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CR LAURENCE CO., INC.
TEST REPORT

SCOPE OF WORK
AIR / WATER / STRUCTURAL TESTING ON 250 T / 250 AT,
SIDE HINGED DOOR (DUAL – OUTSWING)

REPORT NUMBER
I8030.02-303-47 R0

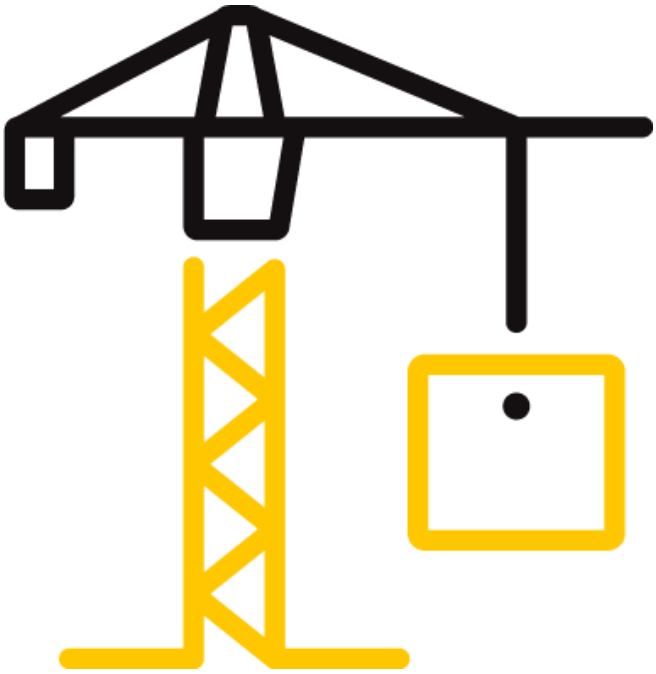
TEST DATE
08/22/18

ISSUE DATE
08/23/18

RECORD RETENTION END DATE
08/22/22

PAGES
13

DOCUMENT CONTROL NUMBER
ATI 00479 (07/24/17)
RT-R-AMER-Test-2805



25800 Commercentre Drive
Lake Forest, California 92630

Telephone: 949-460-9600
Facsimile: 717-764-4129
www.intertek.com/building

TEST REPORT FOR CR LAURENCE CO., INC.
Report No.: I8030.02-303-47 R0
Date: 08/23/18

REPORT ISSUED TO

CR LAURENCE CO., INC.
2503 East Vernon Avenue
Lost Angeles, California 90058

SECTION 1

SCOPE

Intertek Building & Construction (B&C) was contracted by CR Laurence Co., Inc., 2503 East Vernon Avenue, Los Angeles, California to perform testing in accordance with ASTM E283, *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, *Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference,* ASTM E331, *Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference*, on their 250 T / 250 AT, Side Hinged Door (Dual – Outswing). Results obtained are tested values and were secured by using the designated test methods. Testing was conducted at CR Laurence Co., Inc. test facility in Los Angeles, California.

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
Design Pressure	±720 Pa (±15.04 psf)
Air Infiltration	3.5 L/s/m^2 (0.70 cfm/ft^2)
Water Penetration Resistance Test Pressure	0 Pa (0.00 psf)
Uniform Load Structural Test Pressure	±1080 Pa (±22.56 psf)

For INTERTEK B&C:

COMPLETED BY:	Charles Presley
TITLE:	Technician II
SIGNATURE:	Digitally Signed by: Charles Presley II
DATE:	08/24/18

jsh:ab

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Facsimile: 717-764-4129
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SECTION 3
TEST METHOD(S)

The specimens were evaluated in accordance with the following:

AAMA 205-15, *In-Plant Testing Guidelines for Manufacturers and Independent Laboratories*

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 E331-00(2016), *Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference*

SECTION 4
MATERIAL SOURCE/INSTALLATION

Test specimen was provided by the client. Representative samples of the test specimen were retained by the customer.

The specimen was installed into a Spruce-Pine-Fir wood buck. The rough opening allowed for a 3/8" shim space at head and jambs and flush install at threshold. The interior and exterior perimeter of the door was sealed with silicone sealant. Installation of the tested product was performed by the client.

LOCATION	ANCHOR DESCRIPTION	ANCHOR LOCATION
Through threshold	#10 x 2” flat head wood screw	3” from each end and 12” on center spacing.
Through head and jambs	#10 x 3-1/4” flat head wood screws	3” from each end and 12” on center spacing.

SECTION 5
EQUIPMENT

Calibration of test equipment was performed by Intertek B&C in accordance with AAMA 205-01 "In-Plant Testing Guidelines for Manufacturers and Independent Laboratories"

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SECTION 6
LIST OF OFFICIAL OBSERVERS

NAME	COMPANY
Garrett Osterode	CR Laurence Co., Inc.
Charles Presley	Intertek B&C

SECTION 7
TEST SPECIMEN DESCRIPTION

Product Type: Side Hinged Door (Dual – Outswing)
Series/Model: 250 T / 250 AT

Product Size(s):

OVERALL AREA:	WIDTH		HEIGHT	
6.3 m² (68.1 ft²)	millimeters	inches	millimeters	inches
Overall Size	2540	100	2489	98
Leaf (x2)	1219	48	2418	95-3/16

Frame Construction:

FRAME MEMBER	MATERIAL	DESCRIPTION
Head and jambs	Aluminum	Thermally broken frame extrusion, Part No. IT442, see attached drawings Section 10.
Sill	Aluminum	Thermally broken threshold extrusion, Part No. TT245, see attached drawings Section 10.
Head and jambs	Aluminum	Pocket filler extrusion, Part No. PV100, press fit into back side of frame extrusion, see attached drawings Section 10.
Head and jambs	Aluminum	Thermally broken door stop extrusion, Part No. DS051, press fit into interior side of frame extrusion, see attached drawings Section 10.
	JOINERY TYPE	**DETAIL**
All Corners	Flush	Secured at head corners with shear clip (Part No. IP442) fastened with ST240 Frame Assembly screws.

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Leaf Construction (250 T):

LEAF MEMBER	MATERIAL	DESCRIPTION
Top rail	Aluminum	Thermally broken leaf extrusion, Part No. HT201, see attached drawings Section 10.
Bottom rail	Aluminum	Thermally broken leaf extrusion, Part No. HT101, see attached drawings Section 10.
Hinge stile	Aluminum	Thermally broken leaf extrusion, Part No. HT550, see attached drawings Section 10.
Lock stile, primary leaf	Aluminum	Thermally broken leaf extrusion, Part No. HT350, see attached drawings Section 10.
Lock stile, secondary leaf	Aluminum	Thermally broken leaf extrusion, Part No. HT400, see attached drawings Section 10.
Lock stile, primary leaf	Aluminum	Astragal extrusion, Part No. DN350, secured to leaf extrusion with #8 x 3/4" FH SMS fasteners.
	JOINERY TYPE	**DETAIL**
All Corners	Flush	Secured through stiles with #8 x 1” FH SMS, four per corner.

Leaf Construction (250 AT):

LEAF MEMBER	MATERIAL	DESCRIPTION
Top rail	Aluminum	Thermally broken leaf extrusion, foam filled extrusion, Part No. HT201, see attached drawings Section 10.
Bottom rail	Aluminum	Thermally broken leaf extrusion, foam filled extrusion, Part No. HT101, see attached drawings Section 10.
Hinge stile	Aluminum	Thermally broken leaf extrusion, foam filled extrusion, Part No. HT550, see attached drawings Section 10.
Lock stile, primary leaf	Aluminum	Thermally broken leaf extrusion, Part No. HT350, see attached drawings Section 10.
Lock stile, secondary leaf	Aluminum	Thermally broken leaf extrusion, Part No. HT400, see attached drawings Section 10.
Lock stile, primary leaf	Aluminum	Astragal extrusion, Part No. DN350, secured to leaf extrusion with #8 x 3/4" FH SMS fasteners.
	JOINERY TYPE	**DETAIL**
All Corners	Flush	Secured through stiles with #8 x 1” FH SMS, four per corner.

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Reinforcement: *No reinforcement was utilized.*

Weatherstripping:

DESCRIPTION	QUANTITY	LOCATION
Bulb seal, Part No. WH349	1 row	Channel inserted into glass stop at head and jambs.
Door sweep assembly, Part No. BW200	2	Attached to interior face of bottom rail full span of member on each leaf.
Pile weatherstrip	2 rows	Channel inserted into adjustable astragal.

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	Aluminum Spacer – Dual Seal (A1-D)	1/4" Clear Tempered	1/4" Clear Tempered	Exterior dry glazed with setting blocks at base (Part No. SB245). Sealed at interior with EPDM gasket (Part No. NP252), at exterior with EPDM wedge gasket (Part No. NP225), and glass stop (Part No. HE751) at top and bottom rail.

LOCATION	QUANTITY	DAYLIGHT OPENING		GLASS BITE
		millimeters	inches	
Leaf	2	1062 x 2235	41-13/16 x 88	1/2"

Drainage: *No drainage was utilized.*

Hardware:

DESCRIPTION	QUANTITY	LOCATION
Hook bolt lock and cylinder, Part Nos. DH129 and DH004	1	Through lock stile 34” from sill on primary leaf.
Stainless steel butt hinge, Part No. BB55NR	6 (3 per leaf)	Located 11-1/2” from bottom and 38-1/2” on center.
Flush bolt assembly, Part No. DL2210A316	1	Secured to secondary panel at head and sill.

Screen Construction: *No screen was utilized.*

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SECTION 8
TEST RESULTS

The temperature during testing was 22°C (72°F). The results are tabulated as follows:

TITLE OF TEST	RESULTS	NOTE
Air Leakage, Infiltration per ASTM E283 at 75 Pa (1.57 psf)	 3.5 L/s/m^2 (0.70 cfm/ft^2)	
Water Penetration, per ASTM E331 at 0 Pa (0.00 psf)	 Pass	 1
Uniform Load Deflection, per ASTM E330 Deflections taken at lock stile +720 Pa (+15.04 psf) -720 Pa (-15.04 psf)	 0.0 mm (0.00") 2.5 mm (0.10")	 2, 3
Uniform Load Structural, per ASTM E330 Permanent set taken at lock stile +1080 Pa (+22.56psf) -1080 Pa (-22.56 psf)	 16.3 mm (0.64") 17.5 mm (0.69")	 2, 3

***General Note**: All testing was performed in accordance with the referenced standard(s).*

Note 1: Water penetration testing performed in accordance with Limited Water designation.

Note 2: Loads were held for 10 seconds.

Note 3: 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.

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Lake Forest, California 92630

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Facsimile: 717-764-4129
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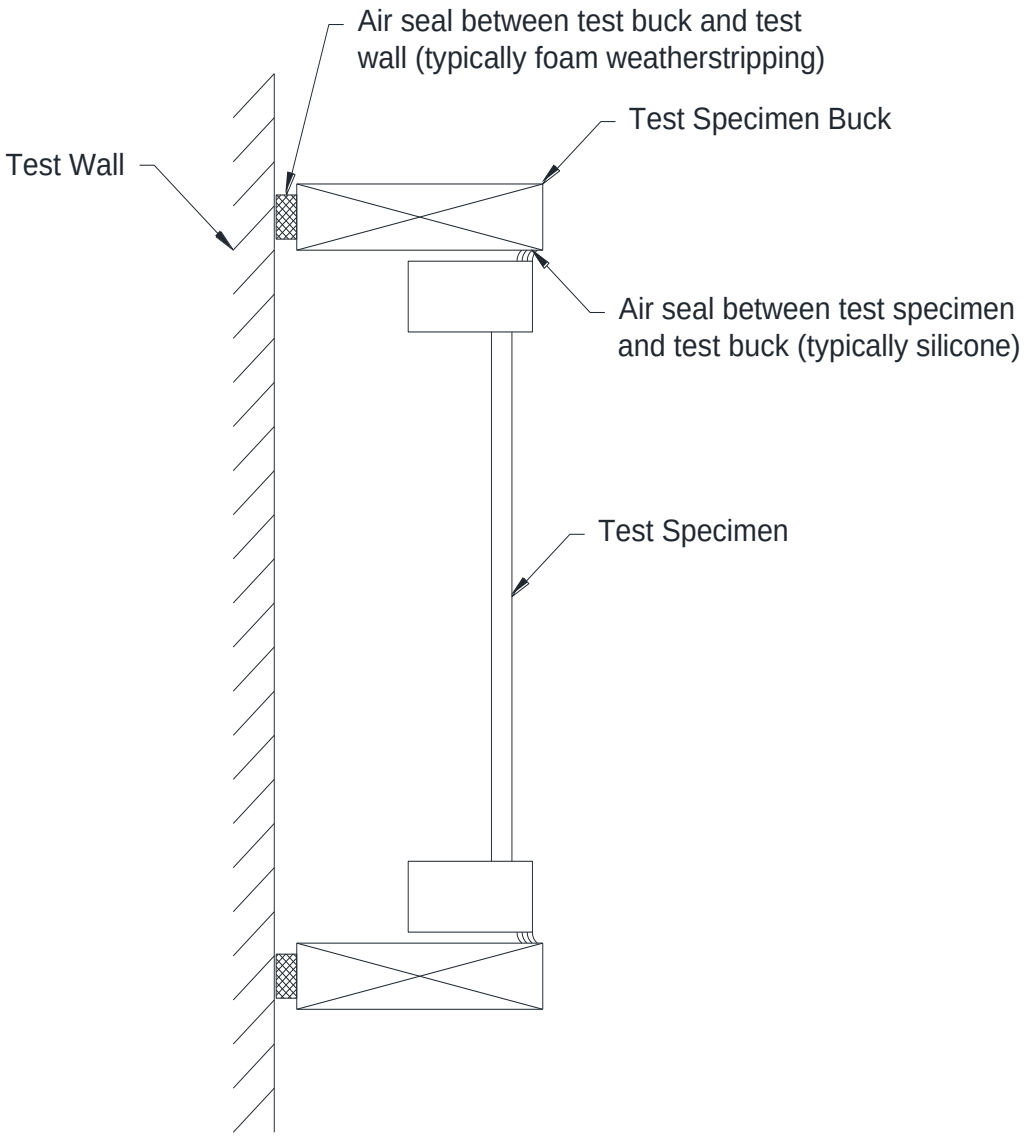
SECTION 9
LOCATION OF AIR SEAL

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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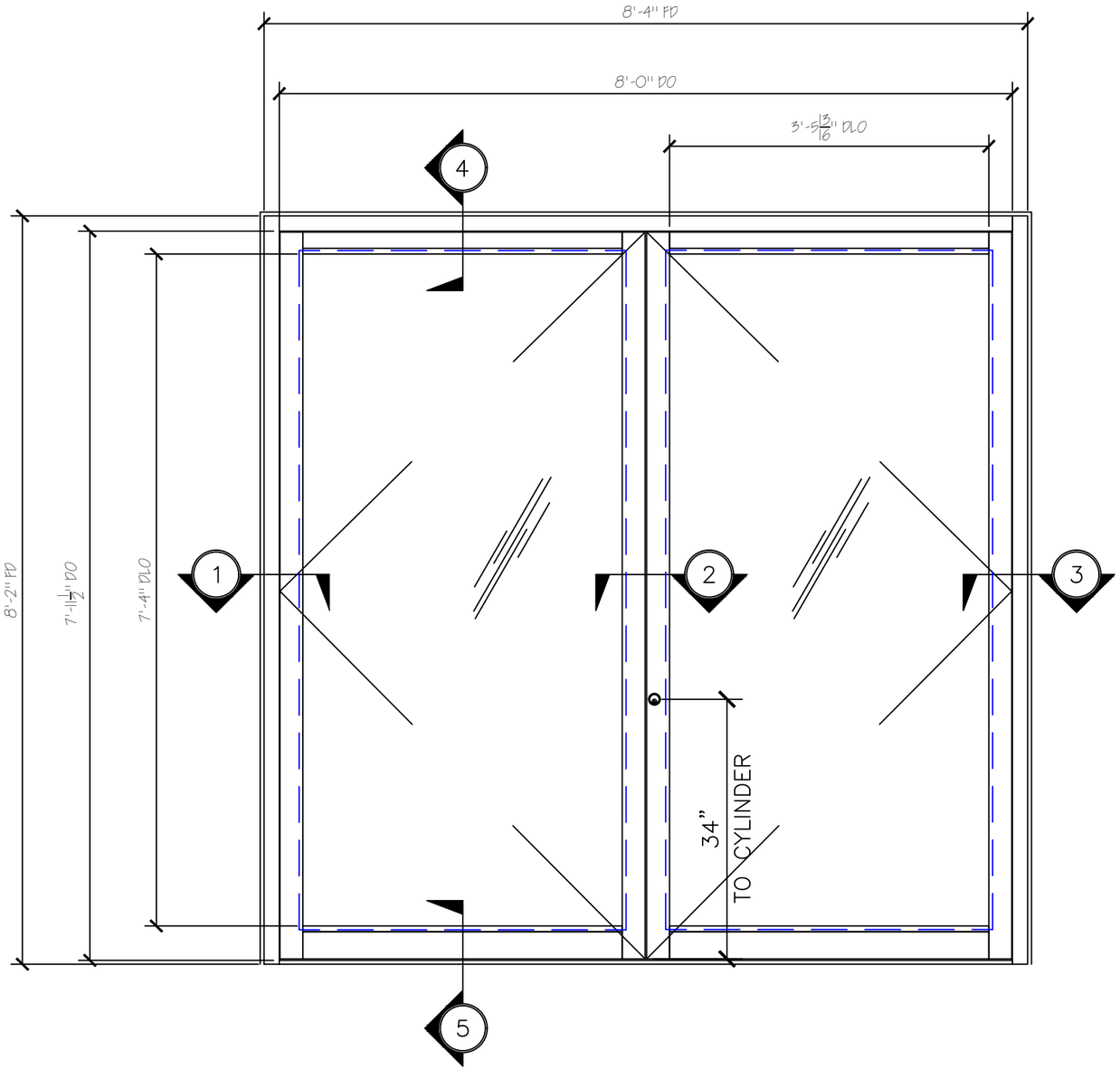
SECTION 10
DRAWINGS

The test specimen drawings have been reviewed by Intertek B&C and are representative of the test specimen(s) reported herein.



ITEM		PT. NO.	PART DESCRIPTION	
C1	FRAME & SASH COMPONENTS	IT442	FRAME/HEAD EXTRUSION	
C2		PV100	POCKET FILLER	
C3		DS051	DOOR STOP	
C4		IP442	SHEAR CLIP (W/ ST254 SCREWS)	
C5		HT201	DOOR FRAME–TOP RAIL	
C6		HT101	DOOR FRAME–BOTTOM RAIL	
C7		HT550	DOOR FRAME–HINGE STILE	
C8		HT400	DOOR FRAME–INACTIVE STILE, COMB.	
C9		HE751	GLAZING STOP	
C10		TT245	THRESHOLD	
C11		HT350	DOOR FRAME–LOCK STILE	
C12		DN350	ADJUSTABLE ASTRAGAL	
G1	GLAZING		1" INSUL GLASS–1/4" TEMP. – 1/2" AIR SPACE – 1/4" TEMP.	
G2		NP225	EDPM–TOP LOAD GASKET	
G3		NP252	EDPM–SETTING GASKET	
G4		SB245	SETTING BLOCK	
H1	HARDWARE	ST240	FRAME ASSEMBLY SCREWS	
H2		--------	#10 X 3–1/4" FH WOOD SCREWS	
H3		BB55NR	STAINLESS STEEL BUTT HINGES	
H5		DH129	HOOK BOLT LOCK	
H6		DH004	CYLINDER	
H7		DL2210A316	FLUSH BOLTS	
H8		--------	#10 X 2" FH WOOD SCREWS	
W1	WEATHER STRIPPING	WH349	BULB SEAL	
W2		BW200	DOOR SWEEP	
W3		DC795	DOW CORNING 795–BUILDING SEALANT	
W4		EF38C	CLOSED CELL BACKER ROD	

NARROW STILE SERIES 250–T & 250–AT ELEVATION

(DOUBLE DOOR @ UP / OVER FRAME) 3/4" =1'–0"

REVISIONS

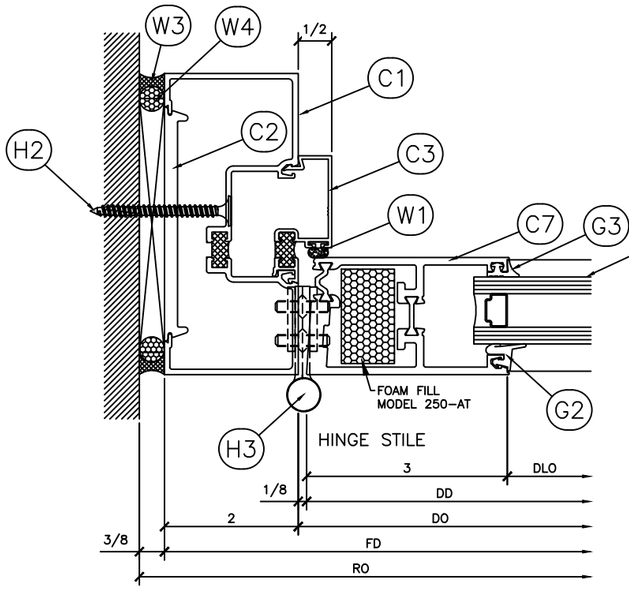
ISO9000 COMPANY
C.R.LAURENCE CO.
ARCHITECTURAL PRODUCTS
2100 E. 38TH Street, Los Angeles, CA 90058
www.crlaurence.com

Job Name:

SERIES 250-T & 250-AT
NARROW STILE - 96" X 96"
ADVANCED THERMAL DOOR

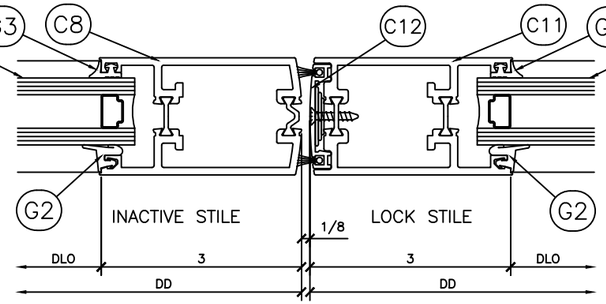
Glazing Contractor:

DATE: 4.4.2018
DRAWN BY: GDO
CHECKED BY:
SCALE: AS SHOWN
JOB #: PTC754264



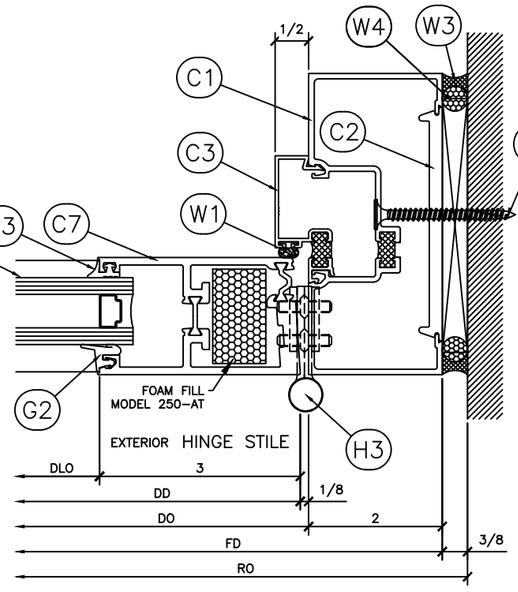
1 SECTION DETAIL @ DOOR JAMB

SCALE: FULL SIZE



2 SECTION DETAIL @ MEETING STILE

SCALE: FULL SIZE



3 SECTION DETAIL @ DOOR JAMB

SCALE: FULL SIZE

REVISIONS

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ARCHITECTURAL PRODUCTS
2100 E. 38TH Street, Los Angeles, CA 90058
www.crlaurence.com

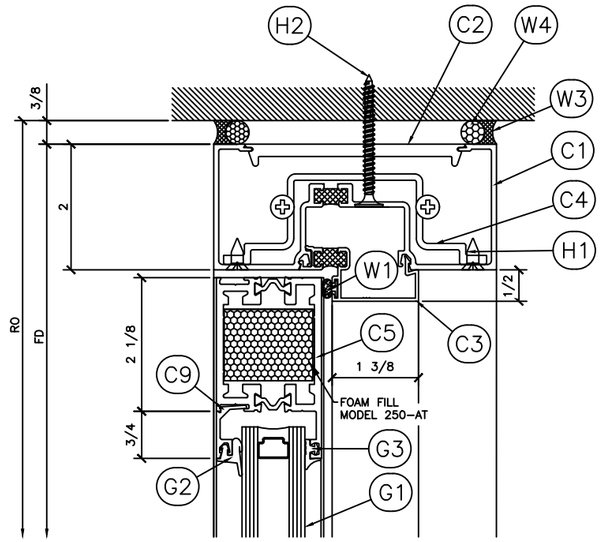
Job Name:

SERIES 250-T & 250-AT
NARROW STILE - 96" X 96"
ADVANCED THERMAL DOOR

Glazing Contractor:

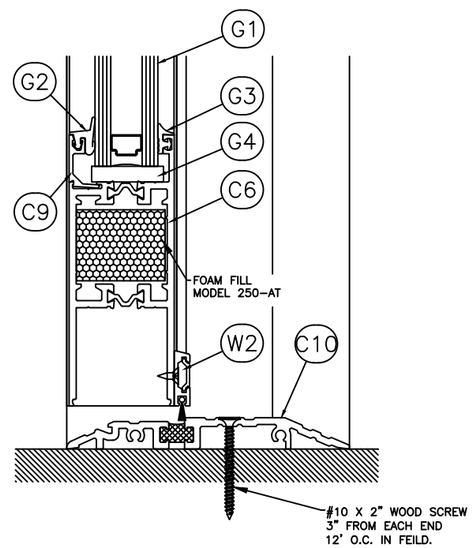
DATE:	4.4.2018
DRAWN BY:	GDO
CHECKED BY:	
SCALE:	AS SHOWN
JOB #:	PTC754264

SHT 2 OF 3



④ SECTION DETAIL @ 2 7/8" TOP RAIL

SCALE: FULL SIZE



⑤ SECTION DETAIL @ 4 5/16" DOOR SILL

SCALE: FULL SIZE

REVISIONS

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SHT 3 OF 3

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Lake Forest, California 92630

Telephone: 949-460-9600
Facsimile: 717-764-4129
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SECTION 11
REVISION LOG

REVISION #	DATE	PAGES	REVISION
0	08/23/18	N/A	Original Report Issue