided foam tape sealed at the corners with silicone; secured using a snap-fit glazing bead with a rubber gasket against the glass.

Location	Quantity	Daylight Opening		Glass Bite
		millimeters	inches	
Outboard Panels	2	704 x 1393	27-11/16 x 54-13/16	9/16"
Inboard Panel	1	705 x 1395	27-3/4 x 54-15/16	9/16"
Fixed	1	754 x 1448	29-11/16 x 57	9/16"

5.6 Drainage:

Drainage Method	Size	Quantity	Location
Weep Notch	7/16" x 1/8"	2	Sill at fixed lite, 7/8" from each corner.
Weep Notch	7/16" x 1/8"	6	Sill at vent openings (3), 7/8" from each jamb or vertical mullion.
Weep Notch	7/16" x 1/8"	6	Bottom rails, 7/8" from each corner.

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Test Report No.: C9430.01-301-44
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5.0 Test Specimen Description: (Continued)

5.7 Hardware:

Description	Quantity	Location
Locking handle assembly	6	14-1/2" from each end of lock stiles attached with two #10-24 x 5/8" Phillips flat head screws.
Strike plate	6	Opposite locks, each attached to vertical lock mullions with two #10-24 x 5/16" Phillips flat head screws.
Multi-arm hinge	6	Attached using #10 x 5/16" square-drive self-drilling pan head screws, each with 5 in the rail and 4 in the frame.

5.8 Reinforcement: No reinforcement was utilized.

5.9 Screen Construction: No screen was utilized.

6.0 Installation:

The specimen was installed into a Douglas fir buck. The rough opening allowed for a 1/4" shim space. The exterior perimeter of the window was sealed with silicone.

Location	Anchor Description	Anchor Location
Nail fin	1/4" x 2" Phillips flat head screw	Spaced 2" – 3" from each corner and 9" – 12" on center.

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Test Report No.: C9430.01-301-44
Report Date: 01/23/14
Record Retention End Date: 06/21/17
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7.0 Test Results: The temperature during testing was 21°C (69°F). The results are tabulated as follows:

Title of Test	Results	Allowed	Note
Operating Force, per ASTM E 2068	Initiate motion: 42 N (11.0 lbf) Maintain motion: 25 N (3.0 lbf) Locks: 47 N (10.5 lbf)	Report Only 100 N (22.5 lbf) max. 100 N (22.5 lbf) max.	1
Air Leakage, Infiltration per ASTM E 283 at 75 Pa (1.57 psf)	0.38 L/s/m² (0.07 cfm/ft²)	1.5 L/s/m² (0.3 cfm/ft²) max.	2
Water Penetration, per ASTM E 547 at 220 Pa (4.59 psf)	Pass	No leakage	3
Uniform Load Deflection, per ASTM E 330 Hinge Stile +1440 Pa (+30.08 psf) -1440 Pa (-30.08 psf) Lock-to-Fixed Mullion +1440 Pa (+30.08 psf) -1440 Pa (-30.08 psf) Fixed- to-Hinge Mullion +1440 Pa (+30.08 psf) -1440 Pa (-30.08 psf) Lock- to-Lock Mullion +1440 Pa (+30.08 psf) -1440 Pa (-30.08 psf)	 0.3 mm (0.01") 3.4 mm (0.14") 7.1 mm (0.28") 11.3 mm (0.45") 7.9 mm (0.31") 7.5 mm (0.30") 3.9 mm (0.16") 9.9 mm (0.39")	 N/A	 4, 5, 6

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Series **3000** Testing

Architectural Testing

Test Report No.: C9430.01-301-44
Report Date: 01/23/14
Record Retention End Date: 06/21/17

7.0 Test Results: (Continued)

Title of Test	Results	Allowed	Note
Uniform Load Structural, per ASTM E 330			
Hinge Stile			
+2160 Pa (+45.11 psf)	0.0 mm (0.00")	4.5 mm (0.18")	
-2160 Pa (-45.11 psf)	0.0 mm (0.00")	4.5 mm (0.18")	
Lock- to-Fixed Mullion			
+2160 Pa (+45.11 psf)	0.4 mm (0.02")	4.1 mm (0.16")	
-2160 Pa (-45.11 psf)	0.1 mm (0.01")	4.1 mm (0.16")	
Fixed- to-Hinge Mullion			
+2160 Pa (+45.11 psf)	0.0 mm (0.00")	4.1 mm (0.16")	
-2160 Pa (-45.11 psf)	0.0 mm (0.00")	4.1 mm (0.16")	
Lock- to-Lock Mullion			
+2160 Pa (+45.11 psf)	0.3 mm (0.01")	4.1 mm (0.16")	
-2160 Pa (-45.11 psf)	0.5 mm (0.02")	4.1 mm (0.16")	1, 5, 6
Forced Entry Resistance, per ASTM F 588, Type B, Grade 10 and per CAWM-301, Type II	Pass	No entry	
Sash Vertical Deflection Test 270 N (60.7 lbf)	<0.1 mm (<0.01")	16.0 mm (0.63") max.	1
Distributed Load Test 300 psf (6.27 psf)	No damage	No damage	

Note 1: *The allowable limits and/or loads reported are the more restrictive of the allowable limits and/or loads according to either AAMA/WDMA/CSA 101/I.S.2/A440-05 or AAMA/WDMA/CSA 101/I.S.2/A440-08, for the respective product designations given.*

Note 2: *The tested specimen meets (or exceeds) the performance levels specified in AAMA/WDMA/CSA 101/I.S.2/A440 for air leakage resistance.*

Note 3: *Without insect screen.*

Note 4: *The deflections reported are not limited by AAMA/WDMA/CSA 101/I.S.2/A440 for this product designation. The deflection data are recorded in this report for special code compliance and information only.*

Note 5: *Loads were held for 10 seconds.*

Note 6: *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.*

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Test Report No.: C9430.01-301-44
Report Date: 01/23/14
Record Retention End Date: 06/21/17

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For ARCHITECTURAL TESTING, Inc.

Digitally Signed by: David Douglass
David Douglass
Project Manager

Digitally Signed by:Leaton Kirk
Leaton Kirk
Director – Regional Operations

DD: ms
Attachments (pages): This report is complete only when all attachments listed are included.
Appendix-A: Alteration Addendum (1)
Appendix-B: Drawings (7)

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Series **3000** Testing

Architectural Testing

TEST REPORT

Report No.: C7729.01-301-44

Rendered to:

ALL WEATHER ARCHITECTURAL ALUMINUM
Vacaville, California

SERIES/MODEL: 3000 Series

PRODUCT TYPE: Aluminum Combination Window
Double Fixed Over Double Awning

SPECIFICATION: AAMA/WDMA/CSA 101/I.S.2/A440-08, *NAFS - North American Fenestration Standard/Specification for Windows, Doors, and Skylights*
AND
AAMA/WDMA/CSA 101/I.S.2/A440-05, *Standard/Specification for Windows, Doors, and Unit Skylights.*

Title	Summary of Results
Primary Product Designator, AAMA/WDMA/CSA 101/I.S.2/A440-08	Class LC – PG30: Size Tested 2427 x 1626 (96 x 64) – Type AP
Primary Product Designator, AAMA/WDMA/CSA 101/I.S.2/A440-05	AP – C30 2427 x 1626 (96 x 64)
Design Pressure	±1440 Pa (±30.08 psf)
Air Infiltration at 1.57 psf	0.18 L/s/m² (0.04 cfm/ft²)
Air Infiltration at 6.27 psf	0.47 L/s/m² (0.09 cfm/ft²)
Water Penetration Resistance Test Pressure	220 Pa (4.59 psf)

Test Completion Date: 05/29/2013

Reference must be made to Report No. C7729.01-301-44, dated 01/23/14 for complete test specimen description and detailed test results.

Architectural Testing

Test Report No.: C7729.01-301-44
Report Date: 01/23/14
Record Retention End Date: 05/29/17
Page 1 of 7

1.0 Report Issued To: All Weather Architectural Aluminum
777 Aldridge Road
Vacaville, California 95688

2.0 Test Laboratory: Architectural Testing, Inc.
2524 East Jensen Avenue
Fresno, California 93706
559-233-8705

3.0 Project Summary:

3.1 Series/Model: 3000 Series

3.2 Product Type: Aluminum Combination Window
Double Fixed / Double Awning

3.3 Compliance Statement: Results obtained are tested values and were secured by using the designated test methods. The specimen tested successfully met the performance requirements for an AAMA/WDMA/CSA 101/I.S.2/A440-08 rating of **Class LC – PG30: Size Tested 2427 x 1626 (96 x 64) – Type AP**, and an AAMA/WDMA/CSA 101/I.S.2/A440-05 rating of **AP – C30 2427 x 1626 (96 x 64)**.

3.4 Test Dates: 04/18/2013 – 05/29/2013

3.5 Test Record Retention End Date: All test records for this report will be retained until May 29, 2017.

3.6 Test Location: Architectural Testing, Inc. test facility in Fresno, California.

3.7 Test Sample Source: The test specimen was provided by the client.

3.8 Drawing Reference: The test specimen drawings have been reviewed by Architectural Testing and are representative of the test specimen reported herein. Test specimen construction was verified by Architectural Testing per the drawings located in Appendix B. Any deviations are documented herein or on the drawings.

3.9 List of Official Observers:

Name	Company
Seamus Porter	All Weather Architectural Aluminum
Jay Ratliff	Architectural Testing, Inc.
Jarod Hardman	Architectural Testing, Inc.
David Douglass	Architectural Testing, Inc.

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Series **3000** Testing

Architectural Testing

Test Report No.: C7729.01-301-44
Report Date: 01/23/14
Record Retention End Date: 05/29/17

4.0 Test Specifications:

AAMA/WDMA/CSA 101/I.S.2/A440-08, *NAFS - North American Fenestration Standard/Specification for Windows, Doors, and Skylights*

AAMA/WDMA/CSA 101/I.S.2/A440-05, *Standard/Specification for Windows, Doors, and Unit Skylights.*

5.0 Test Specimen Description:

5.1 Product Sizes:

Overall Area: 3.92 m² (42.2 ft²)	Width		Height	
	millimeters	inches	millimeters	inches
Overall size	2427	95-1/2	1626	64
Awning Panels (2)	1184	46-5/8	800	31-1/2

5.2 Frame Construction:

Frame Member	Material	Description
Head and Sill	Aluminum	Extruded aluminum
Jambs	Aluminum	Extruded aluminum
Mullions	Aluminum	Extruded aluminum; horizontal mullions integrated fixed lite and active panel; vertical mullion utilized 2-piece construction.

	Joinery Type	Detail
Frame corners	Mitered	Corner welds were located at the outer joint perimeter; joints were sealed with seam sealer.
Vertical mullion halves	Slip fit	Slip-fit vertical mullion halves were fastened together with #8 square drive flat head screws cut flush with the opposite surface at 1-3/4" long, and spaced 4" to 8" from each end each mullion joint.
Horizontal mullions	Coped	Horizontal mullion ends were coped and staked at tabs through slots in vertical mullion and jambs at each joint; sealed with seam sealer.
Vertical mullion to head & sill	Coped	Mullion ends were coped and staked at tabs through slots in head and sill at each joint; sealed with seam sealer.

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Architectural Testing

Test Report No.: C7729.01-301-44
Report Date: 01/23/14
Record Retention End Date: 05/29/17

5.0 Test Specimen Description: (Continued)

5.3 Panel Construction:

Panel/Member	Material	Description
Rails and stiles	Aluminum	Extruded aluminum

	Joinery Type	Detail
All Panel Corners	Mitered	Corner welds were located at the outer joint perimeter; joints were sealed with seam sealer.

5.4 Weatherstripping:

Description	Quantity	Location
Hollow bulb vinyl	2 rows	Interior face of panel perimeter.

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.*

Glass Type	Spacer Type	Interior Lite	Exterior Lite	Glazing Method
15/16" IG	Aluminum	1/8" clear annealed	1/8" clear annealed	Glazing was set from the exterior onto 3/8" wide double-sided foam tape and secured with a snap-fit glazing bead. Each glazing bead utilized a rubber gasket against the glass.

Location	Quantity	Daylight Opening		Glass Bite
		millimeters	inches	
Active panels	2	1089 x 700	42-7/8 x 27-9/16	9/16"
Fixed lites	2	1140 x 755	44-7/8 x 29-3/4	9/16"

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Series **3000** Testing

Architectural Testing

Test Report No.: C7729.01-301-44
Report Date: 01/23/14
Record Retention End Date: 05/29/17
Page 4 of 7

5.0 Test Specimen Description: (Continued)

5.6 Drainage:

Drainage Method	Size	Quantity	Location
Weep slot	7/16" x 1/8"	4	Horizontal mullion at fixed lites, 7/8" from each corner.
Weep notch	7/16" x 1/8"	4	Exterior glazing track leg in bottom rails, 7/8" from each corner.
Weep notch	7/16" x 1/8"	5	Exterior sill leg, 1" from each jamb and each vertical mullion, and midspan at the vertical mullion.

5.7 Hardware:

Description	Quantity	Location
Locking handle assembly	4	Each jamb and vertical mullion, spaced 4" from the sill, each secured with two 10-24 x 5/16" Phillips pan head screws.
Roto-operator assembly	2	Midspan of each panel; sealed and attached to sill using four 10-24 x 5/8" Phillips flat head screws; and attached to bottom rails with four #10 x 7/16" square-drive pan head self-drilling screws.
Multi arm hinge assembly	4	Attached using #10 x 7/16" square-drive pan head self-drilling screws, 5 on each stile and 4 on each jamb and vertical mullion.

5.8 Reinforcement: No reinforcement was utilized.

5.9 Screen Construction: No screen was utilized.

6.0 Installation:

The specimen was installed into a Douglas fir buck. The rough opening allowed for a 1/4" shim space. The exterior perimeter of the window was sealed with silicone.

Location	Anchor Description	Anchor Location
Nail fin	1/4" x 2" Phillips flat head screw	1" from each corner and spaced 10" – 13" on center.

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7.0 Test Results: The temperature during testing was 21°C (69°F). The results are tabulated as follows:

Title of Test	Results	Allowed	Note
Operating Force, per ASTM E 2068	Initiate motion: 49 N (11.0 lbf) Maintain motion: 13 N (3.0 lbf) Locks: 47 N (10.5 lbf)	N/A 45 N (10.1 lbf) max. 100 N (22.5 lbf) max.	
Air Leakage, Infiltration per ASTM E 283 at 75 Pa (1.57 psf)	0.18 L/s/m² (0.04 cfm/ft²)	1.5 L/s/m² (0.3 cfm/ft²) max.	1
Air Leakage, Infiltration per ASTM E 283 at 300 Pa (6.27 psf)	0.47 L/s/m² (0.09 cfm/ft²)	N/A	1
Water Penetration, per ASTM E 547 at 220 Pa (4.59 psf)	Pass	No leakage	2
Uniform Load Deflection, per ASTM E 330 Vertical mullion +1200 Pa (+25.06 psf) -1200 Pa (-25.06 psf) Bottom rail +1200 Pa (+25.06 psf) -1200 Pa (-25.06 psf)	 8.8 mm (0.34") 9.2 mm (0.36") 0.1 mm (0.01") 1.1 mm (0.04")	 N/A	 3, 4, 5
Uniform Load Structural, per ASTM E 330 Vertical mullion +1800 Pa (+37.59 psf) -1800 Pa (-37.59 psf) Bottom rail +1800 Pa (+37.59 psf) -1800 Pa (-37.59 psf)	 0.2 mm (0.01") 0.0 mm (0.00") 0.2 mm (0.01") 0.2 mm (0.01")	 6.4 mm (0.25") max. 6.4 mm (0.25") max. 4.7 mm (0.19") max. 4.7 mm (0.19") max.	 3, 4

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7.0 Test Results: (Continued)

Title of Test	Results	Allowed	Note
Forced Entry Resistance, per ASTM F 588, Type B, Grade 10 and per CAWM-301, Type II	Pass	No entry	
Awning, Hopper, Projected Hardware Load Test 140 N (31.5 lbf)	0.5 mm (0.02")	36.3 mm (1.43") max.	
Uniform Load Deflection, per ASTM E 330			
Vertical mullion			
+1440 Pa (+30.08 psf)	10.8 mm (0.42")		
-1440 Pa (-30.08 psf)	10.9 mm (0.43")		
Bottom rail			
+1440 Pa (+30.08 psf)	0.0 mm (0.00")		
-1440 Pa (-30.08 psf)	1.5 mm (0.06")	N/A	3, 4, 5
Uniform Load Structural, per ASTM E 330			
Vertical mullion			
+2160 Pa (+45.11 psf)	0.2 mm (0.01")	4.8 mm (0.19") max	
-2160 Pa (-45.11 psf)	0.2 mm (0.01")	4.8 mm (0.19") max	
Bottom rail			
+2160 Pa (+45.11 psf)	0.2 mm (0.01")	3.6 mm (0.14") max	
-2160 Pa (-45.11 psf)	0.3 mm (0.01")	3.6 mm (0.14") max.	3, 4, 6

Note 1: *The tested specimen meets (or exceeds) the performance levels specified in AAMA/WDMA/CSA 101/I.S.2/A440 for air leakage resistance.*

Note 2: *Without insect screen.*

Note 3: *Loads were held for 10 seconds.*

Note 4: *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.*

Note 5: *The deflections reported are not limited by AAMA/WDMA/CSA 101/I.S.2/A440 for this product designation. The deflection data is recorded in this report for special code compliance and information only.*

Note 6: *When different allowable limits are specified for multiple product designations or specifications, the limits reported are the more restrictive.*

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For ARCHITECTURAL TESTING, Inc.

Digitally Signed by: David Douglass

David Douglass
Project Manager

Digitally Signed by:Leaton Kirk

Leaton Kirk
Director – Regional Operations

DD: ms

Attachments (pages): This report is complete only when all attachments listed are included.
Appendix-A: Alteration Addendum (1)
Appendix-B: Drawings (9)

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Series **3000** Testing

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TEST REPORT

Report No.: C9431.01-301-44

Rendered to:

ALL WEATHER ARCHITECTURAL ALUMINUM
Vacaville, California

SERIES/MODEL: 3000 Series
PRODUCT TYPE: Aluminum Combination Window
Stacked Outswing Awnings / Fixed / Inswing Hopper

SPECIFICATION: AAMA/WDMA/CSA 101/I.S.2/A440-08, *NAFS - North American Fenestration Standard/Specification for Windows, Doors, and Skylights*
AND
AAMA/WDMA/CSA 101/I.S.2/A440-05, *Standard/Specification for Windows, Doors, and Unit Skylights.*

Title	Summary of Results
Primary Product Designator, AAMA/WDMA/CSA 101/I.S.2/A440-08	Class C – PG30: Size Tested 1207 x 3251 (48 x 128) – Type AP
Primary Product Designator, AAMA/WDMA/CSA 101/I.S.2/A440-05	AP – C30 1207 x 3251 (48 x 128)
Design Pressure	±1440 Pa (±30.08 psf)
Air Infiltration	0.04 L/s/m² (0.01 cfm/ft²)
Water Penetration Resistance Test Pressure	220 Pa (4.59 psf)

Test Completion Date: 07/19/2013

Reference must be made to Report No. C9431.01-301-44 dated 01/30/14 for complete test specimen description and detailed test results.

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Test Report No.: C9431.01-301-44
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1.0 Report Issued To: All Weather Architectural Aluminum
777 Aldridge Road
Vacaville, California 95688

2.0 Test Laboratory: Architectural Testing, Inc.
2524 East Jensen Avenue
Fresno, California 93706
559-233-8705

3.0 Project Summary:

3.1 Series/Model: 3000 Series

3.2 Product Type: Aluminum Combination Window
Stacked Outswing Awnings / Fixed / Inswing Hopper

3.3 Compliance Statement: Results obtained are tested values and were secured by using the designated test methods. The specimen tested successfully met the performance requirements for an AAMA/WDMA/CSA 101/I.S.2/A440-08 rating of **Class C – PG30: Size Tested 1207 x 3251 (48 x 128) – Type AP**, and an AAMA/WDMA/CSA 101/I.S.2/A440-05 rating of **C – C30 1207 x 3251 (48 x 128)**.

3.4 Test Dates: 06/18/2013 – 07/19/2013

3.5 Test Record Retention End Date: All test records for this report will be retained until July 19, 2017.

3.6 Test Location: Architectural Testing, Inc. test facility in Fresno, California.

3.7 Test Sample Source: The test specimen was provided by the client.

3.8 Drawing Reference: The test specimen drawings have been reviewed by Architectural Testing and are representative of the test specimen reported herein. Test specimen construction was verified by Architectural Testing per the drawings located in Appendix B. Any deviations are documented herein or on the drawings.

3.9 List of Official Observers:

Name	Company
Seamus Porter	All Weather Architectural Aluminum
Jay Ratliff	Architectural Testing, Inc.
Jarod Hardman	Architectural Testing, Inc.
Jeff Osugi	Architectural Testing, Inc.
David Douglass	Architectural Testing, Inc.

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4.0 Test Specifications:

AAMA/WDMA/CSA 101/I.S.2/A440-08, *NAFS - North American Fenestration Standard/Specification for Windows, Doors, and Skylights*

AAMA/WDMA/CSA 101/I.S.2/A440-05, *Standard/Specification for Windows, Doors, and Unit Skylights.*

5.0 Test Specimen Description:

5.1 Product Sizes:

Overall Area: 3.92 m^2 (42.2 ft^2)	Width		Height	
	millimeters	inches	millimeters	inches
Overall size	1207	47-1/2	3251	128
Awning Panels (2)	1188	46-3/4	804	31-5/8
Hopper Panel (1)	1125	44-5/16	775	30-1/2

5.2 Frame Construction:

Frame Member	Material	Description
Head and Sill	Aluminum	Extruded aluminum
Jambs	Aluminum	Extruded aluminum
Mullions	Aluminum	Extruded aluminum
Invert bar	Aluminum	Extruded aluminum

	Joinery Type	Detail
Frame corners	Mitered	Corners were welded; sealed with seam sealer.
Horizontal Mullion joints	Coped	Mullions were coped and staked at tabs through slots in jambs; sealed with seam sealer.
Invert bar	Snap fit and fastened	Fastened to frame members at perimeter of inswing vent opening using #10 x 1" square-drive self-drilling screws at mid-span and 4-1/2" from each end, pan heads in the horizontal members and flat heads in the jambs; sealed to the frame at the ends with seam sealer; horizontal members held back 3/4" from each corner.

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5.0 Test Specimen Description: (Continued)

5.3 Panel Construction:

Panel/Member	Material	Description
Awning/All	Aluminum	Extruded aluminum
Hopper/All	Aluminum	Extruded aluminum

	Joinery Type	Detail
Panel Corners	Miter	Corners were welded; sealed with seam sealer.

5.4 Weatherstripping:

Description	Quantity	Location
Hollow bulb vinyl	2 rows	Interior face of awning panels.
Hollow bulb vinyl	1 row	Exterior face of hopper panel.
Hollow bulb vinyl	1 row	Frame at interior face of hopper opening perimeter.

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.*

Glass Type	Spacer Type	Interior Lite	Exterior Lite	Glazing Method
15/16" IG	Aluminum	1/8" clear annealed	1/8" clear annealed	Glazing was set from the exterior onto a bed of adhesive/double-sided foam tape sealed at the corners with silicone; secured using snap-fit glazing bead with a rubber gasket against the glass.

Location	Quantity	Daylight Opening		Glass Bite
		millimeters	inches	
Awning	2	1088 x 705	42-13/16 x 27-3/4	9/16"
Fixed	1	1142 x 761	44-15/16 x 29-15/16	5/8"
Hopper	1	1053 x 674	41-7/16 x 26-9/16	9/16"

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5.0 Test Specimen Description: (Continued)

5.6 Drainage:

Drainage Method	Size	Quantity	Location
Weep notch	7/16" x 1/8"	2	Exterior glazing track leg of horizontal mullion below fixed lite, 15/16" from each end.
Weep notch	7/16" x 1/8"	6	Exterior glazing track leg of each bottom rail, 7/8" from each end.
Weep slot	7/16" x 1/8"	4	Exterior leg of horizontal mullion at bottom of each awning vent, 7/8" from each end.
Weatherstripping gap	1" Gap	2	Awning bottom rails, 1" from each end.
Weatherstripping gap	3/8" Gap	2	Awning stiles, 1" from top end.

5.7 Hardware:

Description	Quantity	Location
Outswing lock handle assembly	4	12" from each end of awning bottom rails attached with 4 #10-24 x 5/8" Phillips flat head screws.
Strike plate	4	Awning horizontal lock mullions, attached with 2 #10-24 x 5/16" Phillips flat head screws.
Inswing lock handle assembly	2	13" from each end of hopper top rail attached with 4 #10-24 x 5/16" Phillips flat head screws.
Keeper	2	Inner face of hopper horizontal lock mullion, attached with 2 #10 x 1" Phillips square-drive pan head self-drilling screws through a 5/16" thick spacer.

5.8 Reinforcement: No reinforcement was utilized.

5.9 Screen Construction: No screen was utilized.

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6.0 Installation: The specimen was installed into a Douglas fir buck. The rough opening allowed for a 1/4" shim space. The exterior perimeter of the window was sealed with silicone.

Location	Anchor Description	Anchor Location
Nail fin	1/4" x 2" Phillips flat head screw	2-1/2" from each corner, spaced 9" – 16" on center.

7.0 Test Results: The temperature during testing was 21°C (69°F). The results are tabulated as follows:

Title of Test	Results	Allowed	Note
Operating Force, per ASTM E 2068 Awning	Initiate motion: 76 N (17.1 lbf) Maintain motion: 44 N (9.9 lbf) Locks: 20 N (4.5 lbf)	N/A 135 N (30.3 lbf) max. 100 N (22.5 lbf) max.	
Operating Force, per ASTM E 2068 Hopper	Initiate motion: 44 N (9.9 lbf) Maintain motion: 51 N (11.5 lbf) Locks: 16 N (3.5 lbf)	N/A 135 N (30.3 lbf) max. 100 N (22.5 lbf) max.	
Air Leakage, Infiltration per ASTM E 283 at 75 Pa (1.57 psf)	0.3 L/s/m² (0.06 cfm/ft²)	1.5 L/s/m² (0.3 cfm/ft²) max.	1
Water Penetration, per ASTM E 547 at 220 Pa (4.59 psf)	Pass	No leakage	2

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7.0 Test Results: (Continued)

Title of Test	Results	Allowed	Note
Uniform Load Deflection, per ASTM E 330			
Awning lock rail			
+1440 Pa (+30.08 psf)	1.2 mm (0.05")	6.8 mm (0.27") max.	
-1440 Pa (-30.08 psf)	2.0 mm (0.08")	6.8 mm (0.27") max.	
Awning lock mullion			
+1440 Pa (+30.08 psf)	3.0 mm (0.12")	6.6 mm (0.26") max.	
-1440 Pa (-30.08 psf)	4.5 mm (0.18")	6.6 mm (0.26") max.	
Hopper lock mullion			
+1440 Pa (+30.08 psf)	3.6 mm (0.15")	6.6 mm (0.26") max.	
-1440 Pa (-30.08 psf)	2.8 mm (0.11")	6.6 mm (0.26") max.	
Hopper hinge rail			
+1440 Pa (+30.08 psf)	1.2 mm (0.05")	6.8 mm (0.27") max.	
-1440 Pa (-30.08 psf)	0.9 mm (0.04")	6.8 mm (0.27") max.	3, 4, 5
Uniform Load Structural, per ASTM E 330			
Awning lock rail			
+2160 Pa (+45.11 psf)	0.0 mm (0.00")	3.6 mm (0.14") max.	
-2160 Pa (-45.11 psf)	0.0 mm (0.00")	3.6 mm (0.14") max.	
Awning lock mullion			
+2160 Pa (+45.11 psf)	0.0 mm (0.00")	3.5 mm (0.14") max.	
-2160 Pa (-45.11 psf)	0.2 mm (0.01")	3.5 mm (0.14") max.	
Hopper lock mullion			
+2160 Pa (+45.11 psf)	0.0 mm (0.00")	3.5 mm (0.14") max.	
-2160 Pa (-45.11 psf)	0.3 mm (0.01")	3.5 mm (0.14") max.	
Hopper hinge rail			
+2160 Pa (+45.11 psf)	0.0 mm (.000")	3.6 mm (0.14") max.	
-2160 Pa (-45.11 psf)	0.0 mm (0.00")	3.6 mm (0.14") max.	4, 5
Forced Entry Resistance, per ASTM F 588, Type B, Grade 10 and per CAWM-301, Type II			
Awning	Pass		
Hopper	Pass	No entry	
Awning, Hopper, Projected Hardware Load Test			
Awning, 140 N (31.5 lbf)	5.3 mm (0.21")	33.4 mm (1.31") max.	
Hopper, 140 N (31.5 lbf)	2.3 mm (0.09")	29.4 mm (1.16") max.	

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7.0 Test Results: (Continued)

Note 1: *The tested specimen meets (or exceeds) the performance levels specified in AAMA/WDMA/CSA 101/I.S.2/A440 for air leakage resistance.*

Note 2: *Without insect screen.*

Note 3: *The deflections are not limited for the product designation shown according to AAMA/WDMA/CSA 101/I.S.2/A440-05. The deflection limits reported are applicable to the product designation shown per AAMA/WDMA/CSA 101/I.S.2/A440-08.*

Note 4: *Loads were held for 10 seconds.*

Note 5: *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.*

Architectural Testing 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 Architectural Testing, Inc. for the entire test record retention period.

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For ARCHITECTURAL TESTING, Inc.

Digitally Signed by: David Douglass
David Douglass
Project Manager

Digitally Signed by:Leaton Kirk
Leaton Kirk
Director – Regional Operations

DD: ms

Attachments (pages): This report is complete only when all attachments listed are included.
Appendix-A: Alteration Addendum (1)
Appendix-B: Drawings (11)

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