NFRC 102-2010 THERMAL PERFORMANCE
TEST REPORT

Rendered to:

COEUR D' ALENE WINDOW CO

SERIES/MODEL: 3200
TYPE: Vertical Slider (Single Hung)

Summary of Results			
Standardized Thermal Transmittance (U-Factor)			0.29
Unit Size:		47" x 59" (1194 mm x 1499 mm) (Model Size)	
Layer 1:	DS	Cardinal 366 (e=0.022*, #2)	
Gap:	0.52"	SS-D: Stainless Steel Spacer	90% Argon*
Layer 2:	DS	Clear	

Reference must be made to Report No. D9212.02-901-46, dated 08/07/14 for complete test specimen description and data.

NFRC 102-2010 THERMAL PERFORMANCE TEST REPORT

Rendered to:

COEUR D' ALENE WINDOW CO
3808 N Sullivan
Spokane Valley, Washington 98216

Report Number:	D9212.02-901-46
Test Date:	07/10/14
Report Date:	08/07/14

Test Sample Identification:

Series/Model: 3200

Type: Vertical Slider (Single Hung)

Overall Size: 47" x 59" (1194 mm x 1499 mm) (Model Size)
NFRC Standard Size: 47.2" x 59.1" (1200 mm wide x 1500 mm high)

Test Sample Submitted by: Client

Test Sample Submitted for: Validation for Initial Certification (Production Line Unit) & Plant Qualification

This report is a reissue of the original Report No. D9212.01-901-46. This report is reissued in the name of Coeur d' Alene Window Co through written authorization of Royal Window and Door Profiles Plant 14.

Test Procedure: U-factor tests were performed in a Guarded Hot Box in accordance with NFRC 102-2010, *Procedure for Measuring the Steady-State Thermal Transmittance of Fenestration Systems* .

Test Results Summary:

Standardized U-factor (U_{st}): 0.29 Btu/hr·ft^2·F (CTS Method)

Test Sample Description:

Frame:

Material:	VI: Vinyl with Reinforcement - Interlock		
Size:	47" x 59" (Model Size)		
Daylight Opening:	44" x 26-5/8"	**Glazing Method:**	Exterior
Exterior Color:	White	**Exterior Finish:**	Vinyl
Interior Color:	White	**Interior Finish:**	Vinyl
Corner Joinery:	Mitered / Welds / Unsealed		

Sash:

Material:	VI: Vinyl with Reinforcement - Interlock		
Size:	44-7/8" x 28-3/4"		
Daylight Opening:	44-5/8" x 25-5/8"	**Glazing Method:**	Exterior
Exterior Color:	White	**Exterior Finish:**	Vinyl
Interior Color:	White	**Interior Finish:**	Vinyl
Corner Joinery:	Mitered / Welds / Unsealed		

Glazing Information:

Layer 1:	DS	Cardinal 366 (e=0.022*, #2)	
Gap:	0.52"	SS-D: Stainless Steel Spacer	90% Argon*
Layer 2:	DS	Clear	
Gas Fill Method:		Evacuated Chamber*	

**Stated per Client/Manufacturer*
N/A Non-Applicable

Test Sample Description: (Continued)

Weatherstripping:

Description	Quantity	Location
Polypile with center fin	1 Row	Sash perimeter and fixed meeting rail

Hardware:

Description	Quantity	Location
Metal auto-lock	2	Active meeting rail
Metal keeper	2	Fixed meeting rail

Drainage:

Drainage Method	Size	Quantity	Location
Weep	5/8" x 3/16"	2	Sill, sash pocket
Weep	1/2" x 1/8"	2	Sill, screen pocket
Weep	1/2" x 1/8"	2	Sill, exterior face
Weep	1/4" x 1/8"	2	Sash, bottom rail

Thermal Transmittance (U-factor)

Measured Test Data

Heat Flows

1. Total Measured Input into Metering Box (Q_{total})	572.89	Btu/hr
2. Surround Panel Heat Flow (Q_{sp})	149.92	Btu/hr
3. Surround Panel Thickness	4.00	inches
4. Surround Panel Conductance	0.0570	Btu/hr·ft^2·F
5. Metering Box Wall Heat Flow (Q_{mb})	0.04	Btu/hr
6. EMF vs Heat Flow Equation (equivalent information)	0.0038*EMF + 0.000	
7. Flanking Loss Heat Flow (Q_{fl})	18.23	Btu/hr
8. Net Specimen Heat Loss (Q_s)	404.70	Btu/hr

Areas

1. Test Specimen Projected Area (A_s)	19.26	ft^2
2. Test Specimen Interior Total (3-D) Surface Area (A_h)	21.54	ft^2
3. Test Specimen Exterior Total (3-D) Surface Area (A_c)	21.66	ft^2
4. Metering Box Opening Area (A_{mb})	58.46	ft^2
5. Metering Box Baffle Area (A_{b1})	50.40	ft^2
6. Surround Panel Interior Exposed Area (A_{sp})	39.20	ft^2

Test Conditions

1. Average Metering Room Air Temperature (t_h)	69.80	F
2. Average Cold Side Air Temperature (t_c)	-0.40	F
3. Average Guard/Environmental Air Temperature	70.00	F
4. Metering Room Average Relative Humidity	14.48	%
5. Metering Room Maximum Relative Humidity	14.88	%
6. Metering Room Minimum Relative Humidity	14.06	%
7. Measured Cold Side Wind Velocity (Parallel Flow)	3.30	mph
8. Measured Warm Side Wind Velocity (Parallel Flow)	0.96	mph
9. Measured Static Pressure Difference Across Test Specimen	0.00" ± 0.04"	H_2O

Average Surface Temperatures

1. Metering Room Surround Panel	67.57	F
2. Cold Side Surround Panel	0.47	F

Results

1. Thermal Transmittance of Test Specimen (U_s)	0.30	Btu/hr·ft^2·F
2. Standardized Thermal Transmittance of Test Specimen (U_{st})	0.29	Btu/hr·ft^2·F

Thermal Transmittance (U-factor)

Calculated Test Data

CTS Method

1.	Warm Side Emittance of Glass (e_1)	0.84	
2.	Cold Side Emittance of Glass	0.84	
3.	Warm Side Frame Emittance*	0.90	
4.	Cold Side Frame Emittance*	0.90	
5.	Warm Side Sash/Panel/Vent Emittance*	0.90	
6.	Cold Side Sash/Panel/Vent Emittance*	0.90	
7.	Warm Side Baffle Emittance (e_{b1})	0.92	
8.	Cold Side Baffle Emittance (e_{b2})	0.92	
9.	Equivalent Warm Side Surface Temperature	54.46	F
10.	Equivalent Cold Side Surface Temperature	3.66	F
11.	Warm Side Baffle Surface Temperature	69.03	F
12.	Cold Side Baffle Surface Temperature	0.04	F
13.	Measured Warm Side Surface Conductance (h_h)	1.37	Btu/hr·ft^2·F
14.	Measured Cold Side Surface Conductance (h_c)	5.17	Btu/hr·ft^2·F
15.	Test Specimen Thermal Conductance (C_s)	0.41	Btu/hr·ft^2·F
16.	Convection Coefficient (K_c)	0.33	Btu/(hr·ft^2·F$^{1.25}$)
17.	Radiative Test Specimen Heat Flow (Q_{r1})	213.37	Btu/hr
18.	Conductive Test Specimen Heat Flow (Q_{c1})	191.33	Btu/hr
19.	Radiative Heat Flux of Test Specimen (q_{r1})	11.08	Btu/hr·ft^2·F
20.	Convective Heat Flux of Test Specimen (q_{c1})	9.94	Btu/hr·ft^2·F
21.	Standardized Warm Side Surface Conductance (h_{sth})	1.22	Btu/hr·ft^2·F
22.	Standardized Cold Side Surface Conductance (h_{stc})	5.28	Btu/hr·ft^2·F
23.	Standardized Thermal Transmittance (U_{st})	0.29	Btu/hr·ft^2·F

Test Duration

1. The environmental systems were started at 12:49 hours, 07/09/14.
2. The test parameters were considered stable for two consecutive four hour test periods from 22:59 hours, 07/09/14 to 06:59 hours, 07/10/14.
3. The thermal performance test results were derived from 02:59 hours, 07/10/14 to 06:59 hours, 07/10/14.

The reported Standardized Thermal Transmittance (Ust) was determined using CTS Method, per Section 8.2(A) of NFRC 102.

**Stated per NFRC 101*

Glazing Deflection:

	Frame	Interior Sash
Edge Gap Width	0.52"	0.52"
Estimated center gap width upon receipt of specimen in laboratory (after stabilization)	0.45"	0.43"
Center gap width at laboratory ambient conditions on day of testing	0.45"	0.43"
Center gap width at test conditions	0.43"	0.42"

Glass collapse determined using a digital glass and air space meter

The sample was inspected for the formation of frost or condensation, which may influence the surface temperature measurements. The sample showed no evidence of condensation/frost at the conclusion of the test.

"This test method does not include procedures to determine the heat flow due to either air movement through the specimen or solar radiation effects. As a consequence, the thermal transmittance results obtained do not reflect performances which are expected from field installations due to not accounting for solar radiation, air leakage effects, and the thermal bridge effects that have the potential to occur due to the specific design and construction of the fenestration system opening. The latter can only be determined by in-situ measurements. Therefore, it is important to recognize that the thermal transmittance results obtained from this test method are for ideal laboratory conditions and should only be used for fenestration product comparisons and as input to thermal performance analyses which also include solar, air leakage and thermal bridge effects."

The test sample was installed in a vertical orientation, the exterior of the specimen was exposed to the cold side. The direction of heat transfer was from the interior (warm side) to the exterior (cold side) of the specimen. The ratings were rounded in accordance to NFRC 601, NFRC Unit and Measurement Policy. The data acquisition frequency is 5 minutes.

ANSI/NCSL Z540-2-1997 type B uncertainty for this test was 4.12%.

Required annual calibrations for the Architectural Testing Inc. 'thermal test chamber' (ICN 63449) in Kent, Washington were last conducted in May 2014 in accordance with Architectural Testing Inc. calibration procedure. A Metering Box Wall Transducer and Surround Panel Flanking Loss Characterization was performed May 2014.

This report is a reissue of the original Report No. D9212.01-901-46. This report is reissued in the name of Coeur d' Alene Window Co through written authorization of Royal Window and Door Profiles Plant 14.

"Ratings included in this report are for submittal to an NFRC licensed IA for certification purposes and are not meant to be used for labeling purposes. Only those values identified on a valid Certification Authorization Report (CAR) are to be used for labeling purposes."

Architectural Testing, Inc. 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. The test record retention end date for this report is July 10, 2018.

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.

Tested By:

Digitally Signed by: Brian L. Rasmussen

Brian L. Rasmussen
Technician
Individual-In-Responsible-Charge

Reviewed By:

Digitally Signed by:Kenny C. White

Kenny C. White
Laboratory Manager

BLR:ss
D9212.02-901-46

Attachments (pages): This report is complete only when all attachments listed are included.

Appendix-A:	CTS Calibration Data (1)
Appendix-B:	Surround Panel Wiring Diagram (1)
Appendix-C:	Baffle Wiring Diagram (1)
Appendix-D:	Submittal Form and Drawings (12)

ACCREDITED

Architectural Testing, Inc. is accredited by the International Accreditation Service (IAS) under the specific test methods listed under lab code TL-144, in accordance with the recognized International Standard ISO/IEC 17025:2005. The laboratory's accreditation or test report in no way constitutes or implies product certification, approval, or endorsement by IAS.

Revision Log

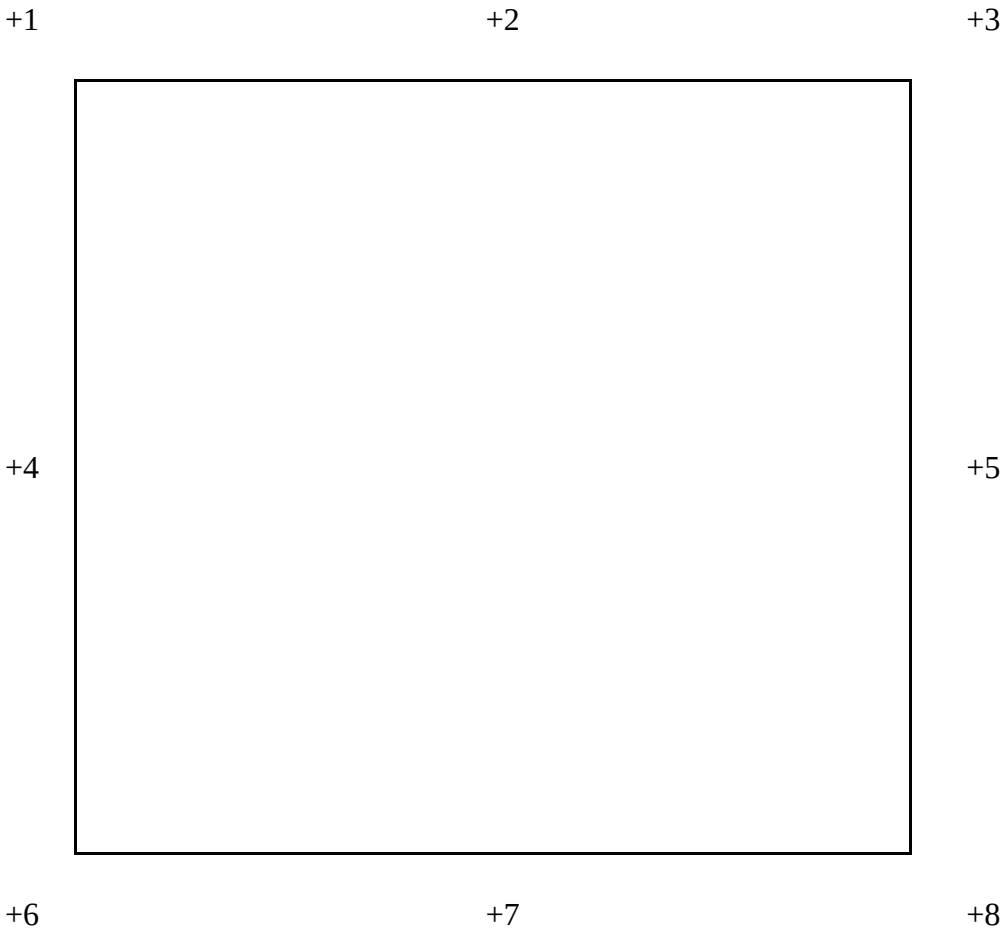
Rev. #	Date	Page(s)	Revision(s)
0	08/07/14	All	Original Report Issue - Reissue of Report No. D9212.01-301-46 in the name of Coeur d' Alene Window Co.

This report produced from controlled document template ATI 00025(a), revised 03/14/2013.

Appendix A: CTS Calibration Data

1.	CTS Test Date	04/12/13	
2.	CTS Size	19.38	ft^2
3.	CTS Glass/Core Conductance	0.40	$Btu/hr \cdot ft^2 \cdot F$
4.	Warm Side Air Temperature	69.80	F
5.	Cold Side Air Temperature	-0.40	F
6.	Warm Side Average Surface Temperature	54.87	F
7.	Cold Side Average Surface Temperature	3.57	F
8.	Convection Coefficient (K_c)	0.33	$Btu/(hr \cdot ft^2 \cdot F^{1.25})$
9.	Measured Cold Side Surface Conductance (h_c)	5.17	$Btu/hr \cdot ft^2 \cdot F$
10.	Measured Thermal Transmittance	0.29	$Btu/hr \cdot ft^2 \cdot F$

Appendix B: Surround Panel Wiring Diagram



Appendix C: Baffle Wiring Diagram

+1	+2	+3	+4	+5	+6
+7	+8	+9	+10	+11	+12
+13	+14	+15	+16	+17	+18
+19	+20	+21	+22	+23	+24
+25	+26	+27	+28	+29	+30

Appendix D: Submittal Form and Drawings

NFRC PRODUCT CERTIFICATION PROGRAM

Submittal Form for Test Samples

For use by manufacturers, lineal suppliers and fabricators

National Fenestration Rating Council®

1. Information on Production of the Test Sample (complete ALL fields):

Manufacturer: Coeur d'Alene Window Co Date of sample manufacture: 6/2/14

Plant Address where manufactured: 3808 N Sullivan, Building 18i

City: Spokane Valley State: WA Zip Code: 99216

Name of IA: NAMI Phone: 509-340-0705 Fax: 509-279-0186

2. Product Information (complete ALL fields):

Product Line ID (CPD) No.: 3200 Product/Operator Type (Table 4-3 of NFRC 100): Single Hung Window

Series/Model: 3200 SINGLE HUNG WINDOW

3. Test sample is being submitted for (select ONE):

a. ☐ Validation for Initial Certification (prototype only) no plant qualification

b. ☑ Validation for Initial Certification (production line unit) & plant qualification

c. ☐ Validation for Recertification (production line unit) & plant qualification

d. ☐ Plant Qualification Only (production line unit)

I, Pat Collins, as the designated agent for Coeur d'Alene Window Company do hereby attest that the foregoing information is true to the best of my information, knowledge, and belief. Further, if the unit is identified in Section 3 as a production line unit, I hereby authorize the NFRC-accredited testing laboratory to send a copy of the test report to the IA identified above for plant qualification purposes pursuant to the NFRC Product Certification Program..

Signature: Pat Collins Date: 7-17-14

FOR LABORATORY USE ONLY

1. Laboratory: Architectural Testing, Inc
2. Date Sample Received: 6/20/14 File number ID: P9212
3. Date Sample Tested: 7/10/14 By: Brian Rasmussen
4. Modifications made: —
5. Reason for non-testing of sample unit: —

[*Note*: If the sample submitted can not be tested due to damage prior to testing, a new sample and new form shall be submitted to the testing laboratory. Both forms shall be submitted to the IA when the testing is completed.]

3200 Series Single Hung BOM

Part Number	Description	Vendor	Comments
305-D4	Frame	Royal	
305-D5	Frame Block	Royal	Alternate
305-D6	Frame Flush Fin	Royal	Alternate
305-D17R	Fixed Interlock	Royal	
305-D16	Fixed Interlock	Royal	
305-D15	Vent Interlock	Royal	
305-D14	Sash Rail	Royal	
305-D13	Sash Stile	Royal	
R1994	Glazing Bead	Royal	
6554	Setting Block Frame	Mikron	
6555	Setting Block Sash	Mikron	
305-D27	Anti Lift	Royal	
305-D22R	T-Bar	Royal	
305-D45	Sash Stop	Royal	
4236-100-2	Roller Assembly	Amesbury - Fastek	
VG1216W-FC515	Glazing Tape	Echo Tape	
08A14PT4HVLD	Fixed Interlock Screw, 8A x 1 3/4 Ph Truss Hd Stainless 410 Vyn-L-Hold	Merchants	
08SD06P6FSZXXX	Cam Lock Screw, 8-18 x 3/4 Ph #6 Flat Hd, Steel Zinc Plated, Self Drilling	Merchants	
06SD06PPSZ	Keeper Screw, 6-20 x 3/4 Ph Pan Stl znc Self-Drilling	Merchants	
06SD06PPSZ	Mechanism Screw, 6-20 x 3/4 Ph Pan Stl znc Self-Drilling	Merchants	Alternate
A30700404.XX	Cam Lock RH	Truth	
A30700414.XX	Cam Lock LH	Truth	
41988-XX	Keeper	Truth	
SK04-0005	Auto Lock Mech	Interlock	Alternate
SK01-3004-XXX	Auto Lock Keeper	Interlock	Alternate
SK04-0008-XXX	Auto Lock Cover Composite	Interlock	Alternate
SK04-0012-XXX	Auto Lock Cover Zinc	Interlock	Alternate
U-3650	Fixed Interlock Reinforcement	Helton	
U-2800	Sash Interlock Reinforcement	Helton	
U-1502	XOU Reinforcement	Helton	
24018745WHGF	Weatherstrip Fixed Interlock, .240 pile x .187 fin	Amesbury, Ultra-Fab	
24018745WHGF	Weatherstrip Sash, .240 pile x .187 fin	Amesbury, Ultra-Fab	

Architectural Testing

Test sample complies with these details.
Deviations are noted.

Report# D9212

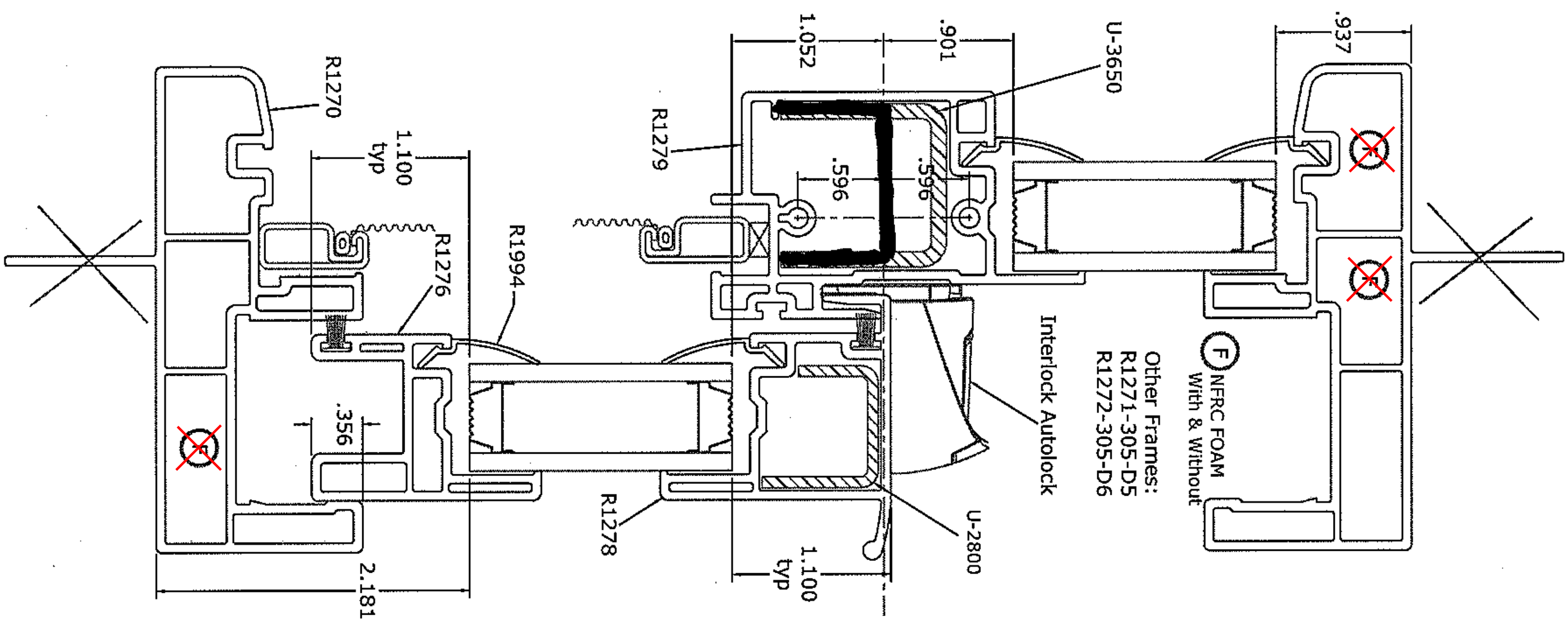
Date 8/7/14 Tech BLR

Architectural Testing

Test sample complies with these details.
Deviations are noted.

Report#: D9212

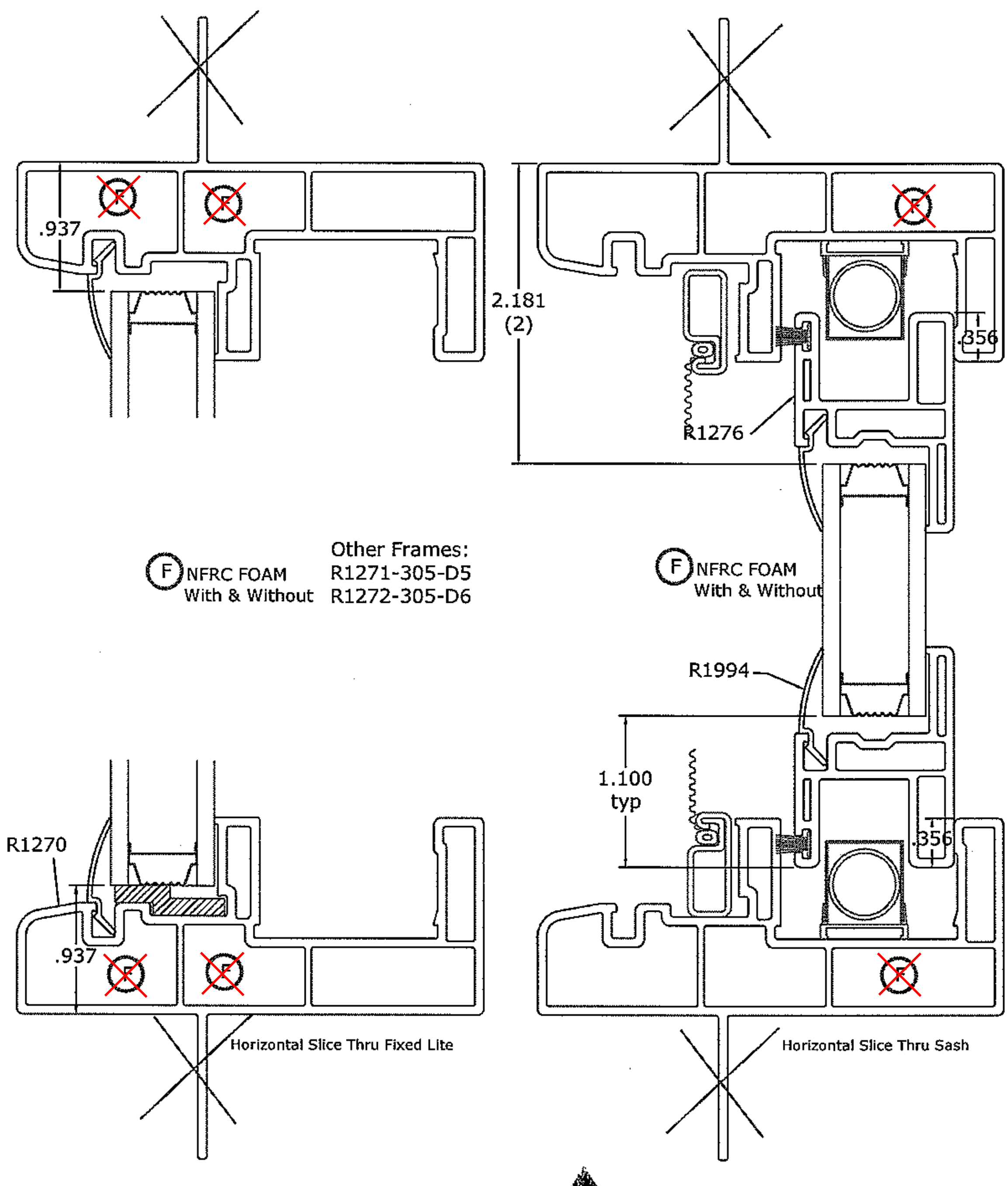
Date: 8/7/14 Tech: BLR



ROYAL Building Products	Die#	THIS DOCUMENT CONTAINS PROPRIETARY AND/OR CONFIDENTIAL INFORMATION AND SHALL NOT BE COPIED, DISCLOSED TO OTHERS, OR USED FOR ANY PURPOSE OTHER THAN THAT FOR WHICH IT IS GIVEN, WITHOUT THE WRITTEN PERMISSION OF ROYAL GROUP INC.	Copyright © 2014 Royal Group, Inc. All Rights Reserved	Layout Name: SH_VERT_70_79	ACAD#: 305_CdA_Sections_all_export_ati_7-21-2014	Ref xxx
111 Royal Group Crescent Woodbridge, Ontario Canada L4H 1X9	Sys No. 305-L1270-79-SH_V			Drawn by: gmc	SCALE 0.875:1	
	CUSTOMER Coeur d'Alene Windows		PROJECT: 305_CdA	AREA .000		
TITLE	*SH Vertical Slice*		DATE: May 1. 2014	WT/FT .000		

WALL TOLERANCES:		ANGULAR TOLERANCES:		RADII:	
0.000–0.099	±0.006	x.x	±1/2°	UNMARKED	0.015

LINEAR TOLERANCES:		WALL THICKNESS:		SYMBOL:			
						a	
0.000–0.999	±0.010	Exterior	.000	SHARP	⊠	b	
		Interior	.000	FLEX	(hatched)	c	
1.000–1.999	±0.015	■	.xxx	CRITICAL	□	f	FULL
2.000–3.999	±0.020	▲	.xxx	EXPOSED	------	s	SHARP



Architectural Testing

Test sample complies with these details.
Deviations are noted.

Report# D9212

Date 8/7/14 Tech BLR

Ref	xxx
ACAD#:	305_CdA_Sections_all_export_atl_7-21-2014
Layout Name:	SH_HOR_70
Drawn by:	gmc
SCALE	0.875:1
AREA	.000
WT/FT	.000
LINEAR TOLERANCES:	0.000-0.999 ±0.010; 1.000-1.999 ±0.015; 2.000-3.999 ±0.020
WALL TOLERANCES:	0.000-0.099 ±0.006
ANGULAR TOLERANCES:	x.x ±1/2°
RADII:	UNMARKED 0.015
WALL THICKNESS:	Exterior .000; Interior .000; ■ .xxx; ▲ .xxx
SYMBOL:	SHARP (a); FLEX (b); CRITICAL (c); EXPOSED (f); s
	FULL SHARP

PROJECT: 305_CdA

DATE: May 1. 2014

Die#

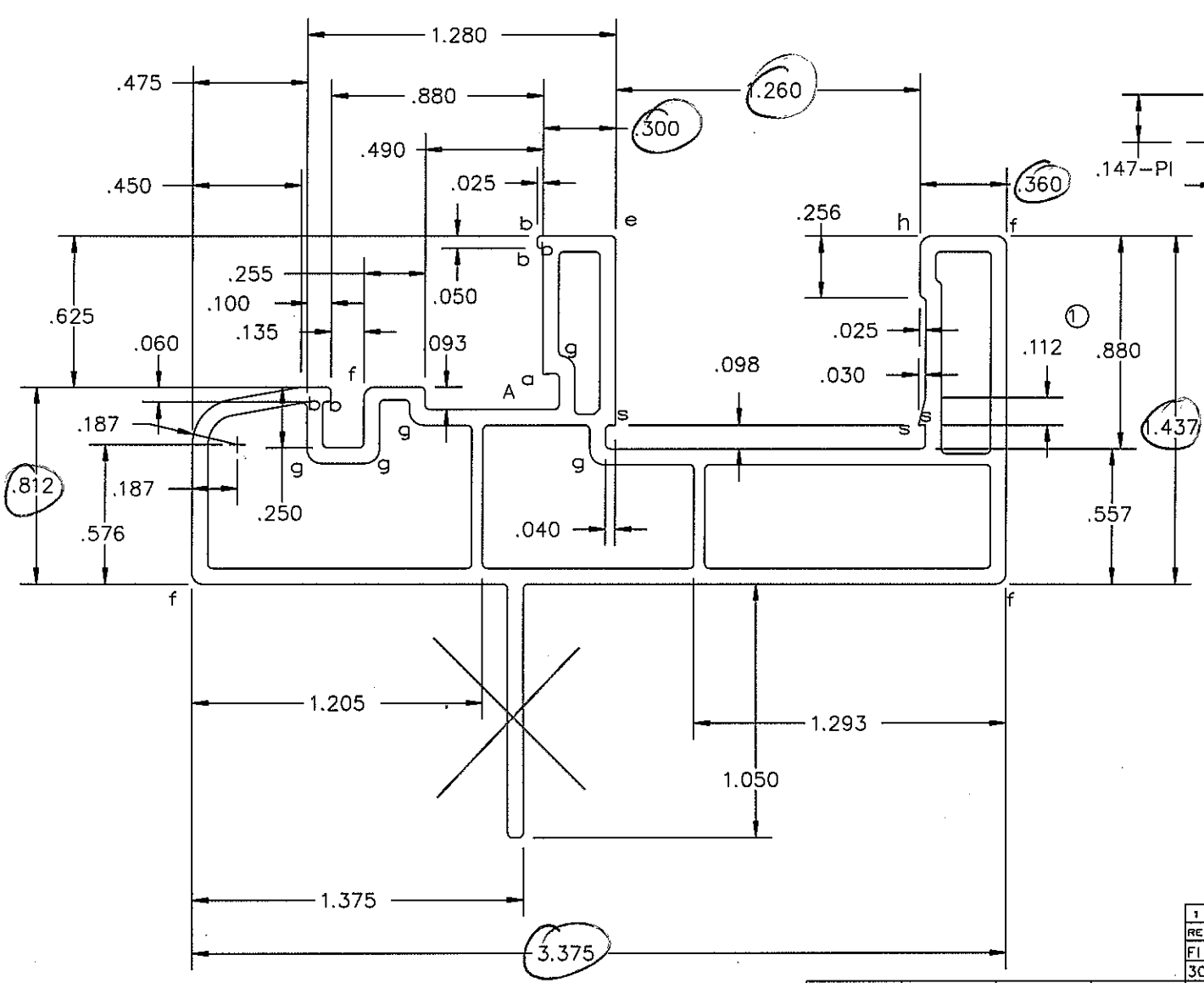
Sys No. 305-L1270-SH_H

CUSTOMER Coeur d'Alene Windows

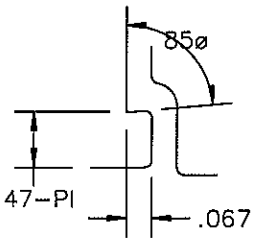
TITLE *SH Horizontal Slices*

ROYAL Building Products
111 Royal Group Crescent
Woodbridge, Ontario
Canada L4H 1X9

SCALE : 1.5: 1



DETAIL A
SCALE: 2:1



a=0.006R
b=0.012R
c=0.015R
d=0.020R
e=0.030R
f=0.045R
g=0.060R
h=0.050R
s=SHARP

Architectural Testing

Test sample complies with these details.
Deviations are noted.

Report# D9212
Date 8/7/14 Tech BLR

APPROVED
23-DEC-97
CYCLOID DESIGNS

REV	DATE	REMARKS			
1	01-16-98	DIMENSION ADDED			
FIT TO		305-D28	305-D34	291-D3	
305-D18		305-D35	305-D27	291-D7	
305-D33		305-D45			
305-D49					

FAB REF	305-F9D
305-F5E	

CYCLOID DESIGNS | DWG: 305-D4 | DATE: 31-DEC-97

TITLE: FIXED FRAME W/FIN | RS1270

EXTERNAL WALL: 0.065
INTERNAL WALL: 0.045
CORNER TYP: 0.020R
WEIGHT: 0.565 LB/FT

SCALE: 2:1

a=0.006R

b=0.012R

c=0.015R

d=0.020R

e=0.030R

f=0.045R

g=0.060R

APPROVED

23-DEC-97

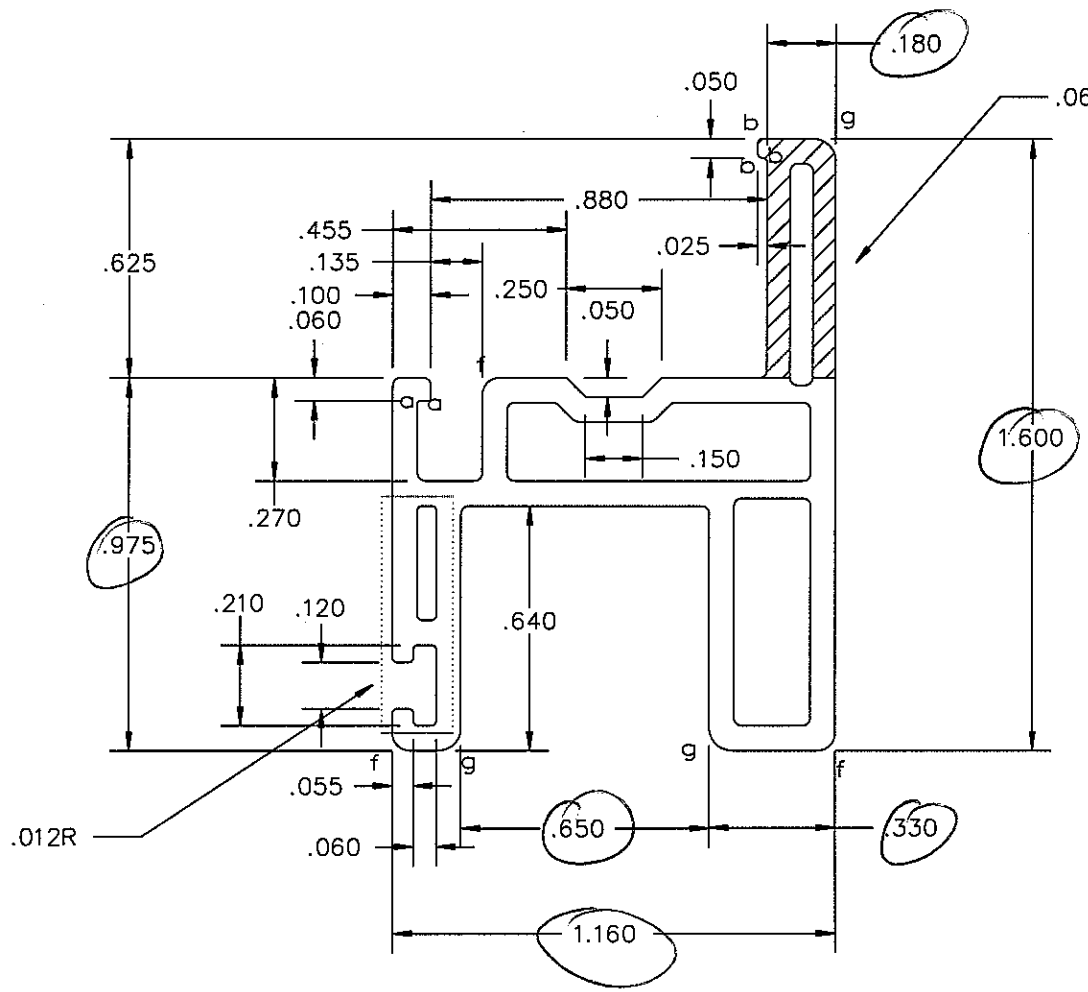
CYCLOID DESIGNS

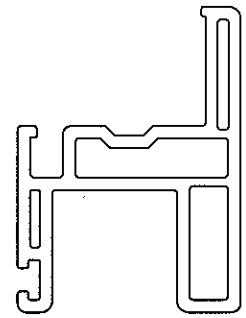
Architectural Testing

Test sample complies with these details.
Deviations are noted.

Report# D9212

Date 8/7/14 Tech BLR





ACTUAL SIZE

FAB REF				FIT TO	291-D7		
305-F7				305-D35			

CYCLOID DESIGNS	DWG: 305-D13	DATE: 17-DEC-97	
TITLE: SINGLE HUNG SASH RAIL	RS1276		EXTERNAL WALL: 0.065 INTERNAL WALL: 0.054 CORNER TYP: 0.020R WEIGHT: 0.271 LB/FT

SCALE: 2:1

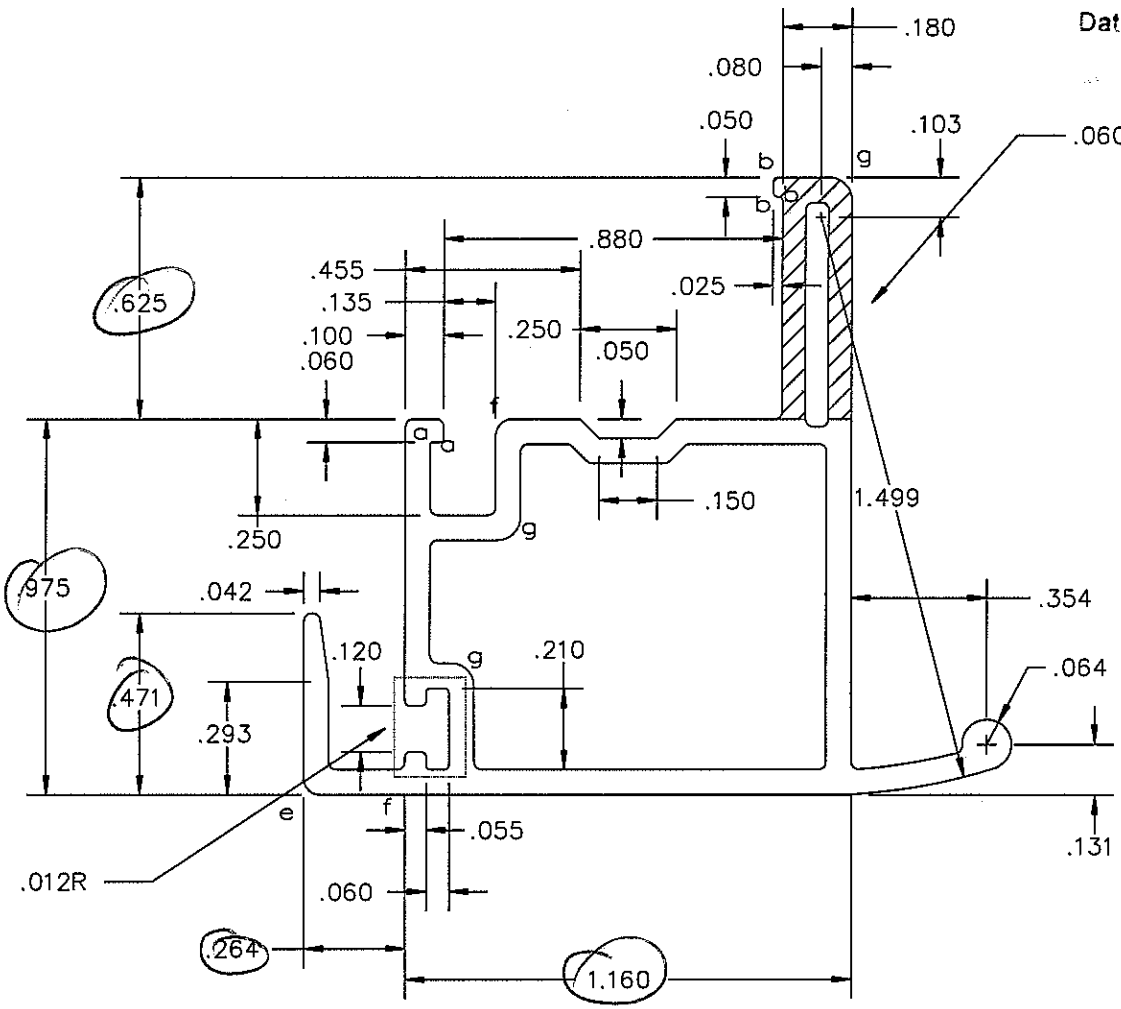
a=0.006R
b=0.012R
c=0.015R
d=0.020R
e=0.040R
f=0.045R
g=0.060R

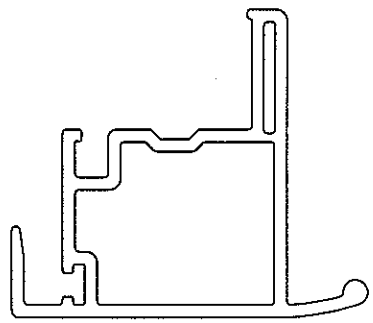
APPROVED
23-DEC-97
CYCLOID DESIGNS

Architectural Testing

Test sample complies with these details.
Deviations are noted.

Report# D9212
Date 8/7/14 Tech BLR





ACTUAL SIZE

FAB REF				FIT TO	291-D7		
305-F8				305-D35			

CYCLOID DESIGNS	DWG: 305-D15	DATE: 17-DEC-97	© 1997 COPYRIGHT ROYAL SIERRA INC SPARKS, NEVADA ALL RIGHTS RESERVED
TITLE: MEETING RAIL	RS1278		

EXTERNAL WALL: 0.065
INTERNAL WALL: 0.054
CORNER TYP: 0.020R
WEIGHT: 0.279 LB/FT

Architectural Testing

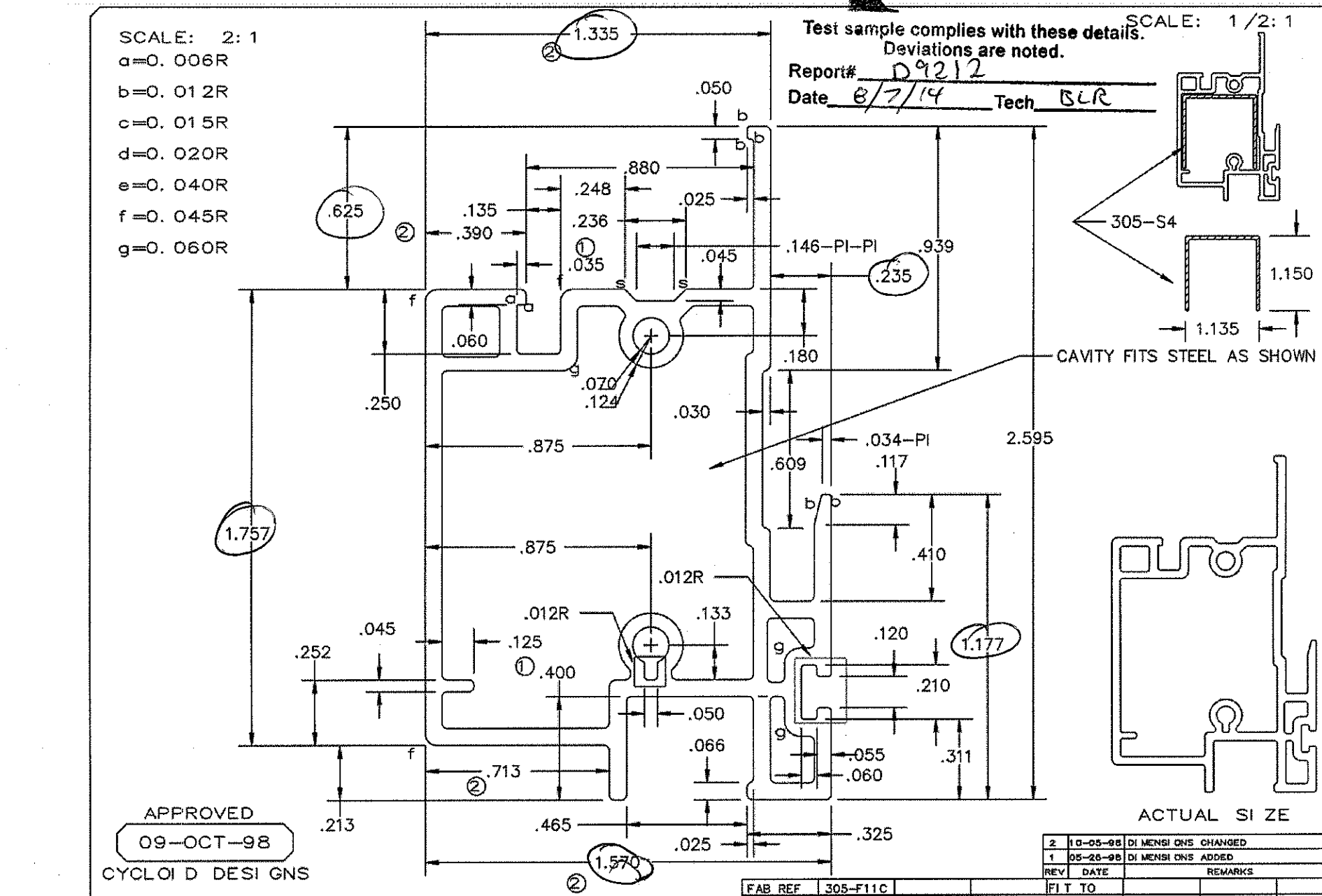
SCALE: 2:1

a=0.006R
b=0.012R
c=0.015R
d=0.020R
e=0.040R
f=0.045R
g=0.060R

Test sample complies with these details.
Deviations are noted.

Report# D9212

Date 8/7/14 Tech BLR



CAVITY FITS STEEL AS SHOWN

ACTUAL SIZE

SCALE: 1/2:1

APPROVED
09–OCT–98
CYCLOID DESIGNS

REV	DATE	REMARKS
2	10–05–98	DIMENSIONS CHANGED
1	05–26–98	DIMENSIONS ADDED

FAB REF	305–F11C	FIT TO	
305–F1A	305–F8A	XXX–XXX	

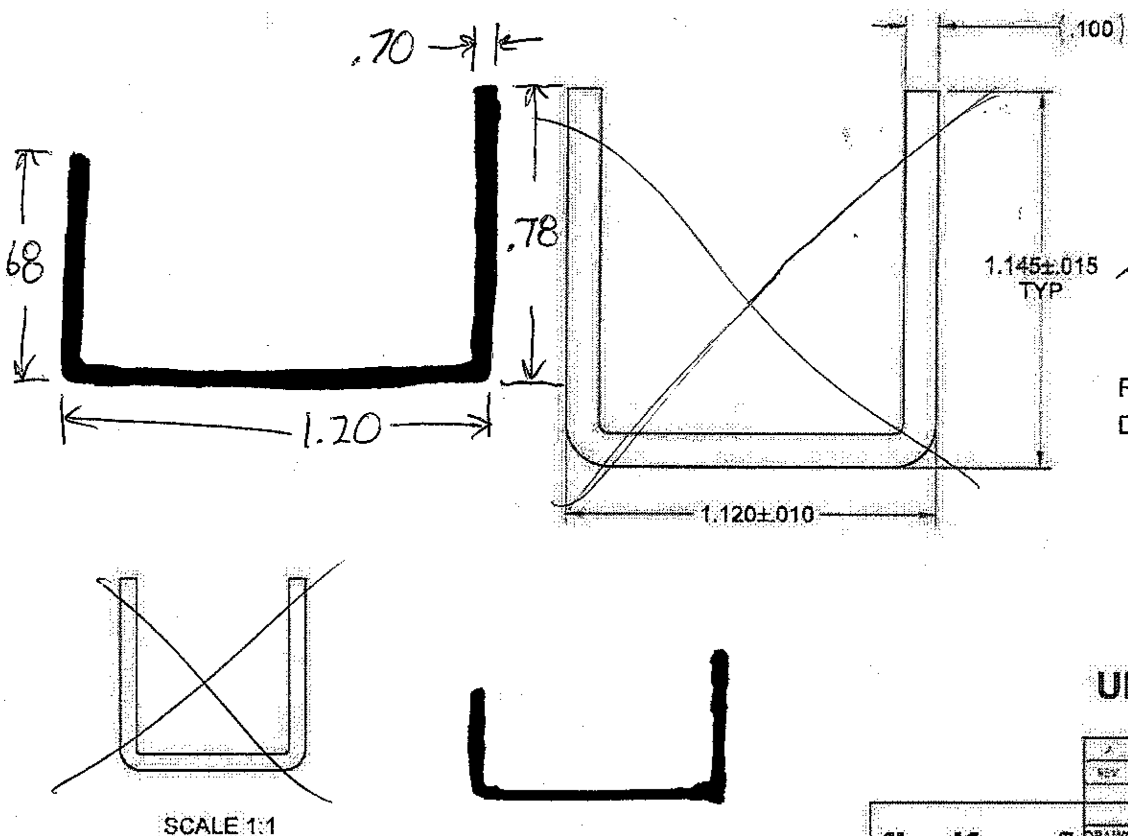
CYCLOID DESIGNS | DWG: 305–D17R | DATE: 21–MAY–98

TITLE: FIXED MEETING RAIL | RS1279

EXTERNAL WALL: 0.065
INTERNAL WALL: 0.054
CORNER TYP: 0.020R
WEIGHT: 0.439 LB/FT

CUSTOMER APPROVAL

NAME	SIGN	DATE
Pat Collins	[signature]	6-11-2014



Architectural Testing

Test sample complies with these details. Deviations are noted.

Report# D9212

Date 8/7/14 Tech BLR

NOT FOR PRODUCTION UNLESS SIGNED BY CUSTOMER

REV	INITIALS	DATE	DESCRIPTION
A	RA	JUN 04/14	RELEASED FOR CUSTOMER APPROVAL

REVISIONS

flexiforce

30840 Peardonville Road
Abbotsford, BC V2T 6K2
PH 604.854.3660 / FAX 604.854.3576

	NAME	DATE
DRAWN	RA	JUN 09/14

UNLESS OTHERWISE SPECIFIED ALL UNITS ARE IN INCHES.

UNLESS OTHERWISE SPECIFIED TOLERANCES

MATERIAL: ASTM A653 CS TYPE B

COL: CS-100-####

U-3650

12GA REIN

SIZE	DWG. NO.	REV.
A	0014-014	A

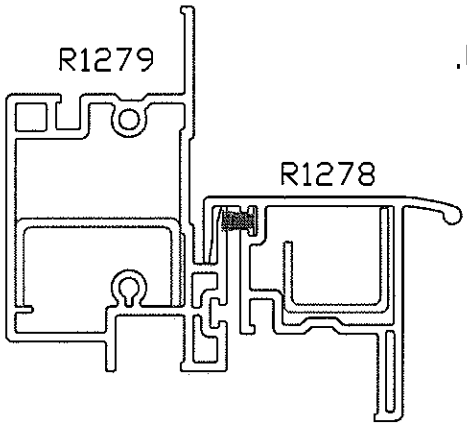
SCALE	WEIGHT	SHEET
2:1	LBS	1 OF 1

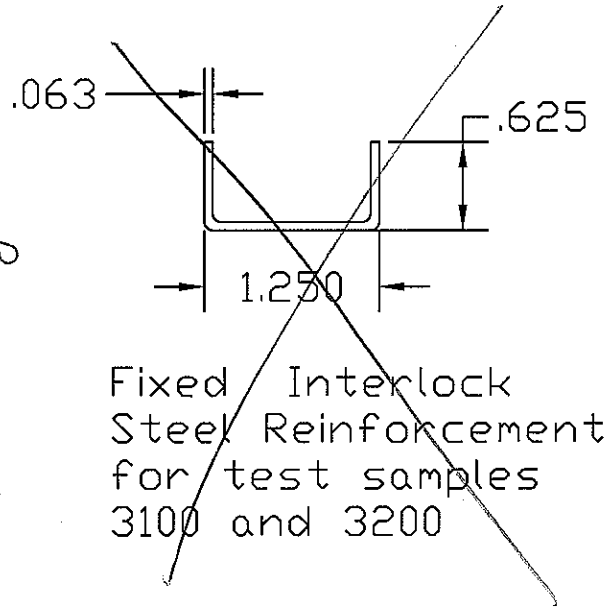
Architectural Testing

Test sample complies with these details.
Deviations are noted.

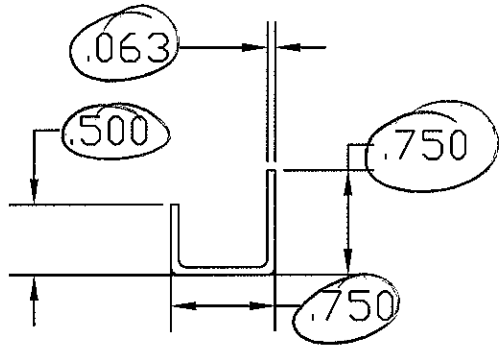
Report# D9212

Date 8/7/14 Tech BLR

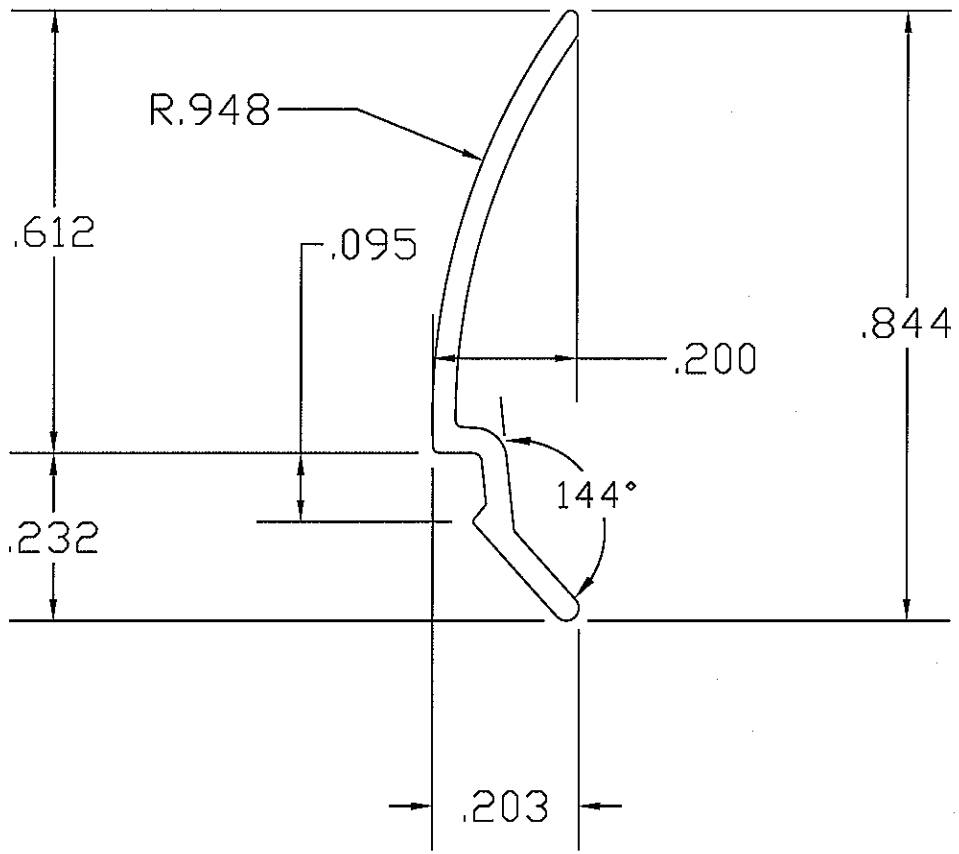




Fixed Interlock
Steel Reinforcement
for test samples
3100 and 3200



Sash Interlock
Steel Reinforcement
for test samples
3100 and 3200



Customer Approval
By: _____
Date: _____

Architectural Testing

Test sample complies with these details.
Deviations are noted.

Report# D9212

Date 8/7/14 Tech BLR

Actual Size

REV #	DATE	REVISION NOTES

External Walls = .065 Internal Walls = ..045	Layout Name: Base Drawn BY: gmc / SCALE 4:1	DATE: 4-25-08 ACAD#: R1994-373-D26-BDS	Copyright © 2008 *ROYAL GROUP, INC.*
CUSTOMER RSE		PROJECT: Sierra Classic SlimLine	
TITLE ***Clam Shell Bead***		AREA = .0323 / WT/FT = ..020	

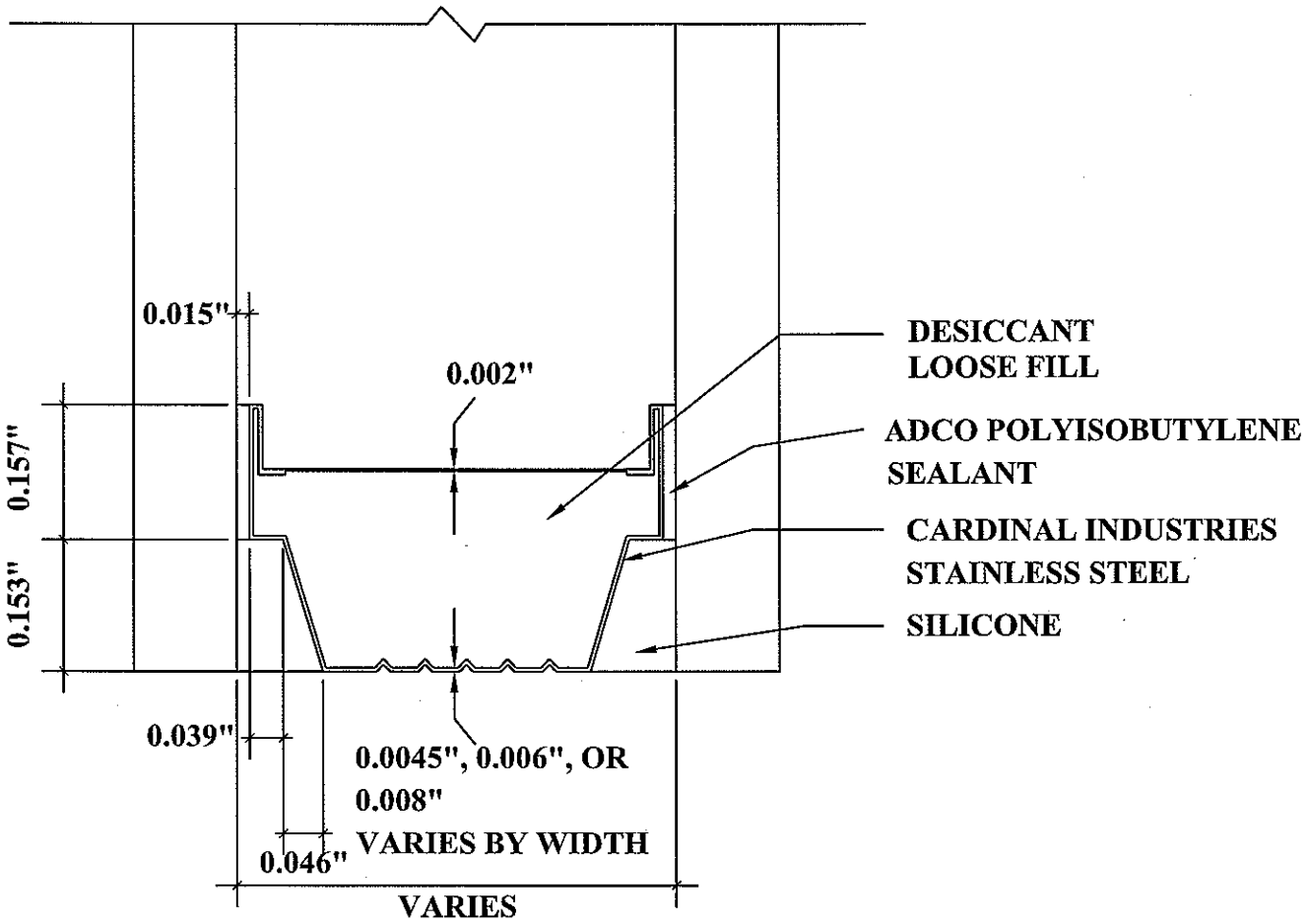
100A Royal Group Crescent
Woodbridge, Ontario
Canada L4L 8Z7

Architectural Testing

Test sample complies with these details.
Deviations are noted.

Report# D9212

Date 8/7/14 Tech BLR



DETAIL FOR THERMAL MODELING OF
CARDINAL ENDUR SPACER (SS-D)