

TEST REPORT

Report No.: B5023.01-701-44

Rendered to:

PRL ALUMINUM ARCHTECTURAL PRODUCTS City of Industry, California

PRODUCT TYPE: Aluminum Sliding Glass Door **SERIES/MODEL**: PRL Max Bottom Rolling Sliding Door "CANCUN"

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

	Summary of Results			
Title	Test Specimen #1Test Specimen #2			
Drimowy Droduct Designator	Class CW-PG35-SD	Class CW-PG45-SD		
Primary Product Designator	2413 x 2108 (95x 83)	2413 x 2108 (95x 83)		
Design Pressure	±2160 Pa (±45.11 psf)	-		
Air Infiltration	0.61 L/s/m ² (0.12 cfm/ft ²)	-		
Water Penetration Resistance Test Pressure	260 Pa (5.43 psf)	330 Pa (6.89 psf)		

Test Completion Date: 12/13/2012

Reference must be made to Report No. B5023.01-701-44, dated 12/28/11 for complete test specimen description and detailed test results.

4 Rancho Circle Lake Forest, CA 92630 phone: 949-460-9600 fax: 949-460-9601 www.archtest.com



1.0 Report Issued To:	PRL Aluminum Architectural Products 14760 Don Julian Road City of Industry, California 91746
2.0 Test Laboratory:	Architectural Testing, Inc. 4 Rancho Circle Lake Forest, California 92630 949.460.9600

3.0 Project Summary:

- 3.1 Product Type: Aluminum Sliding Glass Door
- 3.2 Series/Model: PRL Max Bottom Rolling Sliding Door "CANCUN"
- **3.3 Compliance Statement**: Results obtained are tested values and were secured by using the designated test method. The specimens tested successfully met the performance requirements for the following ratings: Test Specimen #1: Class CW-PG35-SD 2413 x 2108 (95 x 83); Test Specimen #2: Class CW-PG45-SD 2413 x 2108 (95 x 83).
- **3.4 Test Dates**: 11/16/2011 12/13/2011
- **3.5 Test Location**: Architectural Testing's test facility in Lake Forest, California.
- **3.6 Test Sample Source**: The test specimen was provided by the client. Representative samples of the test specimens will be retained by Architectural Testing for a minimum of four years from the test completion date.
- **3.7 Drawing Reference**: The test specimen drawings have been reviewed by Architectural Testing and are representative of the test specimens 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.

Company

3.8 List of Official Observers:

Frank Fisher

John Mayfield

<u>Name</u>

PRL Aluminum Architectural Testing, Inc.

4.0 Test Specification(s):

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



5.0 Test Specimen Description:

5.1 Product Sizes:

Overall Area :	Width		Height	
5.1 m ² (54.8 ft ²)	millimeters	inches	millimeters	inches
Overall size	2413	95	2108	83
Panel size	1226	48-1/4	2067	81-3/8

Note: The following descriptions apply to all specimens.

5.2 Frame Construction:						
Frame Member	Material	Description				
Head	Aluminum	Formed from custom shaped extruded aluminum.				
Sill track (Threshold)	Aluminum	Secured to the upturned leg of the sub sill using a 3/8" wide x 1" long bead of sealant located at each end and 10" on center thereafter.				
Sill track cover	Aluminum	Snapped into the exposed exterior sill track and fully sealed along each exterior joint and to the fixed interlocking stile.				
Bottom rail fixed panel shoe	Aluminum	Inserted and secured into the bottom rail of the fixed panel using two rows of 3/8" wide double-sided tape and snapped into the sill track.				
Sub sill (Test Specimen #1)	Aluminum	Bedded in sealant full length and fully sealed to each jamb member, measuring 1.562" high (P/N: BSP-02).				
Sub sill (extender) (Test Specimen #2)	Aluminum	Bedded in sealant full length and fully sealed to each jamb member, measuring 1.860" high (P/N: BSP-03).				
Jamb	Aluminum	Formed from custom shaped extruded aluminum.				
Exterior jamb pocket cover	Aluminum	Snapped into the exterior jamb pocket of the strike jamb.				
Interior jamb pocket cover	Aluminum	Snapped into the interior jamb pocket of the fixed panel.				
Exterior head pocket cover	Aluminum	Snapped over the exterior channel of the head and sealed to the fixed interlock.				

5.2 Frame Construction:



5.0 Test Specimen Description: (Continued)

	Joinery Type	Detail
Head/Jamb	Butted and sealed	Corners were butted and sealed full perimeter
neau/jaino	Dutteu allu Sealeu	using sealant.
Sill track (jamb	Butted and sealed	Corners were butted and bedded in sealant and
Sill track/jamb	Dutted and Sealed	sealed full perimeter at the exterior.

5.3 Panel Construction:

Fixed Panel Member	Material	Description
Rails	Aluminum	Formed from custom shaped extruded aluminum members; sealed full length at the exterior to the head and sill track.
Stiles	Aluminum	Formed from custom shaped extruded aluminum members; sealed full length at the exterior to the jamb.

Active Panel Member	Material	Description
Rails	Aluminum	Custom shaped extruded aluminum
Stiles	Aluminum	Custom shaped extruded aluminum

	Joinery Type	Detail
Rail/Stile	Butted	Members were butted and secured using a custom-shaped aluminum L-shaped bracket that was secured through the glazing pocket of the rail member using two #10 x1" sheet metal screws and secured to the stile using a #10 x 3/4"socket head cap bolt with a #10 lock nut.



5.0Test Specimen Description: (Continued)

5.4 Weatherstripping:

Description	Quantity	Location
0.320" x 0.270 pile w/fin	4 Rows	Sill track guide at each exterior panel face
0.320" x 0.270 pile w/fin	4 Rows	Interior and exterior facing legs of the exterior sill track
0.320" x 0.270 pile w/fin	2 Rows	Jamb face of the lock stile
0.290" x 0.270 pile w/fin	1 Row	Interior leg of the interior jamb pocket
0.290" x 0.270 pile w/fin	1 Row	Exterior leg of the interior jamb pocket
0.320" x 0.270 pile w/fin	2 Rows	Jamb face of the fixed stile
0.290" x 0.270 pile w/fin	1 Row	Exterior leg of the exterior jamb pocket
0.290" x 0.270 pile w/fin	1 Row	Interior leg of the exterior jamb pocket
0.320" x 0.270 pile w/fin	2 Rows	Interior face of the fixed interlock stile
2" x 2" x 0.290" adhesive- backed pile	1 Plug	Adhered to the sill track below the interlock of the active panel
2" x 2" x 1" open cell foam	1 Plug	Fully sealed into the top hollow of the fixed interlock extrusion
0.290" x 0.270 pile w/fin	2 Rows	Exterior face of the interlocking stile of the active panel

5.5 Glazing:

Glass Type	Spacer Type	Interior Lite	Exterior Lite	Glazing Method
1-1/8" IG	Aluminum	1/4"	1/4"	Marine glazed into a rubber
1-1/0 10	box	Tempered	Tempered	glazing gasket

Logation	Quantity	Dayligh	Glass Bite	
Location	Quantity	millimeters	inches	GIASS DILE
Fixed panel	1	1073 x 1889	42-1/4 x 74-3/8	0.625"
Active panel	1	1073 x 1889	42-1/4 x 74-3/8	0.625"



5.0 Test Specimen Description: (Continued)

5.6 Drainage:

Drainage Method	Size	Quantity	Location
Weep slot	1/2" wide x 1/4" high	2 per panel	12" on center from the stiles of each panel; cut through the exterior sill face continuing through each leg of the sill track

5.7 Hardware:

Description	Quantity	Location	
Roller assembly	2	Inserted into each end of the bottom rail and secured to each stile and the bottom rail using two $\#1/4-20 \times 1"$ machine screws	
Stainless steel track cover	1	Snapped over the interior roller track	
Adams-Rite lock set	1	Located at the midpoint of the stile	

5.8 Reinforcement: No reinforcement was utilized.

5.9 Screen Construction: No screen was utilized.

6.0 Installation:

The specimen was installed into a 2x10 aluminum test buck. The sub sill was bedded in sealant and the exterior perimeter of the door was sealed with sealant.

Location	Anchor Description	Anchor Location	
Jambs	One 1/4-20 x 1-1/2" Phillips flat head screw	4" on center from the head and sill and 12" on center thereafter; through the interior jamb pocket	
Jambs	One 1/4-20 x 1-1/2" Phillips pan head screw	4" on center from the head and sill and 12" on center thereafter; through the interior jamb pocket	
Threshold	Four #10 x 3/4" Phillips pan head sheet metal screws (one though each channel of the track)	Located at 4" and 6" on center from each end and at the midpoint	
Head	Two 1/4-20 x 3/4" Phillips pan head screws	4" on center from the ends and 12" on center thereafter through interior and exterior channel of the head	

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7.0 Test Results: The temperature during testing was 14°C (58°F). The results are tabulated as follows:

Test Specimen #1:

Title of Test	Results	Allowed	Note
	Initiate motion:		
	57.9 N (19 lbf)	135.0 N (40 lbf) max.	
Operating Force,	Maintain motion:		
per ASTM E 2068	31.1 N (14 lbf)	90.0 N (25 lbf) max.	
	Lock:		
	17.8 N (4 lbf)	100.0 N (22.5 lbf) max.	
Air Leakage,			
Infiltration per ASTM E 283	0.61 L/s/m ²	1.5 L/s/m ²	
at 75 Pa (1.57 psf)	(0.12 cfm/ft^2)	$(0.3 \text{ cfm/ft}^2) \text{ max.}$	1
Water Penetration,			
per ASTM E 547			
at 260 Pa (5.43 psf)	Pass	No leakage	2
Uniform Load Deflection,			
per ASTM E 330			
taken on the fixed interlock stile			
+1680 Pa (+35.09 psf)	8.1 mm (0.32")	11.9 mm (0.47")	
-1680 Pa (-35.09 psf)	8.6 mm (0.34")	11.9 mm (0.47")	3, 4
Uniform Load Structural,			
per ASTM E 330			
taken on the fixed interlock stile			
+2520 Pa (+52.63 psf)	0.2 mm (0.01")	8.1 mm (0.32") max.	
-2520 Pa (-52.63 psf)	0.2 mm (0.01")	8.1 mm (0.32") max.	3, 4
Forced Entry Resistance,			
per ASTM F 842,			
Type: A - Grade: 10	Pass	No entry	
Deglazing,			
per ASTM E 987			
Operating direction,			
320 N (70 lbf)	Pass	Meets as stated	
Remaining direction,			
230 N (50 lbf)	Pass	Meets as stated	



7.0 Test Results: (Continued)

Test Specimen #1:

Optional Performance				
Uniform Load Deflection,				
per ASTM E 330				
taken on the fixed interlock stile				
+2160 Pa (+45.11 psf)	9.9 mm (0.39")	11.9 mm (0.47")		
-2160 Pa (-45.11 psf)	11.2 mm (0.44")	11.9 mm (0.47")	3, 4	
Uniform Load Structural,				
per ASTM E 330				
taken on the fixed interlock stile				
+3240 Pa (+67.67 psf)	0.2 mm (0.01")	8.1 mm (0.32") max.		
-3240 Pa (-67.67 psf)	0.2 mm (0.01")	8.1 mm (0.32") max.	3, 4	

Test Specimen #2:

Optional Performance				
Water Penetration,				
per ASTM E 547				
at 330 Pa (6.89 psf)	Pass	No leakage	2	

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 not used to seal against air leakage during structural testing.



The service life of this report will expire on the stated Test Record Retention End Date, at which time such materials as drawings, data sheets, samples of test specimens, copies of this report, and any other pertinent project documentation, shall be discarded without notice.

If test specimen contains glazing, no conclusions of any kind regarding the adequacy or inadequacy of the glass in any glazed test specimen(s) can be made. 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.

John S. Mayfield Project Manager Shawn G. Collins, P.E. Laboratory Support Engineer

JM:bu/cmd

Attachments (pages): This report is complete only when all attachments listed are included. Appendix-A: Alteration Addendum (1) Appendix-B: Drawings (18)

This report produced from controlled document template ATI 00438, issued 04/26/11.

Appendix A

Alteration Addendum

Alteration #1: Date - 11/17/2011 Cause for alteration – Water infiltration over the sill Remedial action taken – Replaced sub sill with a 1.562" high sill leg Appendix B

Drawings

PRL Max sliding door "CANCUN"

Bill of Material

key number	PRL part number	manufacturer	description	qty required	size
1	2263	PRL proprietary	top frame rail	1	W
2	2204	PRL proprietary	sash top rail	2	(W/2)- 5 1/16"
3a	BSP-02	PRL proprietary	sub sill CW-35 rating	1	W
3b	BSP-03	PRL proprietary	sub sill CW-45 rating	1	W
4	2205	PRL proprietary	bottom sash rails	2	(W/2)- 5 1/16"
5	2259	PRL proprietary	sill track	1	W-13/8"
6	2261	PRL proprietary	frame jamb	2	H- 2 1/16"
7	2201	PRL proprietary	sash lock/jamb stile	2	H-1 9/16"
8	2237	PRL proprietary	sash interlock stiles	2	H-1 9/16"
9	2197	PRL proprietary	frame jamb closer	2	H-1"
10	2249	PRL proprietary	non operating leaf support shoe	2	6"
11	29027045BKQB	Amesbury	fin seal 0.290 x 0.270 base (typ horizontally)	8	W
11	29027045BKQB	Amesbury	fin seal 0.290 x 0.270 base (typ vertically)	12	Н
12	BL-4514	bandlock	glazing channel	2	(4*H)+(2*W)
13	shg-47	Hagg supply	stainless steel track guide cover (0.031)	1	W-13/8"

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PRL proprietary

roller wheels

insulated glass width insulated glass height Adams Rite MS-1850 lock 2 (W/2)- 3 3/4" 2 H-8 5/16" 1

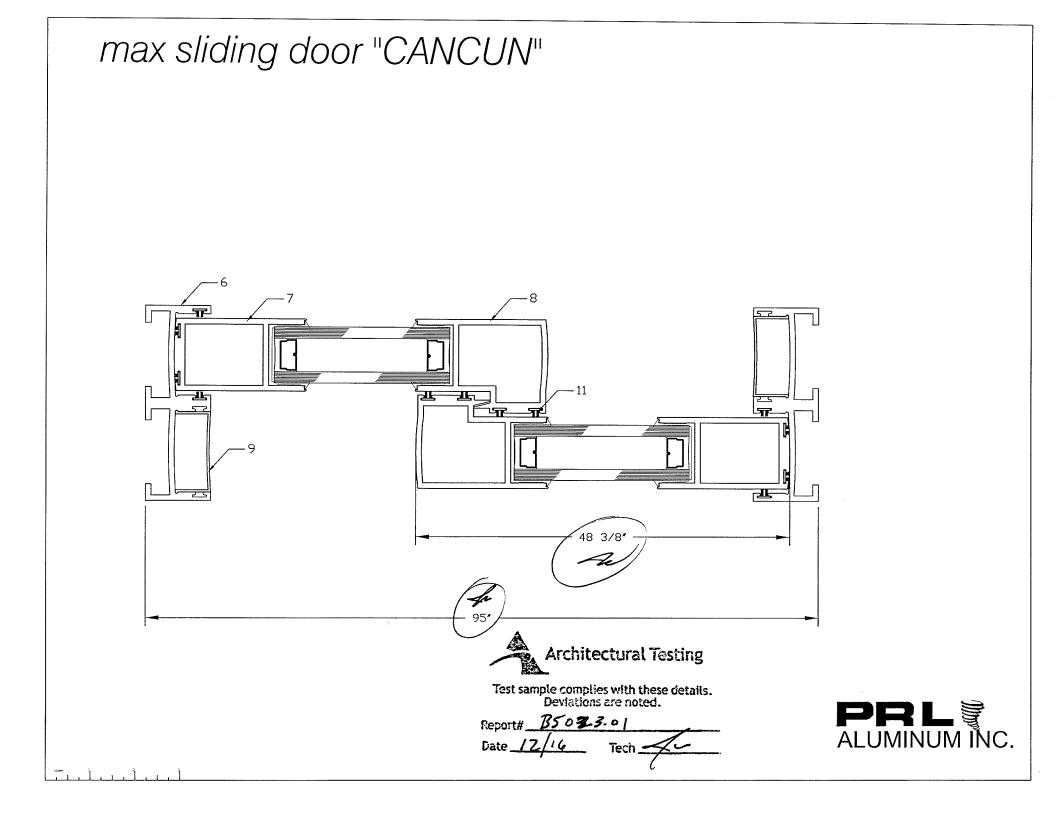
as drawn



2

Test sample complies with these details. Deviations are noted.

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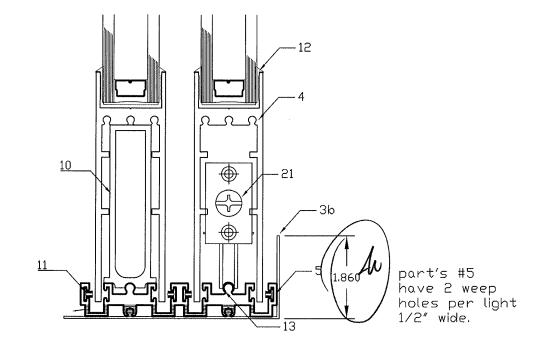


max sliding door "CANCUN"

Architectural Testing

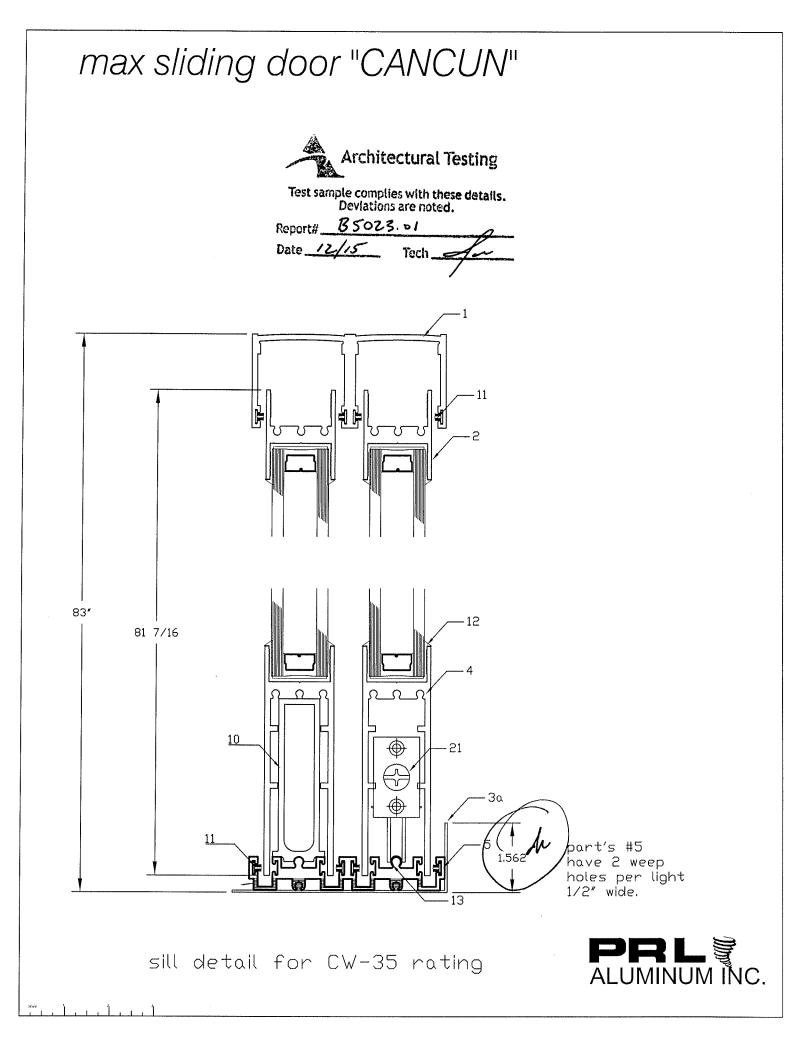
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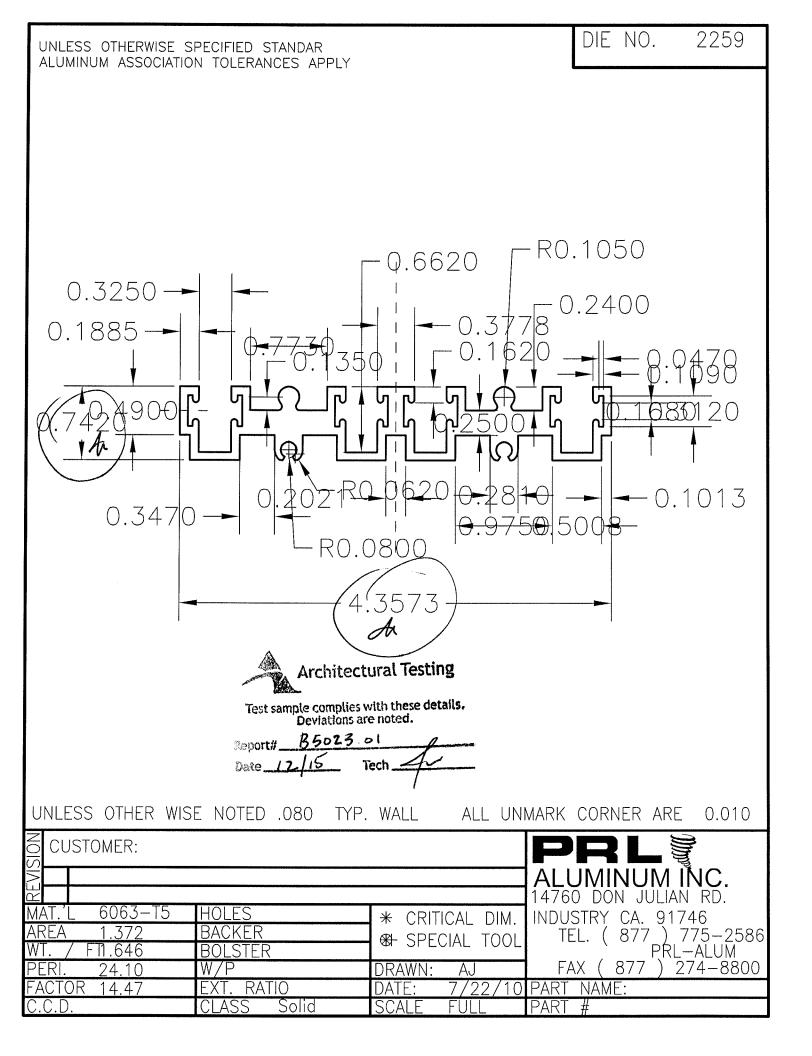
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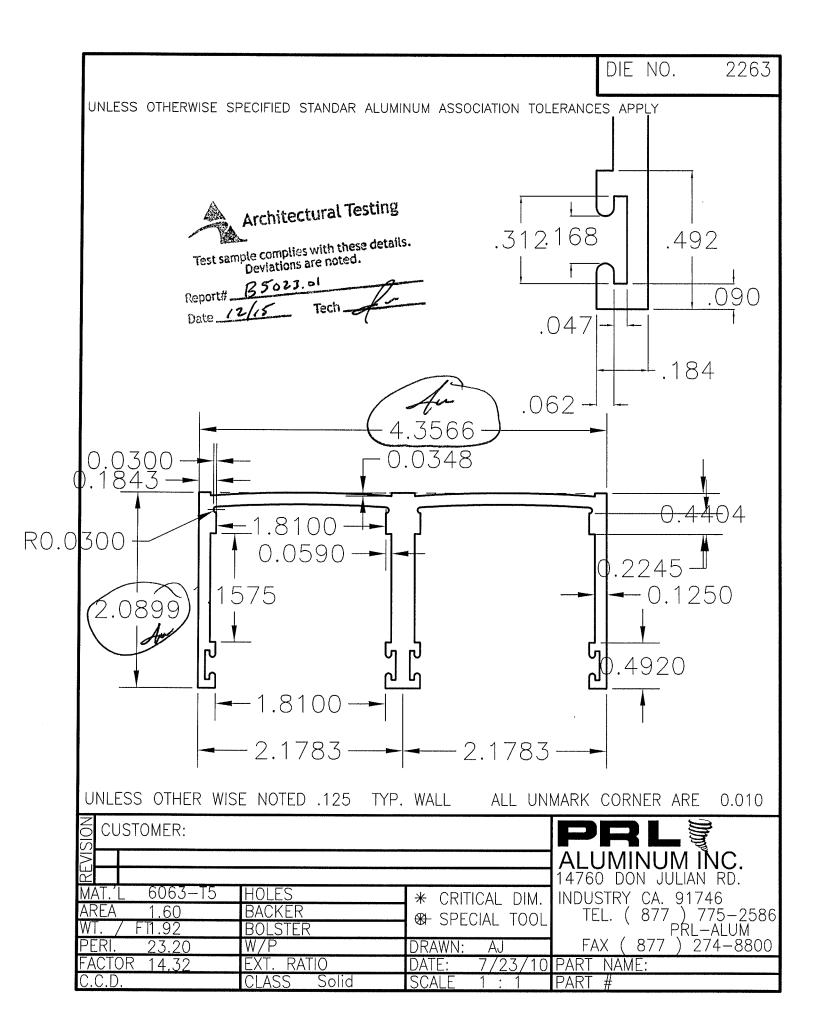
sill detail for CW-45 rating



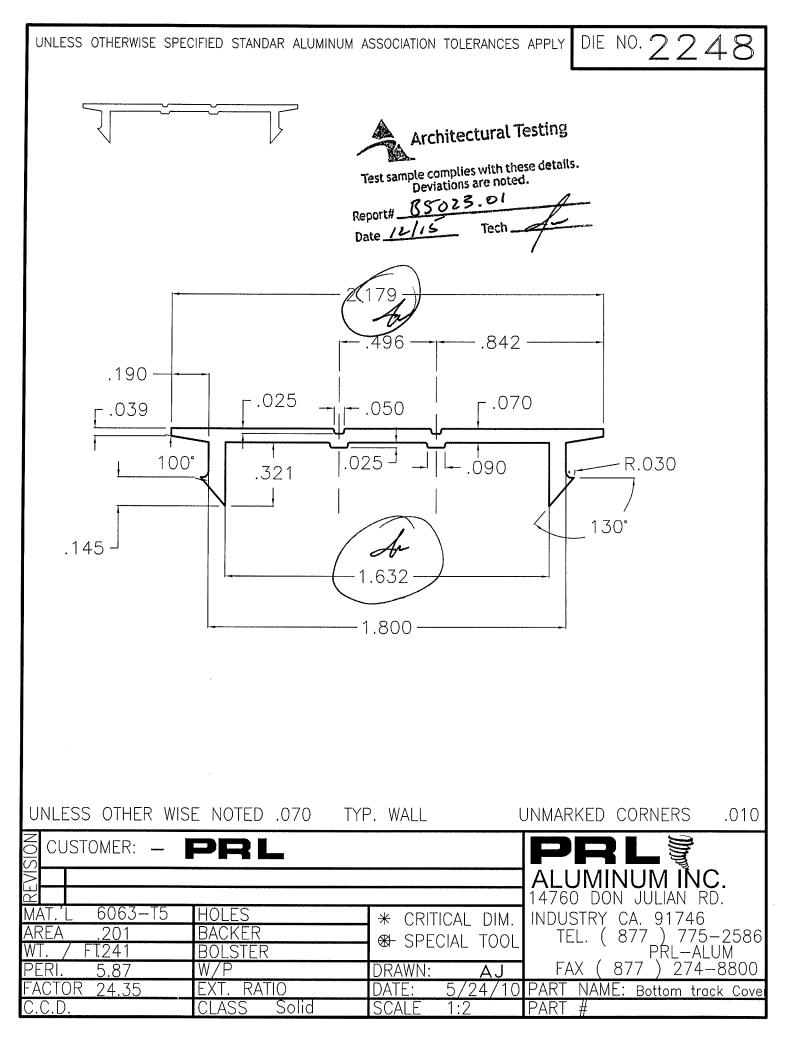


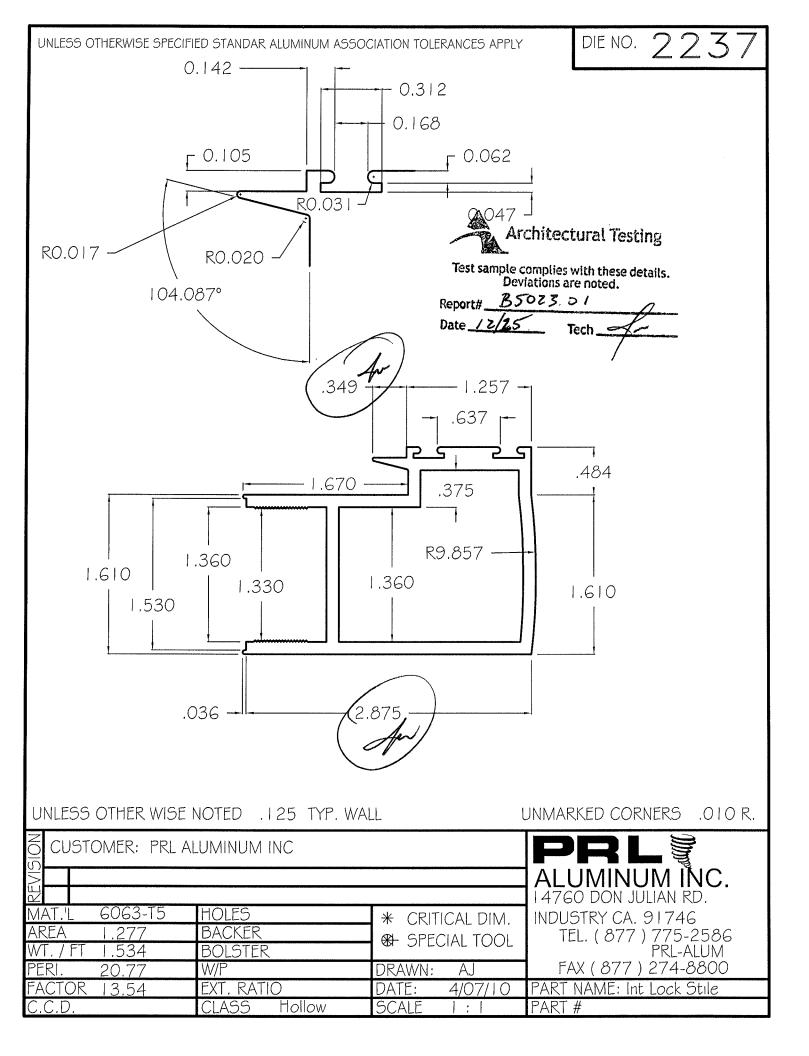
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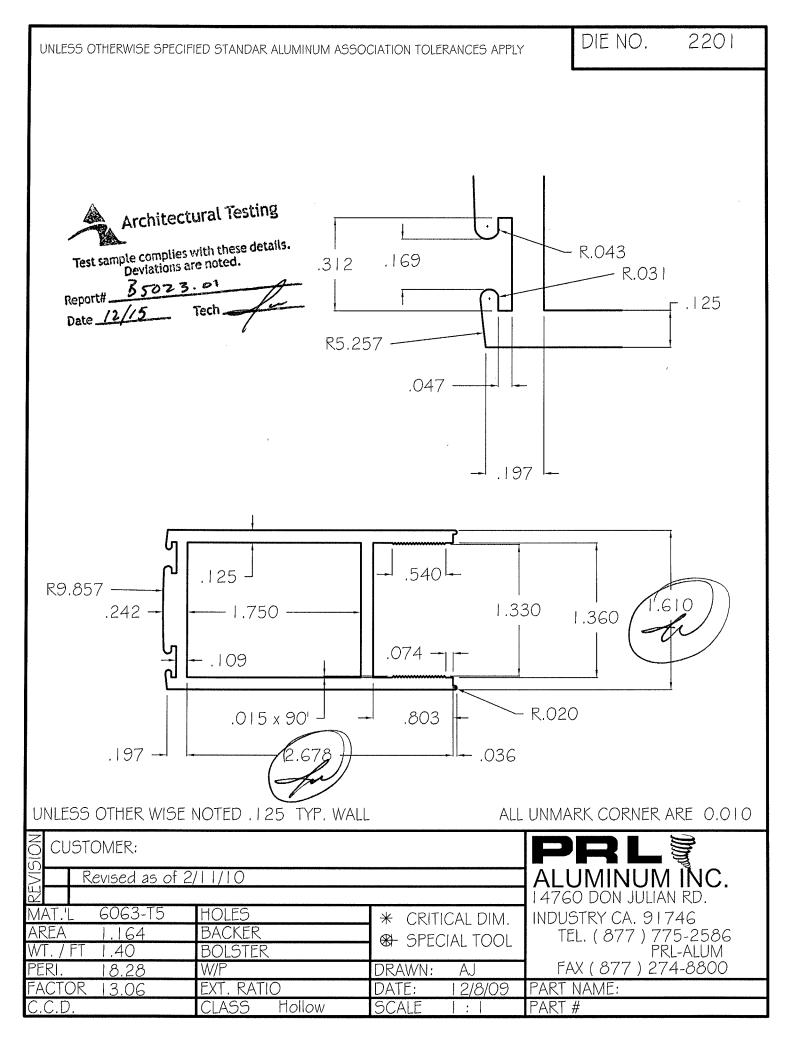
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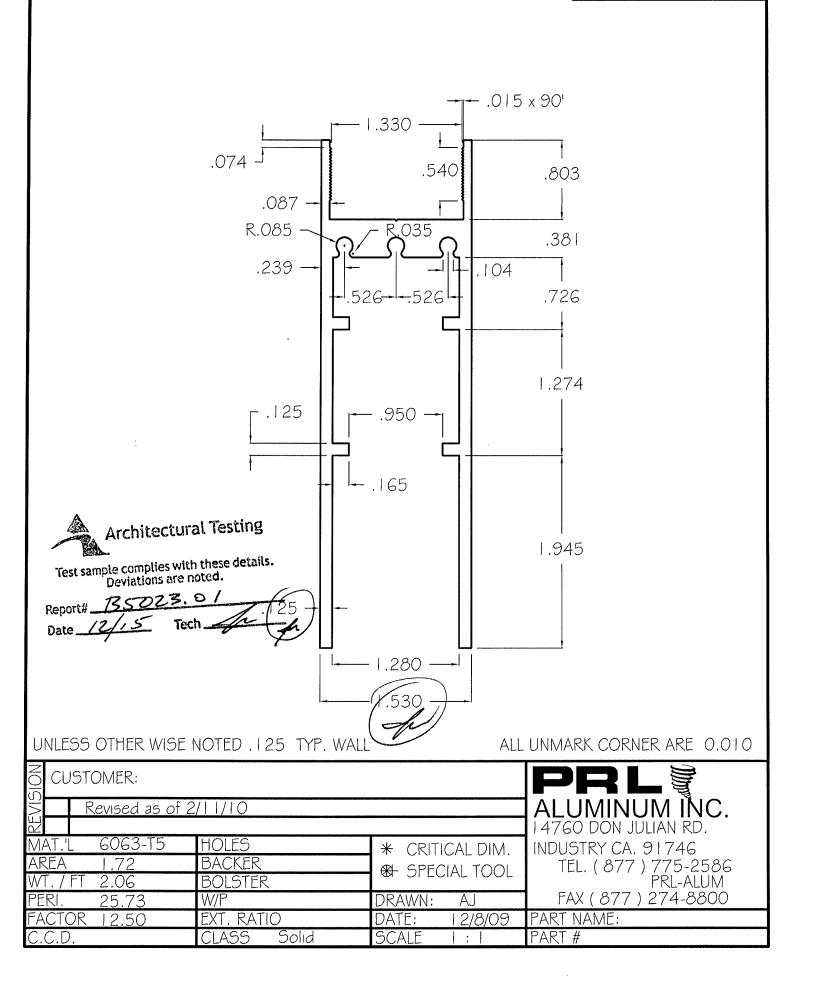


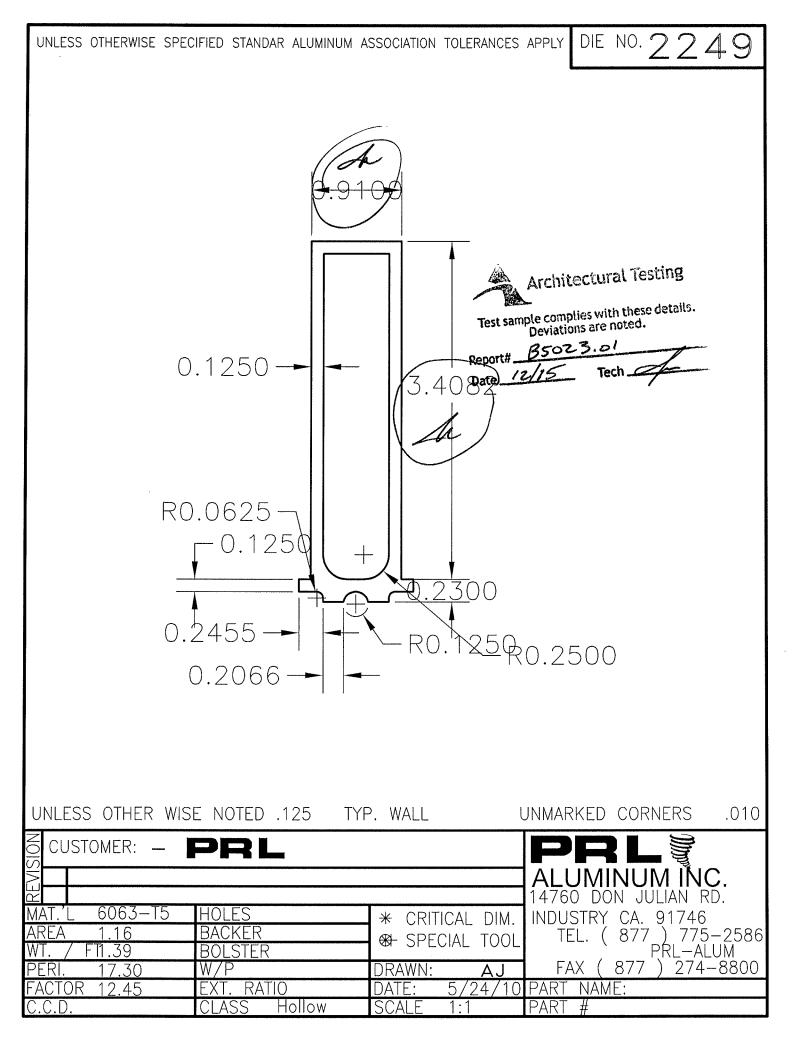


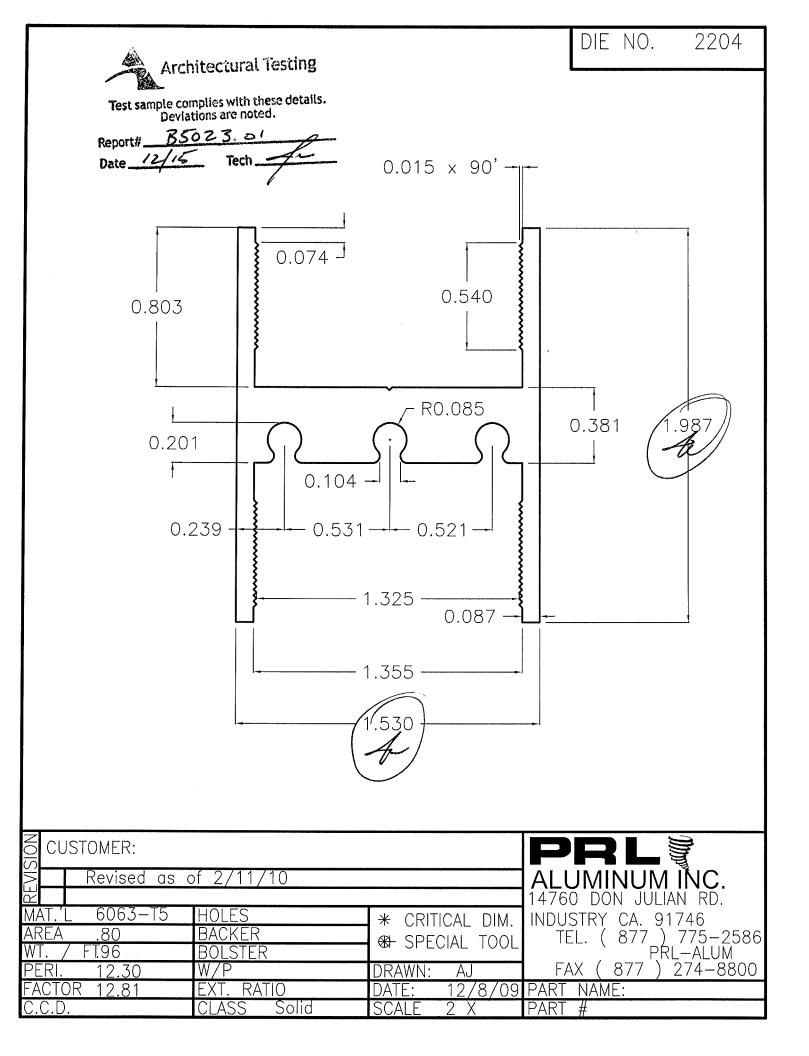


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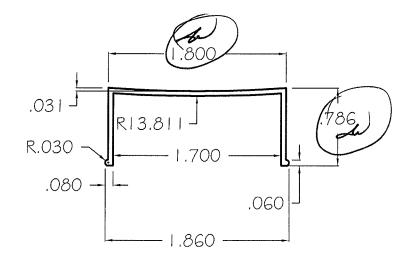
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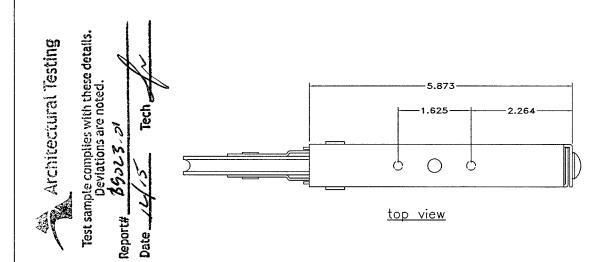
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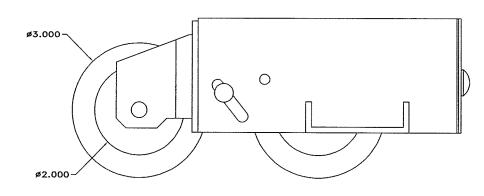


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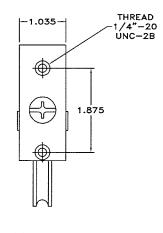
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<u>front</u> view



<u>side view</u>



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