

FLEETWOOD WINDOWS & DOORS TEST REPORT

SCOPE OF WORK

AAMA/WDMA/CSA 101/I.S.2/A440 TESTING ON THEIR SERIES 3200-T HINGED DOOR, DUAL SIDE HINGED DOOR.

REPORT NUMBER

R1117.01-303-44 R1

TEST DATES

04/02/24 - 04/04/24

ISSUE DATE

04/05/24

REVISED DATE

4/11/24

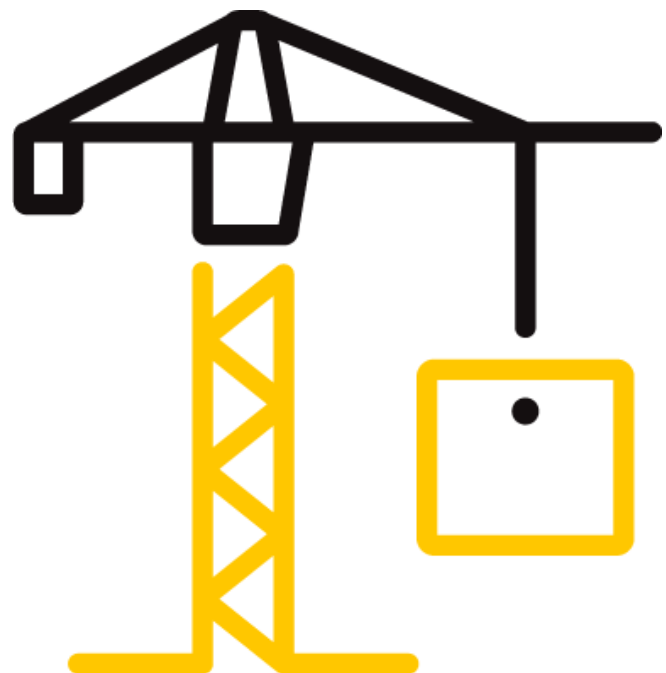
PAGES

17

DOCUMENT CONTROL NUMBER

RT-R-AMER-Test-2804 (12/07/23)

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TEST REPORT FOR FLEETWOOD WINDOWS & DOORS

Report No.: R1117.01-303-44 R1

Date: 04/05/24

REPORT ISSUED TO

FLEETWOOD DOORS & WINDOWS

1 Fleetwood Way

Corona, CA 92879

SECTION 1

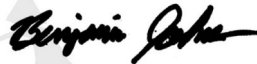
SCOPE

Architectural Testing, Inc. (an Intertek company) dba Intertek Building & Construction (B&C) was contracted by Fleetwood Doors & Windows, 1 Fleetwood Way Corona, CA 92879 to perform testing in accordance with AAMA/WDMA/CSA 101/I.S.2/A440 on their Series, 3200-T Hinged Door, Dual Side Hinged Door. Results obtained are tested values and were secured by using the designated test methods. Testing was conducted at the Intertek Inc. test facility in Lake Forest, CA 92630.

This report does not constitute certification of this product nor an opinion or endorsement by this laboratory. Intertek B&C will service this report for the entire test record retention period. The test record retention period ends four years after the test date. Test records, such as detailed drawings, datasheets, representative samples of test specimens, or other pertinent project documentation, will be retained for the entire test record retention period.

Unless differently required, Intertek reports apply the "Simple Acceptance" rule, also called "Shared Risk approach," of ILAC-G8:09/2019, Guidelines on Decision Rules and Statements of Conformity.

For INTERTEK B&C:

COMPLETED BY:	Benjamin Johns
TITLE:	Technician Building & Construction
SIGNATURE:	 Digitally Signed by: Benjamin Johns
DATE:	04/11/24

REVIEWED BY:	Tyler Westerling P.E.
TITLE:	Operations Manager Building & Construction
SIGNATURE:	 Digitally Signed by: Tyler Westerling
DATE:	04/11/24

BAJ

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SECTION 2

SUMMARY OF TEST RESULTS

TITLE	RESULTS
AAMA/WDMA/CSA 101/I.S.2/A440-17	Class- R PG15 Size Tested 2085mm X 3050mm (82.09" X 120.08")
Design Pressure	+720 Pa (±15.04 psf)
Negative Design Pressure	-720 Pa (-15.04 psf)
Air Infiltration	0.61 L/s/m ² (0.13 cfm/ft ²)
Exfiltration Level	0.57 L/s/m ² (0.12 cfm/ft ²)
Water Penetration Resistance Test Pressure without Pemco door sweep Part #1484575	150 Pa (3.13 psf)
Water Penetration Resistance Test Pressure with Pemco door sweep Part #1484575	180 Pa (3.76 psf)

SECTION 3

TEST SPECIFICATIONS/METHODS

The specimens were evaluated in accordance with the following:

AAMA/WDMA/CSA 101/I.S.2/A440-17 - North American Fenestration Standard/Specification for Windows, Doors, and Skylights

The following test methods were used during testing:

ASTM E283/E283M-19, Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Skylights, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen.

ASTM E330/E330M-14(2021), 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.

AAMA 6.4.5.1, Standard Test Methods for Force to Latch.

AAMA 6.4.5.2 Standard Test Methods for Force to engage.

AAMA 1304-18, Standard Test Methods for Measuring the Forced Entry Resistance of Sliding Door Assemblies, Excluding Glazing Impact.

AAMA 920-22, Specification for operating cycle performance of active side hinged exterior door slabs.

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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 two 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 and the exterior perimeter of the specimen was sealed to the test buck. Installation of the tested product was performed by Intertek Inc.

LOCATION	ANCHOR DESCRIPTION	ANCHOR SPACING
Sill	G E all-purpose 100% Silicone	Full length of the sill.
Head through the nail fin	#6 X 1-5/8" philips flat head phosphate drywall screw	3" from the corners and 12" on center the full length of the head.
Jambs through the nail fin	#6 X 1-5/8" philips flat head phosphate drywall screw	3" from the corners and 12" on center the full length of the jambs.

SECTION 5

EQUIPMENT

Calibration of test equipment was performed by Intertek B&C in accordance with AAMA 205-15.

EQUIPMENT	ASSET NUMBERS	CALIBRATION DUE DATE
Stopwatch	64988	12/27/24
Load Cell	6.3196	8/29/24
Force Gauge	001555	9/26/24
Weather Station	INT03099	10/10/24
Control Panel	62967	4/16/24
Transducers	INT01423	4/30/24
	INT01500	4/30/24
	62849	5/10/24
Spray Rack	63244	7/5/24
Pressure Gauge	INT03761	8/5/24

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SECTION 6

LIST OF OFFICIAL OBSERVERS

NAME	COMPANY
Corey Jones	Fleetwood Doors & Windows
Benjamin Johns	Intertek B&C

SECTION 7

TEST SPECIMEN DESCRIPTION

Product Type: Dual Side Hinged door

Series/Model: 3200-T Hinged Door

Product Size:

Test Specimen #1

OVERALL AREA:	WIDTH		HEIGHT	
	millimeters	inches	millimeters	inches
6.36 m ² (68.45 ft ²)				
Overall size	2085	82.09	3050	120.08
Exterior sash	1039	40.91	2993	117.83
Interior sash	996	39.21	2993	1117.83

Frame Construction:

MEMBER	MATERIAL	DESCRIPTION
Head	Aluminum	Extruded
Jambs	Aluminum	Extruded
Sill	Aluminum	Extruded

	JOINERY TYPE	DETAIL
All corners	Butt joint	Attached with screws

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Panel Construction:

MEMBER	MATERIAL	DESCRIPTION
Head	Aluminum	Extruded
Sill	Aluminum	Extruded
Jambs	Aluminum	Extruded

	JOINERY TYPE	DETAIL
All corners	Butt joint	Attached with screws

Reinforcement: *No reinforcement was utilized.*

Weatherstripping:

DESCRIPTION	QUANTITY	LOCATION
Kerf style foam gasket	4	At the perimeter of the frame
Rubber Gasket	1	At the full length of the astragal
gasket	1	At the left jamb of the exterior panel.
Kerf style foam gasket	4	1 at the head, 1 at the sill of both panels.
Gasket	2	At both jambs of the interior panel.
Kerf style gasket	1	At the right jamb of the exterior panel.
Gasket	2	1 at the sill and right jamb of the exterior panel. 1 at the sill of the left jamb of the interior panel. (Reference Photo # 1 & 2)

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
0.99" IG	Aluminium	0.25" Tempered	0.25" Tempered	Exterior glass stop with interior glazing tape.

LOCATION	QUANTITY	DAYLIGHT OPENING		GLASS BITE
		millimeters	inches	
Both panels	2	880 x 2802	34.65 x 110.32	1/2"

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Drainage:

METHOD	SIZE	QUANTITY	LOCATION
Weep Hole	3/4" wide by 1/8" high	2	1-1/2" on center from the corners at the sill on the frame.

Hardware:

DESCRIPTION	QUANTITY	LOCATION
Lock with shoot bolts	1	80" on center from the head on the left jamb of the exterior panel.
Keeper with shoot bolt	1	80" on center from the head on the right jamb of the interior panel.
Hinge	8	1 @ 11" 1 @ 35" 1 * 83" 1 @ 107" on both jambs of the frame attaching to the panels.
Shoot bolt cup	4	1 @ 38" from both jambs of the frame. 1 @ the sill from both jambs of the sill.
Door sweep Pemco part # 1484575 added after the 3.13 psf ASTM-547 test.	4	1 @ 38" from both jambs of the frame. 1 @ the sill from both jambs of the sill.

SECTION 8

TEST RESULTS

The temperature during testing was 17.78°C (64°F). The results are tabulated as follows:

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Test Specimen #1:

TITLE OF TEST	RESULTS	ALLOWED	NOTE
AAMA 6.4.5.1	Meets as stated	Meets as stated	
AAMA 6.4.5.2	Meets as stated	Meets as stated	
Air Leakage, Infiltration per ASTM E283 at 75 Pa (1.57 psf)	0.57 L/s/m ² (0.12 cfm/ft ²)	1.5 L/s/m ² (0.3 cfm/ft ²) max.	1, 2
Air Leakage, Exfiltration per ASTM E283 at 75 Pa (1.57 psf)	0.61 L/s/m ² (0.13 cfm/ft ²)	1.5 L/s/m ² (0.3 cfm/ft ²) max.	1, 2
Water Penetration, per ASTM E547 at 150 Pa (3.13 psf) without Pemco door sweep part # 1484575	Pass	No leakage	3
Water Penetration, per ASTM E547 at 3.76 Pa (180 psf) with Pemco door sweep part # 1484575	Pass	No leakage	3
Uniform Load Deflection, per ASTM E330 Deflections taken at the meeting stile. +1200 Pa (+25.06 psf) -1200 Pa (-25.06 psf)	0.04mm (0.91") 0.04mm (0.98")	Report only	4,5,6,7
Uniform Load Structural, per ASTM E330 Permanent set taken at meeting stile. +1200 Pa (-25.06 psf) -1200 Pa (-25.06 psf)	8.89 mm (0.35") 11.684 mm (0.16")	11.99 mm (0.472") max. 11.99 mm (0.472") max.	4,5,6,7
Forced Entry Resistance, per AAMA-1304,	Pass	No entry	
Hinge Test Per AAMA 920 25,000 Cycles	Pass	No damage	

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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: Test Date 04/02/24 / Time: 8:00 AM (Air Note Only)

Note 3: Without insect screen.

Note 4: The client opted to start at a pressure higher than the minimum required. Test results are reported under Optional Performance.

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: Loads were held for 10 seconds.

Note 7: 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.

SECTION 9

ALTERATIONS

OR

Alteration #1: Date - 4/2/24
Cause for alteration – Failed ASTM E547 test at 3.13 psf.
Remedial action taken – Client added foam gasket to the Sill on both panels. See Reference Photo's # 1 & 2.

Alteration #2: Date – 4/2/24
Cause for alteration – Failed ASTM E547 test at 6.06 psf.
Remedial action taken – Client added door sweeps at the sill of both panels.
Pemco Part # 1484575. See Reference Photo # 3

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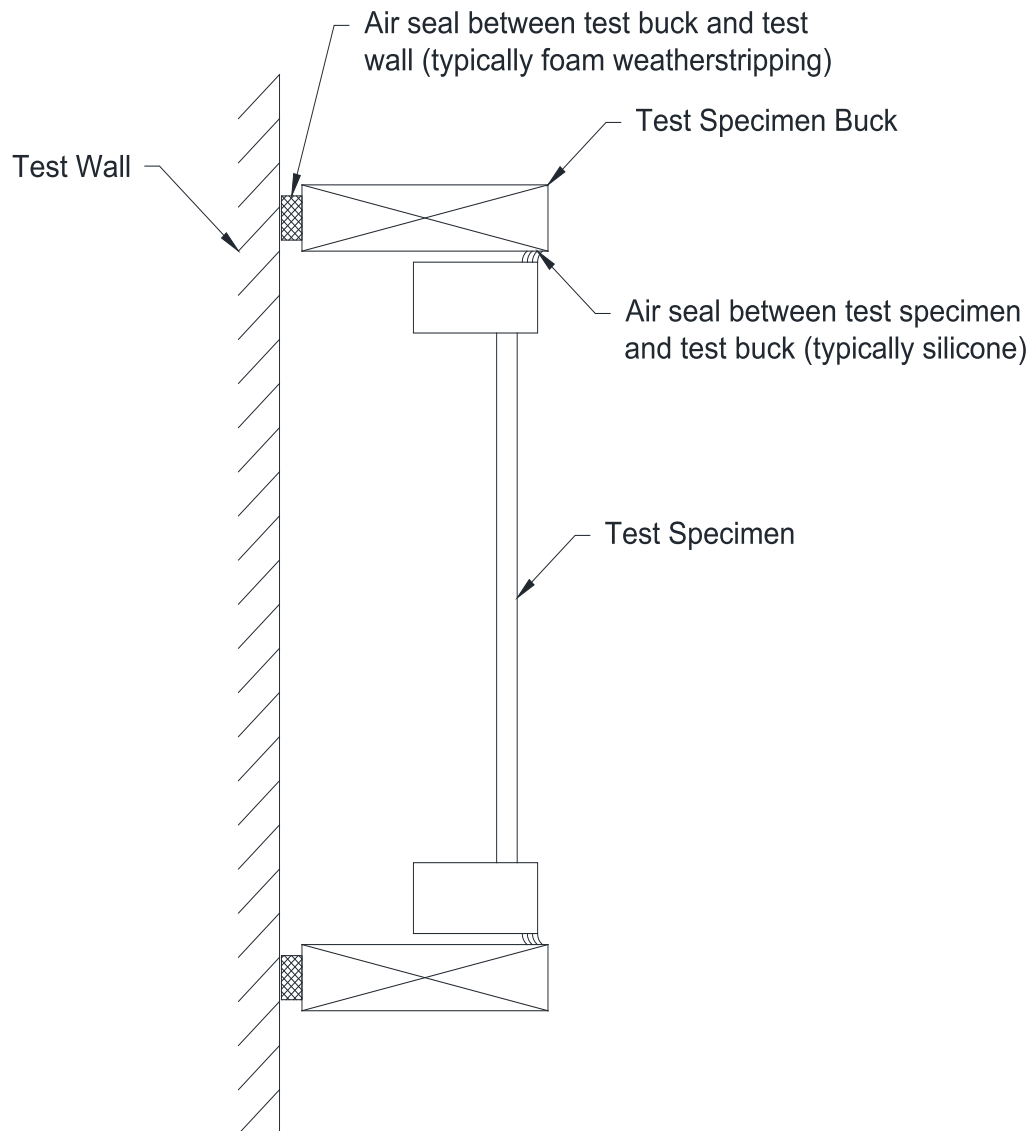
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SECTION 10

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 11 CONCLUSION

specimens tested successfully met the performance requirements for the following rating:

TEST SPECIMEN(S)	TITLE	SUMMARY OF RESULTS
1	AAMA/WDMA/CSA 101/I.S.2/A440-17	Class- R PG15 Size Tested 2085mm X 3050mm (82.09" X 120.08")

SECTION 12 PHOTOGRAPHS



Photo No. 1
Added Sill Gasket Exterior Panel

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Photo No. 2
Added Sill Gasket interior Panel



Photo No. 3
Door Sweep Photo



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Lake Forest, California 92630

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SECTION 13

DRAWINGS

The test specimen drawings have been reviewed by Intertek B&C and are representative of the test specimen 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.

Note: Complete drawings packet on file with Intertek B&C.

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TEST SPECIFIC DESCRIPTIONS

1. SERIES / MODEL Name 3200-T
2. PRODUCT TYPE Hinged Doors - Single Hinged Doors - Double

GENERAL NOTES

1. DOUBLE SWINGING A SECOND BUSINESS AS USUALLY DESIGNED IS INSTALLED TO REMAIN CLOSED TO THE STRUCTURE AND TO BE OPERATED BY HAND OR REMOTE CONTROL.
2. ALL MEASUREMENTS SHALL BE TO THE FACE UNLESS OTHERWISE SPECIFIED.
3. OPERATIONAL REQUIREMENTS SHALL BE TO THE FACE UNLESS OTHERWISE SPECIFIED.
4. OPERATIONAL REQUIREMENTS SHALL BE TO THE FACE UNLESS OTHERWISE SPECIFIED.

INSTALLATION

1. REFER TO THE SUPPLIER'S INSTALLATION MANUAL FOR THE CORRECT INSTALLATION OF THIS PRODUCT.
2. REFER TO THE SUPPLIER'S INSTALLATION MANUAL FOR THE CORRECT INSTALLATION OF THIS PRODUCT.

CORNER CONSTRUCTION

1. CORNER JOINTS SHALL BE REINFORCED TO THE HEAD AND
2. CORNER JOINTS SHALL BE REINFORCED TO THE HEAD AND

ANCHOR SCHEDULE

1. ANCHORS TO BE SUPPLIED BY THE FRAME MANUFACTURER.
2. ANCHORS TO BE SUPPLIED BY THE FRAME MANUFACTURER.

GLAZING (SEE PAGE 3)

ITEM	DESCRIPTION	QUANTITY	UNIT
1	GLASS	2	EA
2	GLASS	2	EA
3	GLASS	2	EA
4	GLASS	2	EA

1 HH-OUTSWING
Series 3200-T
QTY: 1
CLASS: 1; 6mm, A.S., 6mm-T

NOTES:

1. OUTSWING
2. NAIL-ON FRAME
3. 2-POINT LOCK
4. INACTIVE LEVER SHOOTBOLTS

PROPOSAL

AIR	
CFM / FT ²	
INFIL	EXFIL
HIGH	HIGH

WATER		
DP	RATING	PASS/FAIL
40		

STRUCTURAL	
DESIGN PRESSURE (PSF)	
POSITIVE	NEGATIVE
40	40

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Verified by: *Erin J. [Signature]*

1 FLEETWOOD WAY
CORONA, CA 92626
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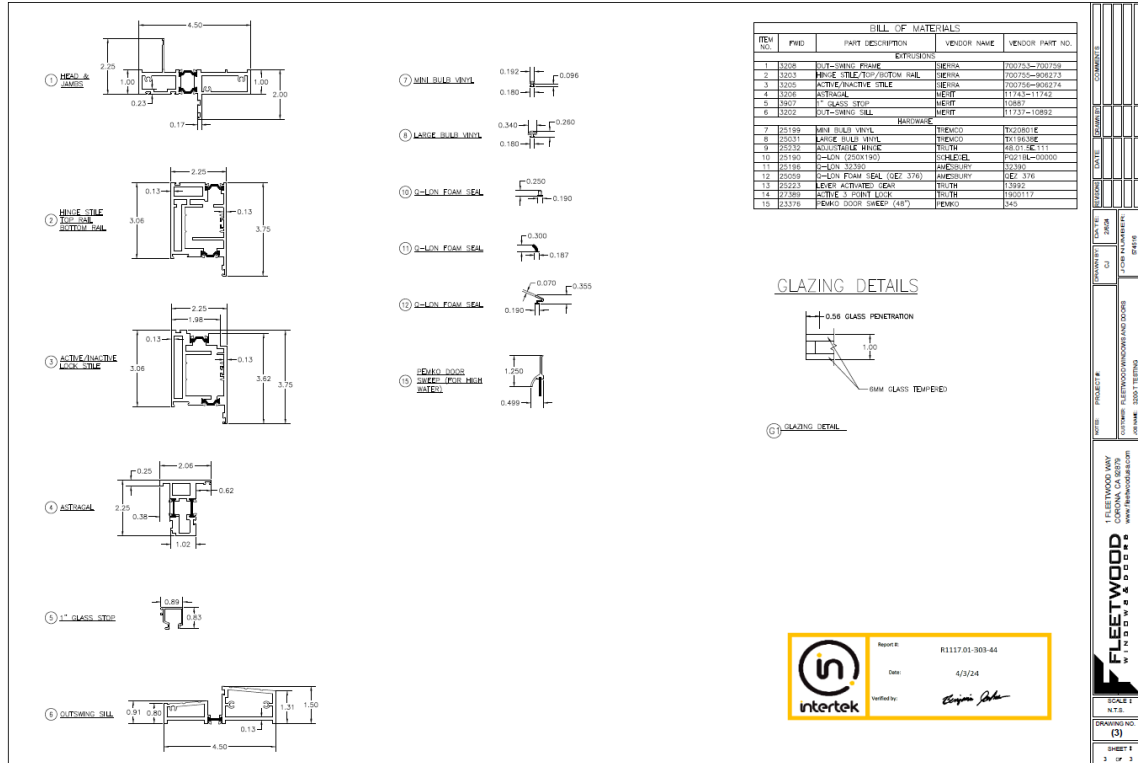
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SCALE: N/A
DRAWING NO.: (1)
SHEET 1 OF 3

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SECTION 14

REVISION LOG

REVISION #	DATE	PAGES	REVISION
0	04/05/24	N/A	Original Report Issue
1	04/11/24	5	Fix product description