

ALL WEATHER ARCHITECTURAL ALUMINUM TEST REPORT

SCOPE OF WORK

AAMA/WDMA/CSA 101/I.S.2/A440-22 TESTING ON 7000, SIDE HINGED DOOR (OUT-SWING)

REPORT NUMBER

R3680.01-301-44-R0

TEST DATE(S)

06/06/24 - 08/29/24

ISSUE DATE

09/03/24

RECORD RETENTION END DATE

08/29/28

PAGES

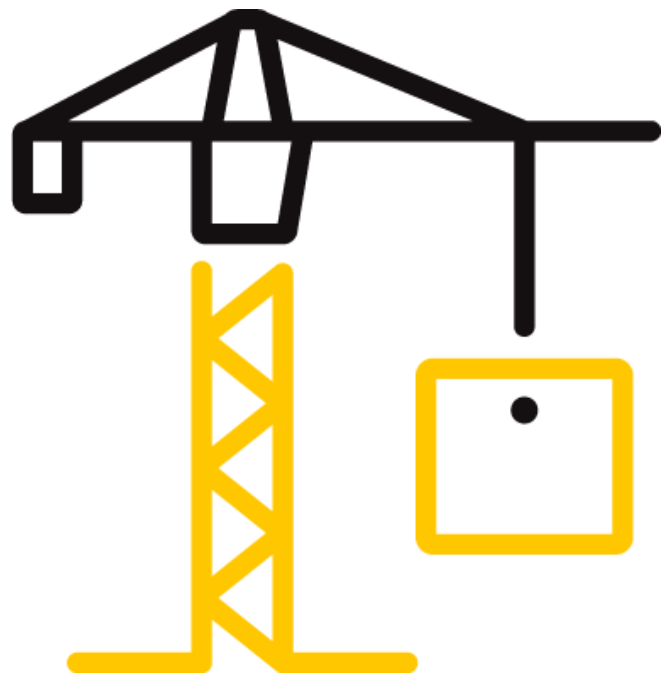
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TEST REPORT FOR ALL WEATHER ARCHITECTURAL ALUMINUM

Report No.: R3680.01-301-44-R0

Date: 09/03/24

REPORT ISSUED TO

ALL WEATHER ARCHITECTURAL ALUMINUM

777 Aldridge Road

Vacaville, California 95688

SECTION 1

SCOPE

Intertek Building & Construction (B&C) was contracted by All Weather Architectural Aluminum, Vacaville, California to perform testing in accordance with AAMA/WDMA/CSA 101/I.S.2/A440-22, *NAFS 2022 - North American Fenestration Standard/Specification for Windows, Doors, and Skylights*, on their 7000, Side Hinged Door. Results obtained are tested values and were secured by using the designated test method(s). Testing was conducted at Intertek test facility in Fresno, California where testing was completed. This report does not constitute certification of this product nor an opinion or endorsement by this laboratory.

SECTION 2

SUMMARY OF TEST RESULTS

TITLE	RESULTS
AAMA/WDMA/CSA 101/I.S.2/A440-22	Class CW – DP35 – Size Tested: 1015 x 2100 mm (40 x 82-5/8 in) – Type SHD
Design Pressure	±1680 Pa (±35.09 psf)
Air Infiltration	<0.1 L/s/m ² (<0.01 cfm/ft ²)
Air Exfiltration	<0.1 L/s/m ² (<0.01 cfm/ft ²)
Water Penetration Resistance Test Pressure	260 Pa (5.43 psf)

For INTERTEK B&C:

COMPLETED BY: Jarod Hardman
TITLE: Senior Project Lead
SIGNATURE:
DATE: 09/03/24

REVIEWED BY: Tyler Westerling, P.E.
TITLE: Regional Manager
SIGNATURE:
DATE: 09/03/24

JSH:ms

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TEST METHOD(S)

The specimens were evaluated in accordance with the following:

AAMA/WDMA/CSA 101/I.S.2/A440-22, *NAFS 2022 - North American Fenestration Standard/Specification for Windows, Doors, and Skylights*

AAMA 920-11, *Specification for Operating Cycle Performance of Side-Hinged Exterior Door Systems*

AAMA 925-13, *Specification for Determining the Vertical Loading Resistance of Side-Hinged Doors*

AAMA 1304-02, *Voluntary Specification for Forced Entry Resistance of Side-Hinged Door Systems*

ASTM E283-04(2012), *Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen*

ASTM E330/E330M-14, *Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference*

ASTM E547-00(2016), *Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Cyclic Static Air Pressure Difference*

SECTION 4

MATERIAL SOURCE/INSTALLATION

Test specimen was provided by the client. Representative samples of the test specimen(s) will be retained by Intertek B&C for a minimum of four years from the test completion date.

The specimen was installed into a Douglas-Fir wood buck. The rough opening allowed for a 1/4" shim space. The exterior perimeter of the door was sealed with sealant. Installation of the tested product was performed by the client.

LOCATION	ANCHOR DESCRIPTION	ANCHOR LOCATION
Through frame	#10 x 3" wood screws	3"-5-1/2" from corner and 12" on center

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LIST OF OFFICIAL OBSERVERS

NAME	COMPANY
Erick Dominguez	All Weather Architectural Aluminum
Jarod Hardman	Intertek B&C

SECTION 6

TEST SPECIMEN DESCRIPTION

Product Type: Side-Hinged Door (Out-Swing)

Series/Model: 7000

Product Size(s):

OVERALL AREA:	WIDTH		HEIGHT	
	Millimeters	Inches	Millimeters	Inches
2.1 m ² (22.9 ft ²)				
Overall Size	1015	40	2100	82-5/8
Leaf Size	943	37-1/8	2040	80-5/16

Frame Construction:

FRAME MEMBER	MATERIAL	DESCRIPTION
Head and jambs	Aluminum	Thermally broken extrusion, Part No. 702, with nail-on fin, Part No. 751.
Sill	Aluminum	Thermally broken extrusion, Part No. 784
	JOINERY TYPE	DETAIL
Head corners	Mitered	Staked key
Sill corners	Coped	Secured through jambs

Leaf:

LEAF MEMBER	MATERIAL	DESCRIPTION
Rails and stiles	Aluminum	Thermally broken extrusion, Part No. 708.
	JOINERY TYPE	DETAIL
All corners	Mitered	Staked key

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Reinforcement: *No reinforcement was utilized.*

Weatherstripping:

DESCRIPTION	QUANTITY	LOCATION
EPDM, Part No. MG750D	1 row	Full perimeter of frame
EPDM, Part No. MG381D	1 row	Full perimeter of leaf

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
1" IG	A1-D	3/16" tempered	3/16" tempered	Interior set, dry glazed with glazing bead w/ gaskets (Part Nos. 710, MG761D, MG440D, and MG380D)

LOCATION	QUANTITY	DAYLIGHT OPENING		GLASS BITE
		Millimeters	Inches	
Leaf	1	725 x 1825	28-9/16 x 71-7/8	1/2"

Drainage:

DRAINAGE METHOD	SIZE	QUANTITY	LOCATION
Weephole with cover	1-1/2" wide by 1/4" high	2	Located in face of sill, 3" from each jamb

Hardware:

DESCRIPTION	QUANTITY	LOCATION
Barrel hinge	2	Secured to hinge stile and jamb, 3" from head and sill.
Multi point lock and handle assembly	1	Secured to lock stile midway between head and sill.

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SECTION 7

TEST RESULTS

The temperature during testing was 37°C (98°F). The results are tabulated as follows:

TITLE OF TEST	RESULTS	ALLOWED	NOTE
Force to Latch Side-Hinged Door System, per ANSI/BHMA A156.2	Force to Latch: 49.8 N (11.2 lbf) Deadbolt: 84.5 N (19.0 lbf)	Report only Report only	
Air Leakage, Infiltration per ASTM E283 at 75 Pa (1.57 psf)	<0.1 L/s/m ² (<0.01 cfm/ft ²)	1.5 L/s/m ² (0.3 cfm/ft ²) max.	1
Air Leakage, Exfiltration per ASTM E283 at 75 Pa (1.57 psf)	<0.1 L/s/m ² (<0.01 cfm/ft ²)	1.5 L/s/m ² (0.3 cfm/ft ²) max.	1
Water Penetration, per ASTM at 220 Pa (4.59 psf)	N/A	N/A	2
Uniform Load Deflection, per ASTM E330 Deflections taken at hinge stile +1440 Pa (+30.08 psf) -1440 Pa (-30.08 psf)	N/A	N/A	2
Uniform Load Structural, per ASTM E330 Permanent set taken at hinge stile +2160 Pa (+45.11 psf) -2160 Pa (-45.11 psf)	N/A	N/A	2
Forced Entry Resistance, per AAMA 1304, 1330 N (300 lbf) point load	Pass	No entry	
Operation/Cycling Performance, per AAMA 920 250,000 cycles	Pass	Meets as stated	4
Vertical Loading Resistance, per AAMA 925 Pre-load – 200 N (45 lbf) Vertical deflection Vertical permanent set	0.0 mm (0.00") 0.0 mm (0.00")	Report only	

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TITLE OF TEST	RESULTS	ALLOWED	NOTE
Vertical Loading Resistance, per AAMA 925 Test load – 1112 N (250 lbf) Vertical deflection Vertical permanent set	 1.3 mm (0.05") 0.0 mm (0.00")	 Report only	
Vertical Loading Resistance, per AAMA 925 Diagonal deformation	0.0 mm (0.00")	Report only	
Vertical Loading Resistance, per AAMA 925 Force to latch	Force to Latch: 49.8 N (11.2 lbf) Deadbolt: 84.5 N (19.0 lbf)	 Report only Report only	
OPTIONAL PERFORMANCE			
Water Penetration, per ASTM E547 at 260 Pa (5.43 psf)	Pass	No leakage	
Uniform Load Deflection, per ASTM E330 Deflections taken at hinge stile +1680 Pa (+35.09 psf) -1680 Pa (-35.09 psf)	 2.0 mm (0.08") 2.3 mm (0.09")	 10.9 mm (0.43") max. 10.9 mm (0.43") max.	4, 6
Uniform Load Structural, per ASTM E330 Permanent set taken at hinge stile +2520 Pa (+52.63 psf) -2520 Pa (-52.63 psf)	 0.0 mm (0.00") 0.0 mm (0.00")	 5.8 mm (0.23") max. 5.8 mm (0.23") max.	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: The client opted to start at a pressure higher than the minimum required. Test results are reported under Optional Performance.

Note 3: Loads were held for 10 seconds.

Note 4: At the conclusion of the test, there were no signs of damage to the door panel, frame, construction, fasteners, glazing, weatherstripping, or system assembly.

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.



Total Quality. Assured.

2524 E. Jensen Ave
Fresno, California 93706

Telephone: 559-233-8705
Facsimile: 717-764-4129
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SECTION 8 ALTERATIONS

No alterations were required.

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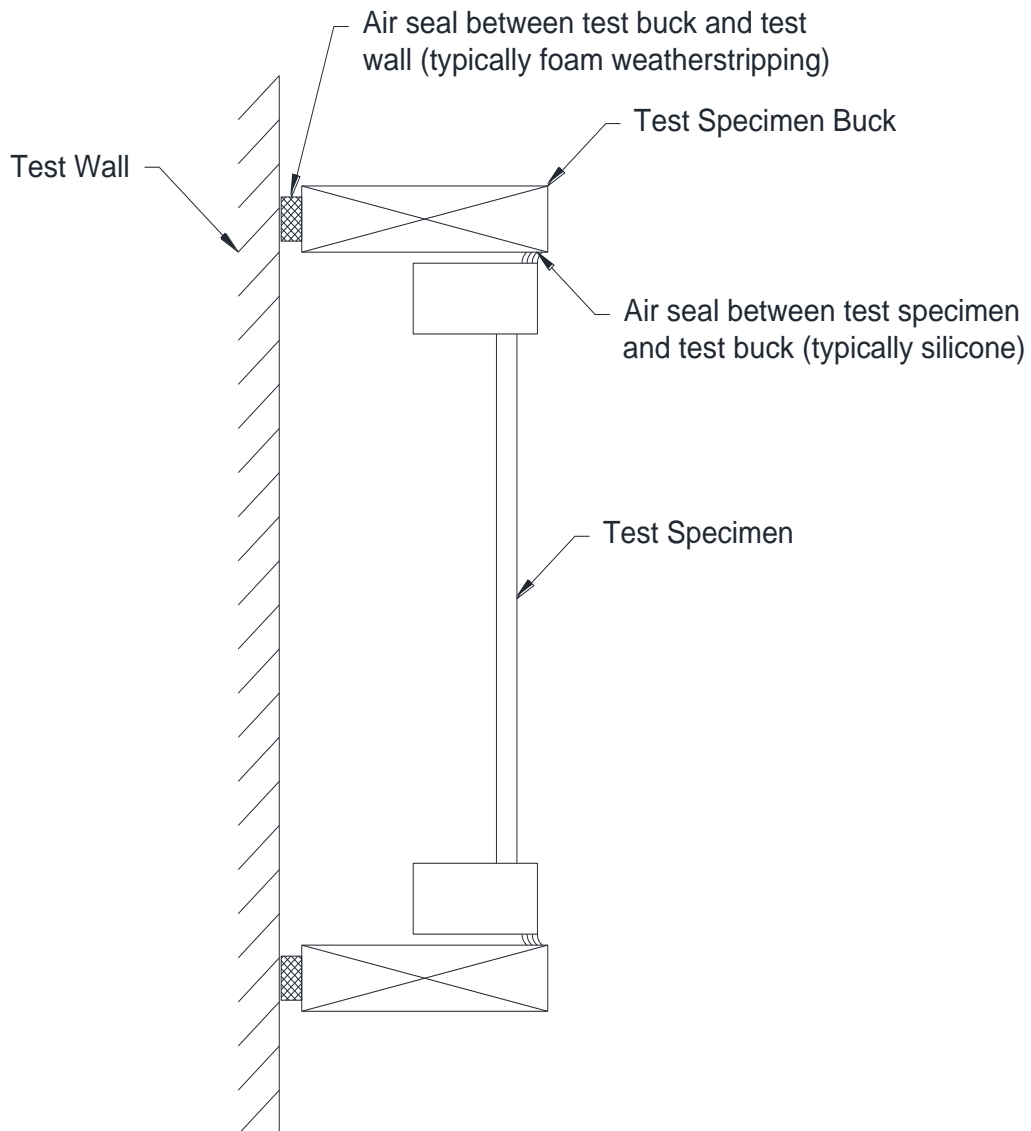
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LOCATION OF AIR SEAL

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.





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SECTION 10

CONCLUSION

The specimen tested successfully met the performance requirements for a **Class CW – DP35 – Size Tested: 1015 x 2100 mm (40 x 82-5/8 in) – Type SHD** rating.



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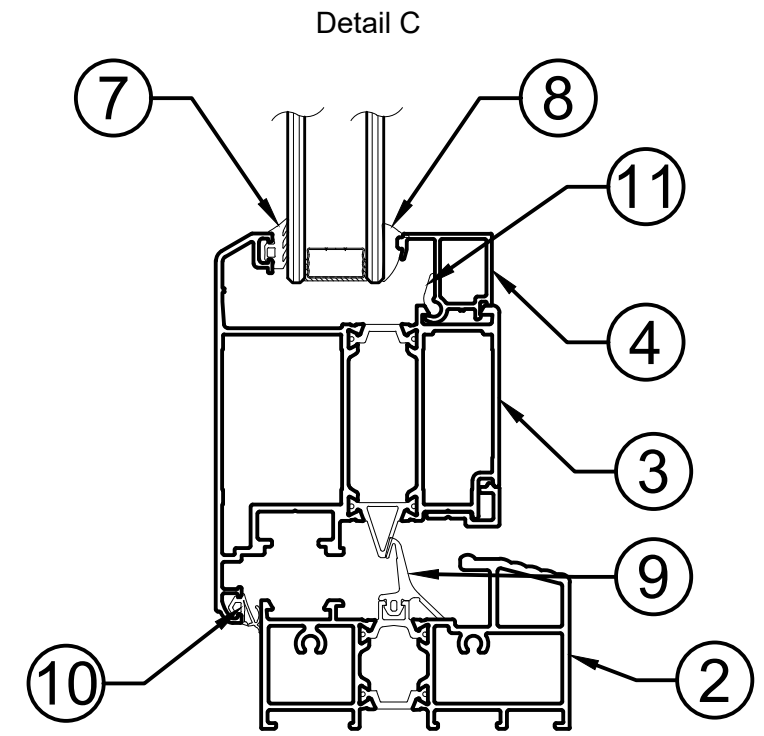
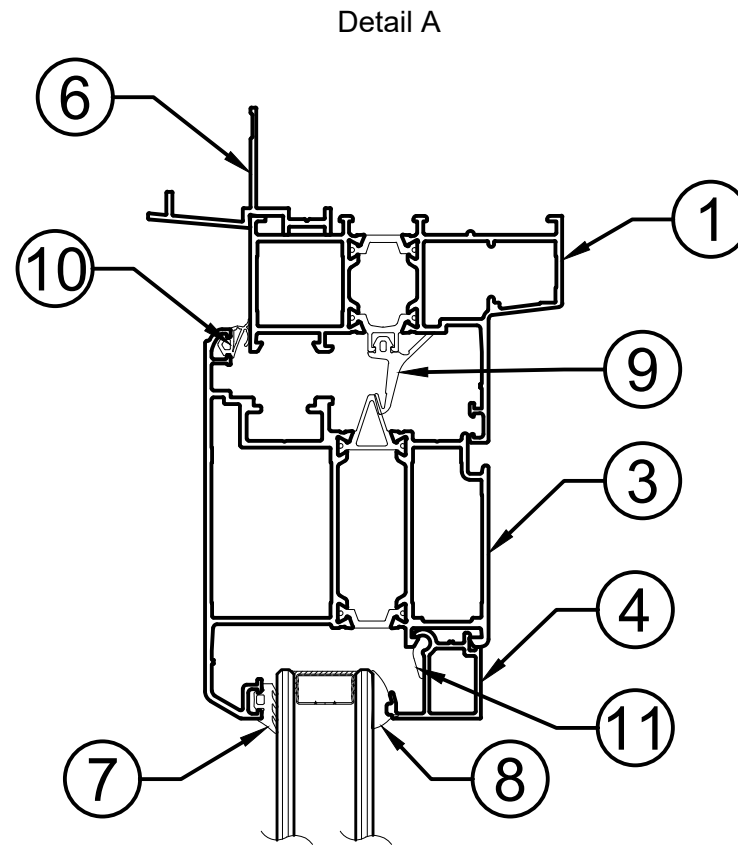
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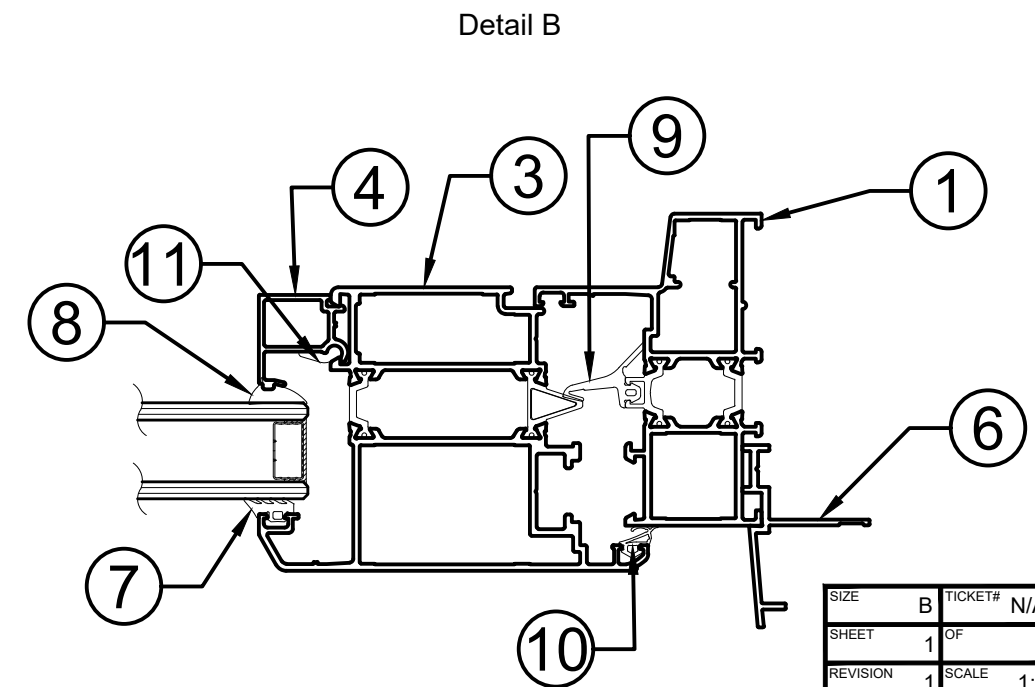
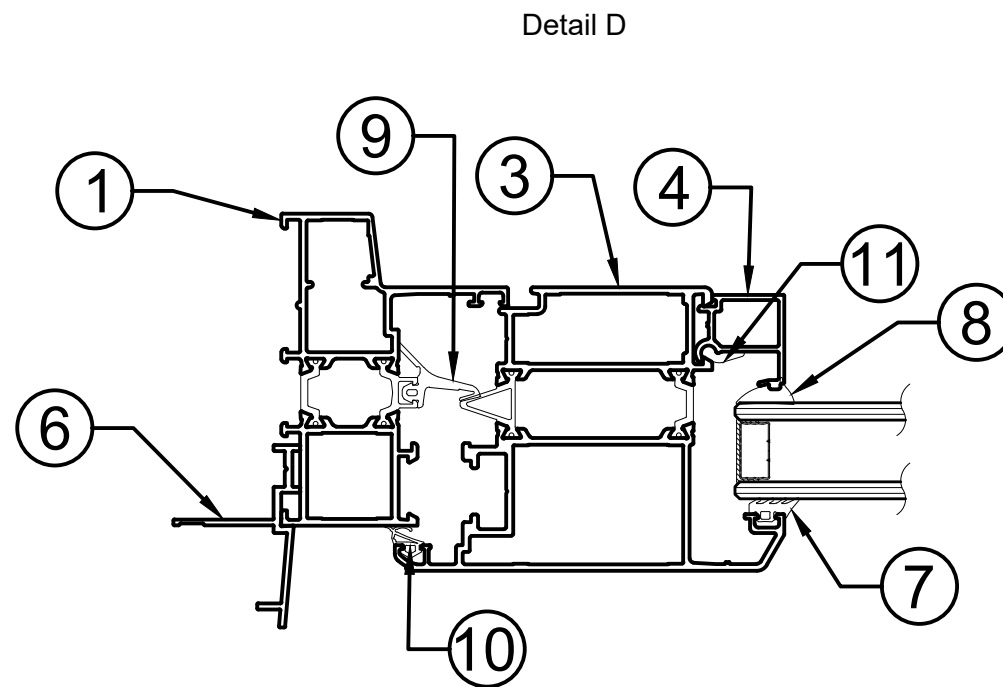
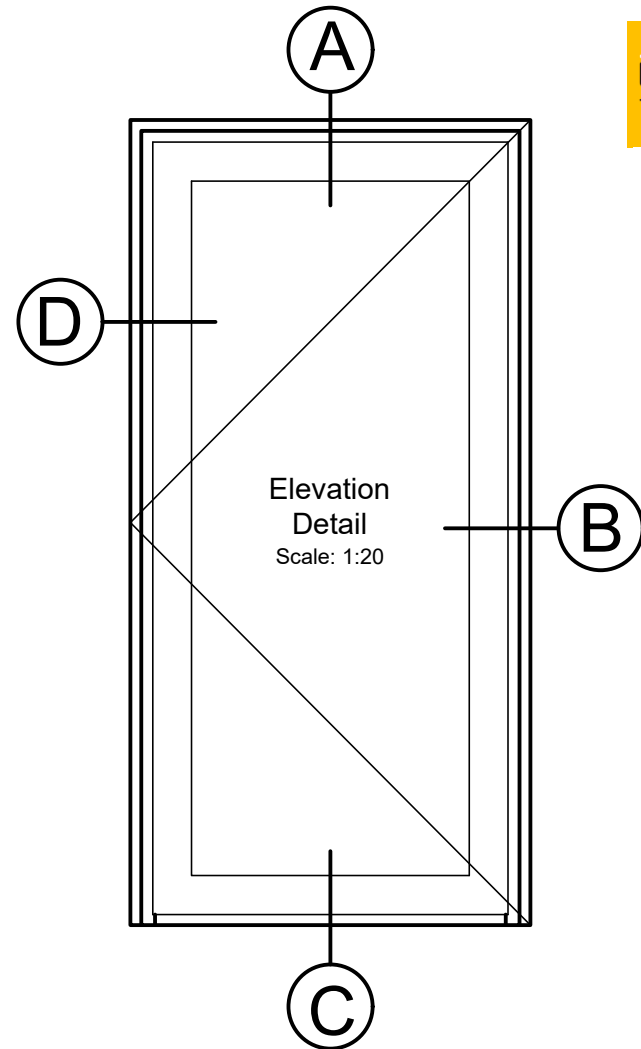
DRAWING(S)

The test specimen drawings have been reviewed by Intertek B&C and are representative of the test specimen(s) reported herein. Test specimen construction was verified by Intertek B&C per the drawings included in this report. Any deviations are documented herein or on the drawings.

Item #	Part #	Part Description	Material	Finish
Extrusion				
1	702	Frame – Equal Leg	Aluminum, Strut	Anodized
2	784	Sill – Midrise	Aluminum, Strut	Anodized
3	708	Sash – Outswing	Aluminum, Strut	Anodized
4	710	Glazing Bead - 1" OA	Aluminum	Anodized
5	786	Sill Extension	Aluminum	Anodized
6	751	Nail-on Fin	Aluminum	Anodized
Gasket				
7	MG761D	External Glazing Gasket	EPDM	
8	MG440D	Internal Glazing Gasket	EPDM	
9	MG750D	Main Gasket	EPDM	
10	MG381D	Rabbit Gasket	EPDM	
11	MG380D	Glazing Bead Gasket	EPDM	



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 Verified by: *[Signature]*



SIZE	B	TICKET#	N/A
SHEET	1	OF	1
REVISION	1	SCALE	1:2
DATE	7/31/2024		
DRAWN	Erick		
REVIEWED	---		
BY	---		



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SECTION 12

REVISION LOG

REVISION #	DATE	PAGES	REVISION
0	09/03/24	N/A	Original Report Issue