Architectural Testing

TEST REPORT

Report No.: E2257.01-901-44

Rendered to:

COEUR D'ALENE WINDOW
Spokane Valley, Washington

PRODUCT TYPE: PVC Fixed Window
SERIES/MODEL: 3310

SPECIFICATIONS:
AAMA/WDMA/CSA 101/I.S.2/A440-11, *NAFS 2011 - North American Fenestration Standard/Specification for Windows, Doors, and Skylights*
and
AAMA/WDMA/CSA 101/I.S.2/A440-08, *NAFS - North American Fenestration Standard/Specification for Windows, Doors, and Skylights*
and
CSA A440S1-09, Canadian Supplement to AAMA/WDMA/CSA 101/I.S.2/A440, *NAFS - North American Fenestration Standard/Specification for Windows, Doors, and Skylights*

Title	Summary of Results
AAMA/WDMA/CSA 101/I.S.2/A440-08 and -11	Class LC PG55 1398 x 1398 (55 x 55) Type FW
Design Pressure	±2640 Pa (55.14 psf)
Air Infiltration	<0.01 L/s/m^2 (<0.01 cfm/ft^2)
Air Exfiltration	<0.01 L/s/m^2 (<0.01 cfm/ft^2)
Canadian Air Infiltration/Exfiltration Level	Fixed
Water Penetration Resistance Test Pressure	720 Pa (15.04 psf)

Test Completion Date: 12/26/14

Reference must be made to Report No. E2257.01-901-44, dated 02/03/15 for complete test specimen description and detailed test results.

1.0 Report Issued To: Coeur d'Alene Window
3808 N. Sullivan Road
Spokane Valley, WA 99216

2.0 Test Laboratory: Architectural Testing, Inc.
22155 68th Avenue South
Kent, WA 98032
253-395-5656

3.0 Project Summary:

3.1 Product Type: PVC Fixed Window

3.2 Series/Model: 3310

3.3 Compliance Statement: Results obtained are tested values and were secured by using the designated test method(s). The specimen tested successfully met the performance requirements for a **Class LC PG55 1398 x 1398 (55 x 55) Type FW** rating.

3.4 Test Dates: 12/18/14 - 12/26/14

3.5 Test Record Retention End Date: All test records for this report will be retained until 12/26/18.

3.6 Test Location: Architectural Testing test facility in Kent, Washington.

3.7 Test Specimen Source: The test specimen was provided by the client. Representative samples of the test specimen will be retained by Architectural Testing for a minimum of four years from the test completion date.

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 the appropriate Appendix. Any deviations are documented herein or on the drawings.

3.9 List of Official Observers:

Name	Company
Brian Rasmussen	Architectural Testing, Inc.
Guillermo Silva	Architectural Testing, Inc.

4.0 Test Specifications:

AAMA/WDMA/CSA 101/I.S.2/A440-11, *NAFS 2011 - North American Fenestration Standard/Specification for Windows, Doors, and Skylights*

and

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

and

CSA A440S1-09, Canadian Supplement to AAMA/WDMA/CSA 101/I.S.2/A440, *NAFS - North American Fenestration Standard/Specification for Windows, Doors, and Skylights*

5.0 Test Specimen Description:

5.1 Product Sizes:

Overall Area: 1.95 m^2 (21.0 ft^2)	**Width**		**Height**	
	millimeters	**inches**	**millimeters**	**inches**
Overall size	1398	55	1398	55

5.2 Frame Construction:

Member	**Material**	**Description**
All	PVC	White

	Joinery Type	**Detail**
All corners	Welded	Miter cut and thermally welded

5.3 Weatherstripping: No weatherstripping was utilized.

5.0 Test Specimen Description: (Continued)

5.4 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 Nominal	Spacer Type	Interior Lite Nominal	Exterior Lite Nominal	Glazing Method
19 mm (3/4") IG	Aluminum	3 mm (5/32") annealed	3 mm (5/32") annealed	Glazed against 3/8" foam tape, silicone sealed corners and PVC glazing beads

Location	Quantity	Daylight Opening		Glass Bite
		millimeters	inches	
Fixed lites	2	1326 x 1326	52-1/4 x 52-1/4	12.5 mm (1/2") nominal

5.5 Drainage:

Method	Size	Qty.	Location
Weep	12.2 mm x 3.8 mm (1/2" x 5/32")	2	Sill, glazing pocket, approx. 35 mm (1-3/8") from the corner, through one wall, (draining into hollow)
Weep	22.2 mm x 3.8 mm (7/8" x 5/32")	2	Sill, internal web, at the corner, through one wall, (draining between hollows)
Weep	12.2 mm x 6.4 mm (1/2" x 1/4")	2	Sill, exterior face, approx. 40 mm (1-5/8") from the corner, through one wall, (draining hollows)

5.6 Hardware: No hardware was utilized.

5.7 Reinforcement: No reinforcement was utilized.

6.0 Installation:

The specimen was installed into a Doug-Fir wood buck. The rough opening allowed for shim space. The exterior perimeter of the window was set with sealant.

Location	Anchor Description	Anchor Location
Full perimeter	#8 by 1" screws	Located between 0 mm (0") and 127 mm (5") from the corners and approx. 127 mm (5") apart through pre-punched slots

7.0 Test Results: The temperature during testing was 18.3°C (65°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)	<0.01 L/s/m² (<0.01 cfm/ft²)	1.5 L/s/m² (0.3 cfm/ft²) max.	1
Air Leakage, Exfiltration per ASTM E 283 at 75 Pa (1.57 psf)	<0.01 L/s/m² (<0.01 cfm/ft²)	1.5 L/s/m² (0.3 cfm/ft²) max.	1
Canadian Air Infiltration/Exfiltration Level	Fixed	0.2 L/s/m² (0.4 cfm/ft²) max.	
Water Penetration	N/A	N/A	2
Uniform Load Deflection	N/A	N/A	2
Uniform Load Structural	N/A	N/A	2
Forced Entry Resistance, per ASTM F 588 - Grade: 20	Pass	No entry	
Forced Entry Resistance, per CAWM 301	Pass	No entry	
Thermoplastic Corner Weld	Pass	Meets as stated	
Optional Performance			
Water Penetration, per ASTM E 547 at 720 Pa (15.04 psf)	Pass	No leakage	
Uniform Load Deflection, per ASTM E 330 Deflections taken at the jamb, between installation screws +2640 Pa (55.14 psf) -2640 Pa (55.14 psf)	 0.5 mm (0.04") 1.0 mm (0.04")	 Report Only Report Only	 3, 4, 5
Uniform Load Structural, per ASTM E 330 Permanent sets taken at the jamb, between installation screws +3960 Pa (82.71 psf) -3960 Pa (82.71 psf)	 <0.25 mm (<0.01") <0.25 mm (<0.01")	 0.4 mm (0.02") max. 0.4 mm (0.02") max.	 4, 5

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: 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 4: Loads were held for 10 seconds.

Note 5: Tape and film were not used to seal against air leakage during structural testing.

Architectural Testing will service this report for the entire test record retention period. Test records, 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 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: Brian L. Rasmussen

Brian L. Rasmussen
Technician

Digitally Signed by: Jeffrey L. Dideon

Jeffrey L. Dideon
Director – Regional Operations

JLD:pac

Attachments (pages): This report is complete only when all attachments listed are included.
Appendix-A: Alteration Addendum (1)
Appendix-B: Location of Air Seal (1)
Appendix-C: Drawings (3)

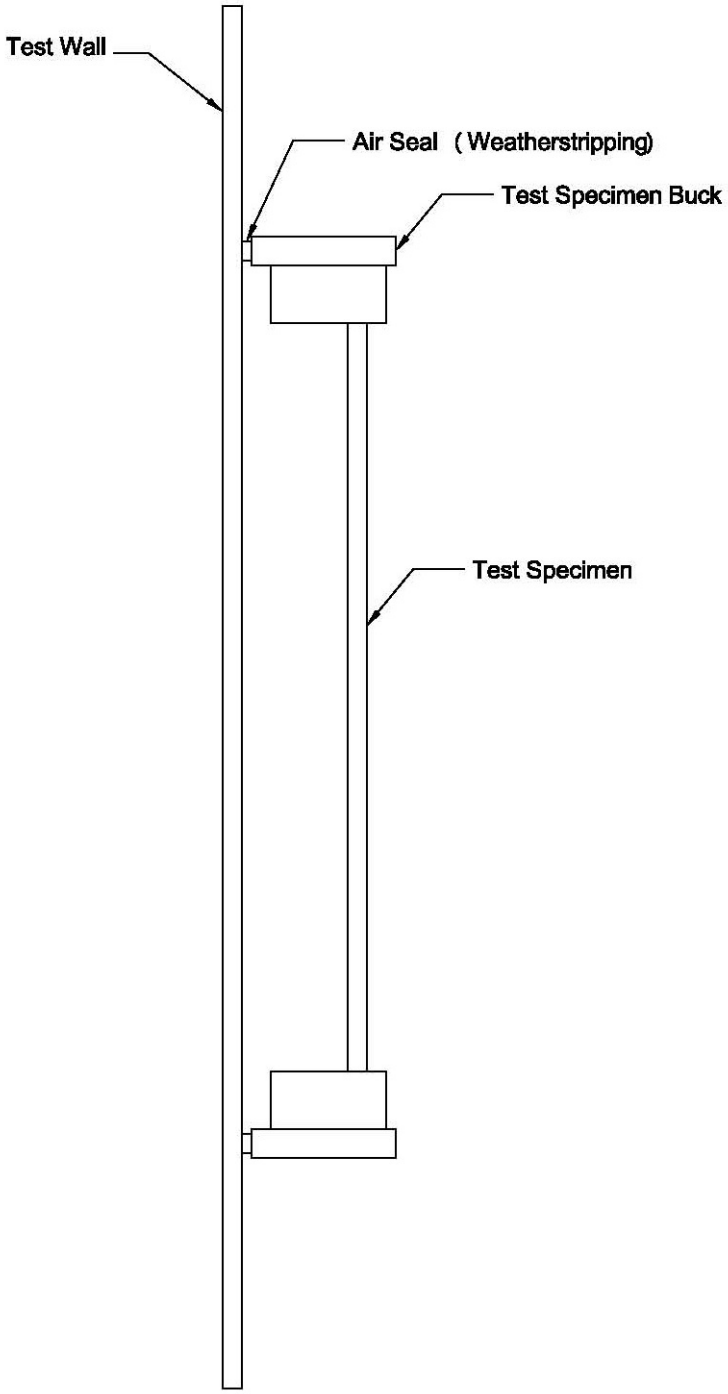
Appendix A

Alteration Addendum

***Note**: No alterations were required.*

Appendix B

Location of Air Seal: The air seal between the test specimen and the test wall is detailed below. The seal is made of foam weatherstripping and is attached to the edge of the test specimen buck. The test specimen buck is placed against the test wall and clamped in place, compressing the weatherstripping and creating a seal.



Appendix C

Drawings

3310 Pic Series

Part	Part # 47 1/4 x 47 1/4	Part # 55 1/8 x 55 1/8
Main Frame Vinyl	R1273 ✓	W801
Setting Block	6554 ✓	6554
Setting Block Glue	IPS-56-1021	IPS-56-1021
Glazing Tape	VG1216W	FC515
Glazing Bead	1994 ✓	W801

Architectural Testing

Test sample complies with these details.
Deviations are noted.

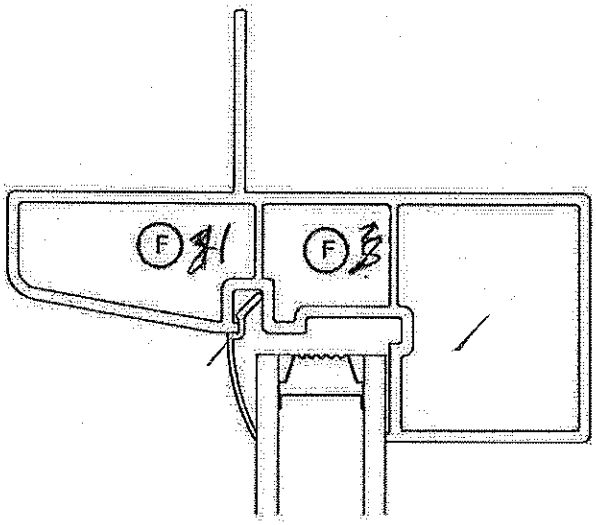
Report# E2257

Date 1/28/15 Tech GS

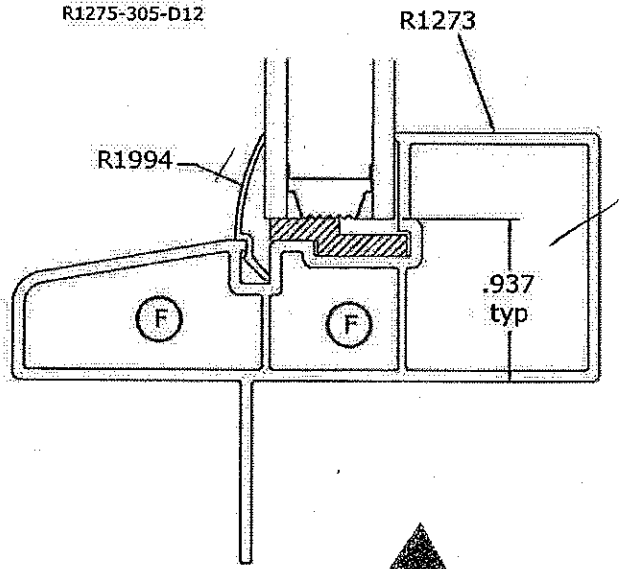
Customer Approval

By: [signature]

Date: 6-30-14



Other Frames:
R1274-305-D11
R1275-305-D12



Architectural Testing

F4= 1.625 X .625

F5= 1.000 X .875

Test sample complies with these details.
Deviations are noted.

Report# E2257

Date 1/28/15 Tech GS

ROYAL Building Products

111 Royal Group Crescent
Woodbridge, Ontario
Canada L4H 1X9

Die#

Sys No. 305-L1270-PIC_H_V

CUSTOMER Coeur d'Alene Windows

TITLE *Fixed Window Section Slice*

PROJECT: 305_CdA

DATE: May 1, 2014

Layout Name: PIC_H_V

Drawn by: gmc

SCALE 1:1

AREA .000

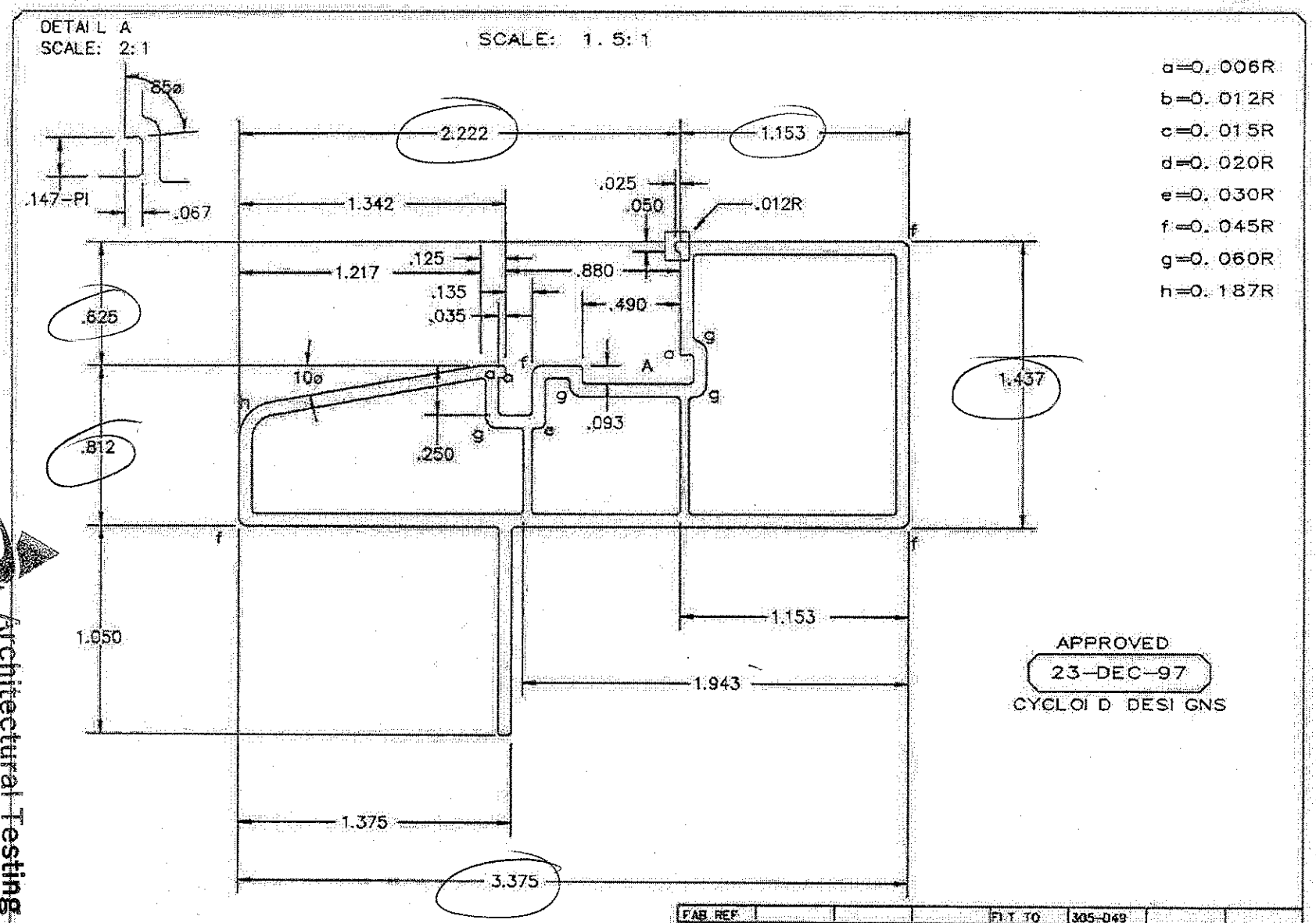
WT/FT .000

ACAD#: 305_CdA_Sections.jpl

Ref xxx

WALL TOLERANCES:	LINEAR TOLERANCES:	ANGULAR TOLERANCES:	RADII:
0.000–0.099 ±0.006	0.000–0.999 ±0.010	XX ±1/2°	UNMARKED 0.015
	1.000–1.999 ±0.015		
	2.000–3.999 ±0.020		

WALL THICKNESS:	SYMBOL:		
Exterior .000	SHARP		b
Interior .000	FLEX		c
.xxx	CRITICAL		f FULL
.xxx	EXPOSED	~~~~	s SHARP



Architectural Testing

Test sample complies with these details.
Deviations are noted.

Report# E2257

Date 1/28/15 Tech GS