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GLASSCRAFT DOOR COMPANY
TEST REPORT

SCOPE OF WORK

STRUCTURAL TESTING ON HARDWOOD GLAZED ¾ LITE DOUBLE / SINGLE DOORS WITH SIDELITE

REPORT NUMBER
H4307.02-801-44

TEST DATE(S)
09/20/17 - 09/22/17

ISSUE DATE
10/10/17

RECORD RETENTION END DATE
09/22/21

PAGES
10

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

TYLER WESTERLING LICENSE No. 72012 STATE OF FLORIDA PROFESSIONAL ENGINEER

Digitally Signed by: Tyler Westerling
2017.11.14 13:34:20 -08'00'

STATE OF TEXAS JOHN H. WASKOW 78232 REGISTERED PROFESSIONAL ENGINEER

Texas Firm F-11869

Digitally Signed by: John H. Waskow
2017.11.14 16:53:39 -06'00'

REPORT ISSUED TO

GLASSCRAFT DOOR COMPANY
2002 Brittmoore Rd.
Houston, Texas 77043-2209

SECTION 1

SCOPE

Intertek Building & Construction (B&C) was contracted by GlassCraft Door Company, 2002 Brittmoore Rd., Houston Texas 77043 to perform testing in accordance with ASTM E330/E330M-14, on their Hardwood Glazed Double Doors with side lite, Outswing and Inswing Type. Results obtained are tested values and were secured by using the designated test method(s).

This report does not constitute certification of this product nor an opinion or endorsement by this laboratory.

For INTERTEK B&C:

COMPLETED BY:	Clint Barnett	**REVIEWED BY:**	John Waskow
TITLE:	Technician	**TITLE:**	Operations Manager
SIGNATURE:	Digitally Signed by: Clint Barnett	**SIGNATURE:**	Digitally Signed by: John H. Waskow
DATE:	10/10/17	**DATE:**	10/10/17

CAB:jw

REVIEWED BY:	Tyler Westerling
TITLE:	Sr. Project Engineer
SIGNATURE:	Digitally Signed by: Tyler Westerling
DATE:	10/10/17

SECTION 2

SUMMARY OF TEST RESULTS

Test Specimen # 1 Inswing Double Door

TITLE	RESULTS
Design Pressure	±2880 Pa (±60.15 psf)
Uniform Load Structural Test Pressure	±4320 Pa (±90.23 psf)

Test Specimen # 2 Outswing Double Door

TITLE	RESULTS
Design Pressure	±2880 Pa (±60.15 psf)
Uniform Load Structural Test Pressure	±4320 Pa (±90.23 psf)

SECTION 3

TEST METHOD(S)

The specimens were evaluated in accordance (general accordance if deviated from method; all deviations must be described within test report) with the following:

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

SECTION 4
MATERIAL SOURCE/INSTALLATION

Test specimen(s) were 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 Spruce-Pine-Fir wood buck. The rough opening allowed for a 1/2" shim space. Installation of the tested product was performed by the client.

Double Door with Sidelite

LOCATION	ANCHOR DESCRIPTION	ANCHOR LOCATION
Head	#8 x 3" Wood Screws	4" from each end then 4-7/8" over from the first anchor then every 18-3/4" thereafter.
Sill	#8 x 3" Wood Screws	3-1/8" from each end then every 15-1/16" thereafter
Jambs	#8 x 3" Wood Screws #8 x 1-1/2" Wood Screws	The doors utilized three hinges spaced 8" from the top and bottom and at the midpoint of the jambs. The hinges utilized four screws. A #8 x 3" (2) wood screw was utilized on the top and bottom of the hinges and a #8 x 1-1/2" (2) wood screw was utilized in the center of the hinges. A 3" screw was anchored through the jambs in between the hinges.

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"

SECTION 6
LIST OF OFFICIAL OBSERVERS

NAME	COMPANY
Andy Cost	Intertek B&C
Clint Barnett	Intertek B&C

SECTION 7

TEST SPECIMEN DESCRIPTION

Product Type: Hardwood Glazed Double Doors Single with sidelite
Series/Model: Hardwood Glazed Double Doors Single with sidelite

Product Size(s):

Test Specimen #1 Inswing Double Door

OVERALL AREA:	**WIDTH**		**HEIGHT**	
8.23 m² (88.58 ft²)	**millimeters**	**inches**	**millimeters**	**inches**
Overall Size	3289	129-1/2	2502	98-3/4
Double Door Leaf (2)	914	36	2438	96
Single Door Leaf (1)	914	36	2438	96
Sidelite (1)	356	14	2438	96

Test Specimen #2 Outswing Double Door

OVERALL AREA:	**WIDTH**		**HEIGHT**	
8.23 m² (88.58 ft²)	**millimeters**	**inches**	**millimeters**	**inches**
Overall Size	3289	129-1/2	2502	98- 3/4
Double Door Leaf (2)	914	36	2438	96
Single Door Leaf (1)	914	36	2438	96
Sidelite (1)	356	14	2438	96

The following descriptions apply to all specimens.

Frame Construction:

FRAME MEMBER	**MATERIAL**	**DESCRIPTION**
Jambs	Hardwood	1-1/4" x 4-1/2" Custom Extruded Hardwood
Header	Hardwood	1-3/4" x 6-1/2" Custom Extruded Hardwood
Threshold	Aluminum	5/1/2" Custom Extruded Aluminum
Mullion	Hardwood	Custom Extruded Hardwood
	JOINERY TYPE	**DETAIL**
All Corners	Coped & Butted	Anchored together at each end with #9 x 3" Screws. All joints were sealed.

Panel Construction: *Panels and Sidelite.* Panels Were 1-3/4" thick

LEAF MEMBER	**MATERIAL**	**DESCRIPTION**
Top Rail	Hardwood	Wood

Bottom Rails	Hardwood	Wood
Lock Rail	Hardwood	Wood
Hinge Rail	Hardwood	Wood

	JOINERY TYPE	DETAIL
Top Rail to Lock rail and Hinge Rail	Coped and Butted	Glued together with two Dowels on each side
Bottom rails to Lock rail and Hinge Rail	Coped and Butted	Glued together with two Dowels on each side

Weatherstripping:

DESCRIPTION	QUANTITY	LOCATION
1/2" Four Finger Vinyl Gasket	1 Row	Bottom of each door leaf
5/8" Vinyl Gasket	1 Row	Frame Jambs and Head

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
3/4" IG	Butyl	1/8" Tempered	1/8" Tempered	Glazed into glazing pocket with Structural Silicone

LOCATION	QUANTITY	DAYLIGHT OPENING		GLASS BITE
		millimeters	inches	
Door Leafs	3	527 x 1664	20- 7/8 x 66 ¼	0.50"
Sidelite	1	229 x 1664	9 x 66 ¼	0.50"

Drainage: A Sloped Sill was utilized

Hardware:

DESCRIPTION	QUANTITY	LOCATION
Kwikset Lock Set with Dead bolt lock	3	Locking jamb of door panel
Surface Bolts 3/4" x 8" 1/4"thick	6	Top and bottom of each door leaf. Anchored to the door leaf with 1-1/2" screws. The depth of the slides were 3"
4" x 4" x 5/8" Radius Hinge	9	Anchored to the door leaf and into the jambs with a #9 x 1" screw in the two center holes and #8 x 3" screw in the two outer holes.

SECTION 8
TEST RESULTS

The temperature during testing was 21°C (70°F). The results are tabulated as follows:

Test Specimen #1: Inswing Door

TITLE OF TEST	RESULTS	ALLOWED	NOTE
Uniform Load Deflection, per ASTM E330 Deflections taken on mull rail +2880 Pa (+60.15 psf) -2880 Pa (-60.15 psf)	 14 mm (0.56") 17 mm (0.66")	 Report Only	 1, 2
Uniform Load Structural, per ASTM E330 Permanent set taken on mull rail +0000 Pa (+90.23 psf) -0000 Pa (-90.23 psf)	 < 1 mm (0.01") < 1 mm (0.01")	 10 mm (0.38") max. 10 mm (0.38") max.	 1, 2

Test Specimen #2: Outswing Door

TITLE OF TEST	RESULTS	ALLOWED	NOTE
Uniform Load Deflection, per ASTM E330 Deflections taken on mull rail +2880 Pa (+60.15 psf) -2880 Pa (-60.15 psf)	 18 mm (0.69") 18 mm (0.68")	 Report Only	 1, 2
Uniform Load Structural, per ASTM E330 Permanent set taken on mull rail +0000 Pa (+90.23 psf) -0000 Pa (-90.23 psf)	 < 1 mm (0.01") 1 mm (0.04")	 10 mm (0.38") max. 10 mm (0.38") max.	 1, 2

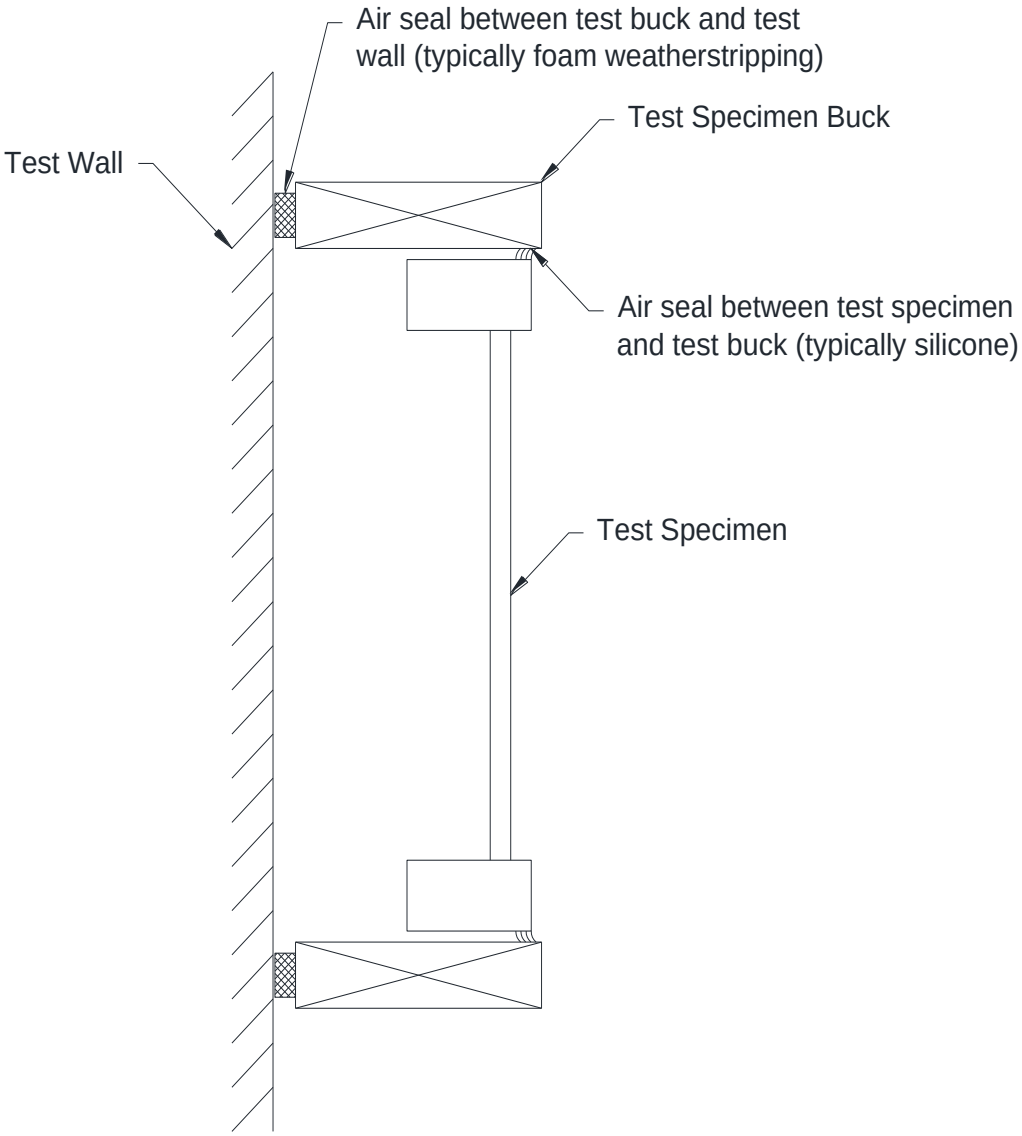
***General Note**: All testing was performed in accordance with the referenced standard(s).*

Note 1: Loads were held for 10 seconds.

Note 2: 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
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.



SECTION 10
DRAWINGS

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.

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

SECTION 11

REVISION LOG

REVISION #	DATE	PAGES	REVISION
0	10/10/17	N/A	Original Report Issue

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Test sample complies with details shown herein. Any deviations are noted in the test report drawings.

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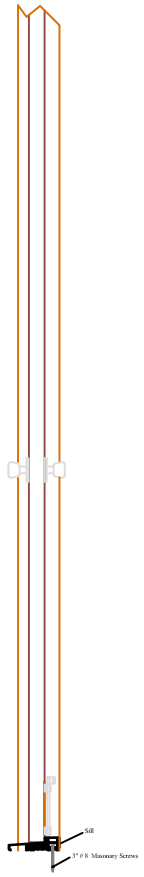
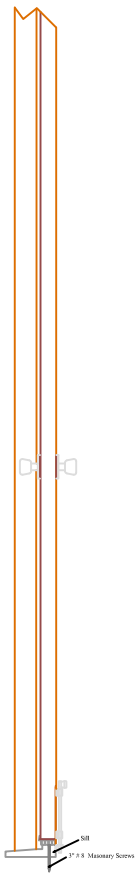
Date: 10/30/17 By: CB



Out Swing



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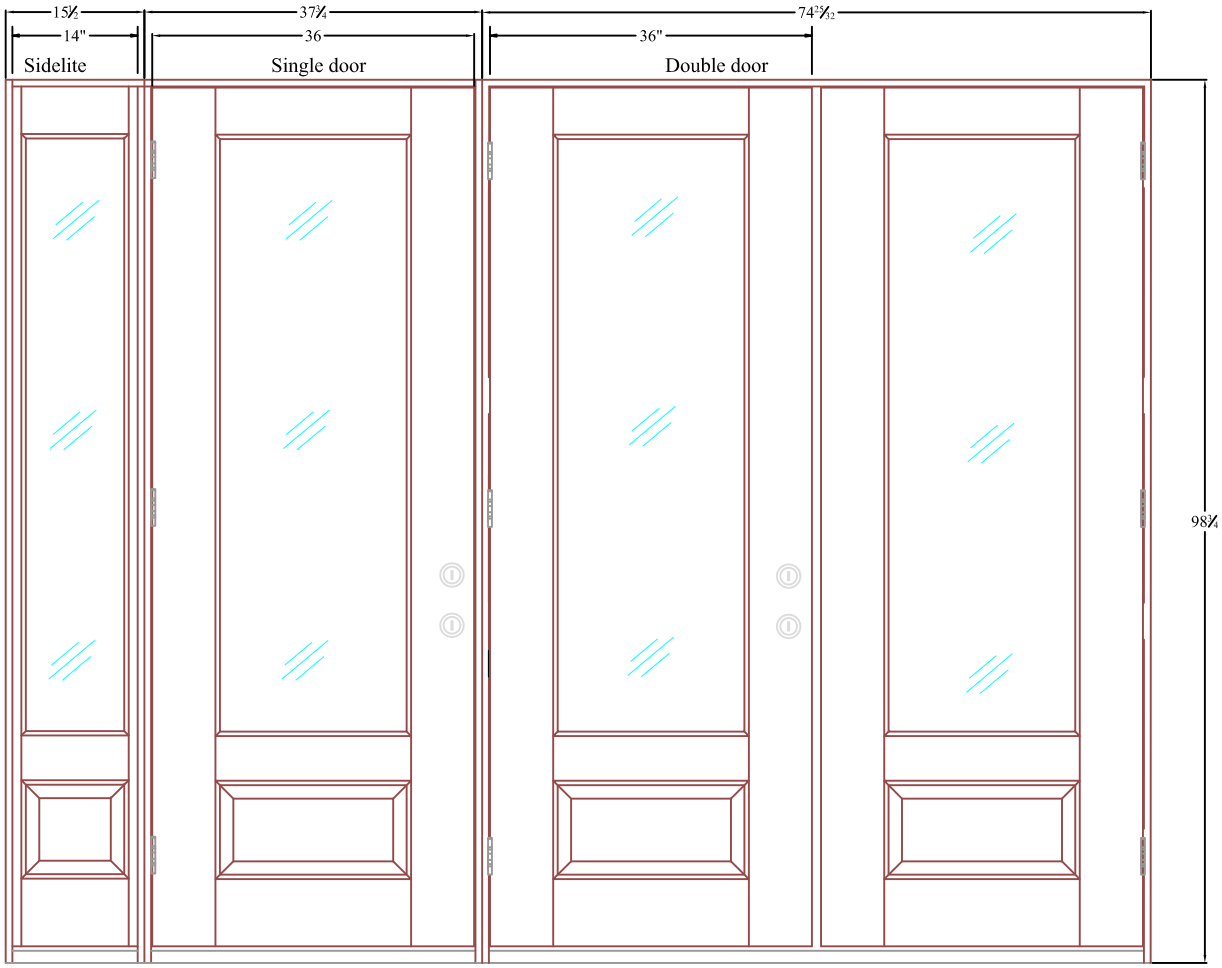

In Swing

ELEVATION

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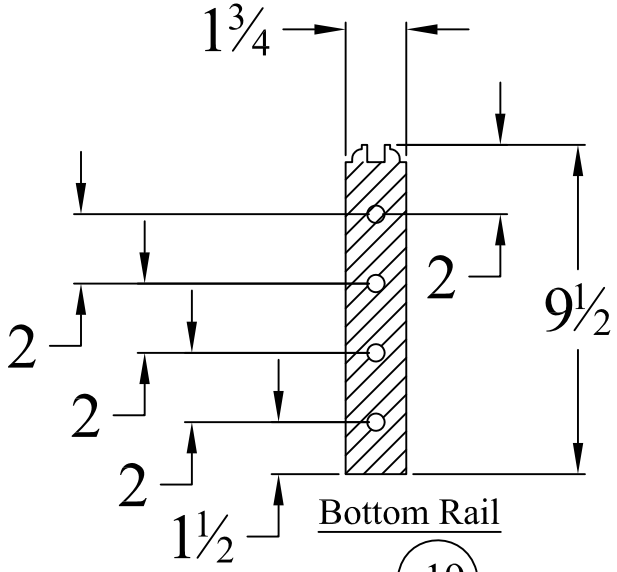
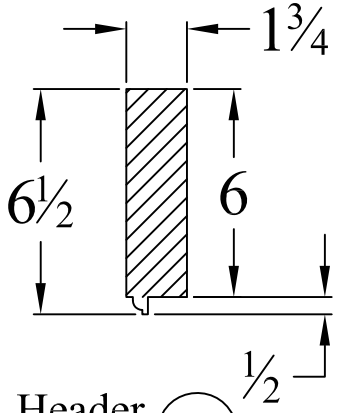
Hardwood Glazed Double 3/4 Lite Doors

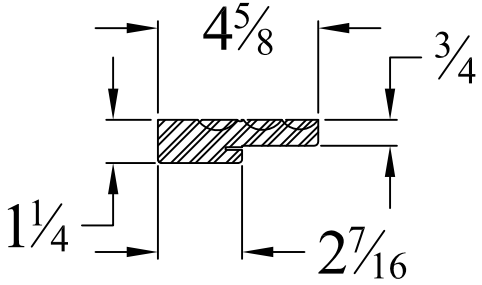


Bottom Rail

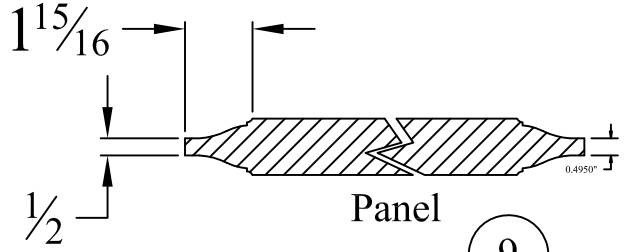
19



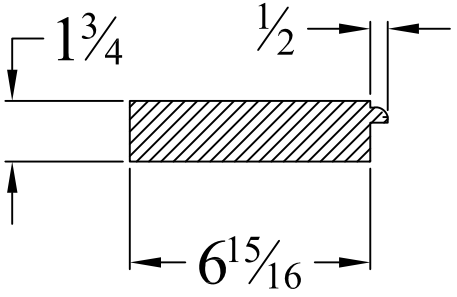
Header 6



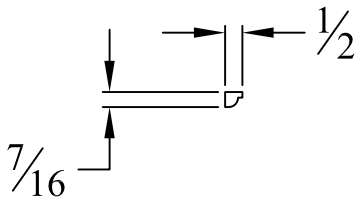
Door Jam 16



Panel 9



Stile 15



Quarter Rnd. Trim 13

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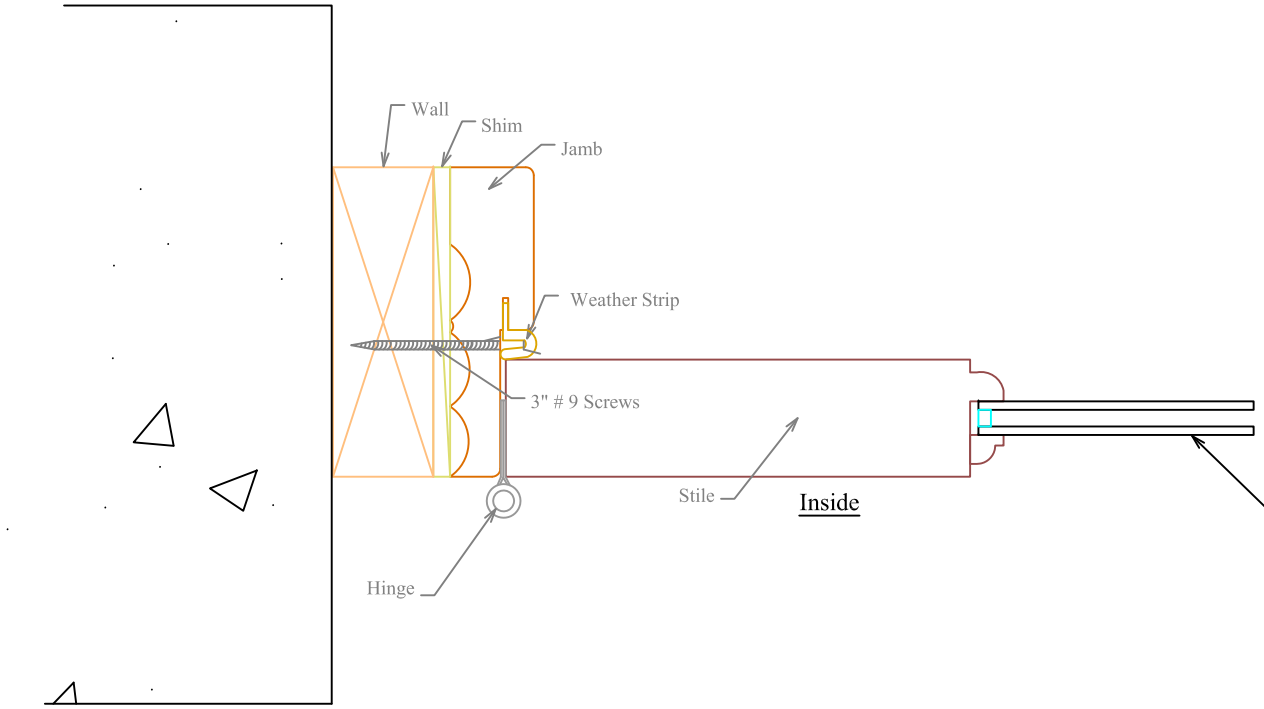

8

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Date: 10/30/17 By: CB

C Glass

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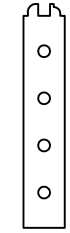
Hardwood Glazed Double TDL Doors

List of Material

Item #	Discription	Material
1	Masonry	CONC.
2	2x Buck	Wood
4	Lock Set	Metal
5	Surface Bolts	Metal
6	Top Header	Wood
7	4"x4" 5/8" Radius Hinge	Metal
8	Glass	Glass
9	Panel	Wood
10	Inswing Sill	Alum.
11	3" #9 Wood screw	Metal
12	#9x1" PFH Wood Screw	Metal
13	Quarter Round Trim	Wood
15	Stile	Wood
16	Door Jam	Wood
17	Door Bottom	Vinyl
18	10-32 Sex Bolt	Metal
19	Bottom Rail	Wood
20	Weather Strip	Foam
21	Outswing Sill	Alum.

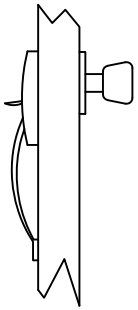
Outswing Sill (21)

Inswing Sill (10)

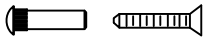


Bottom Rail (19)

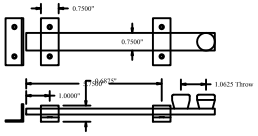
Header (6)



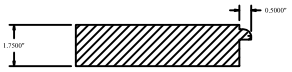
Lock Set (4)



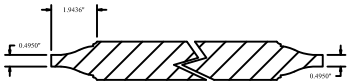
10-32 Sex Bolt (18)



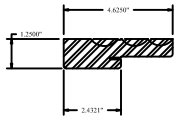
Surface Bolt (5)



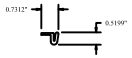
Stile (15)



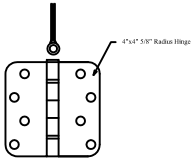
Panel (9)



Door Jam (16)



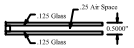
Weather Strip (20)



4"x4" 5/8" Radius Hinge (7)

Mull (14)

Quarter Rnd. Trim (13)



Glass (8)

Intertek Architectural Testing

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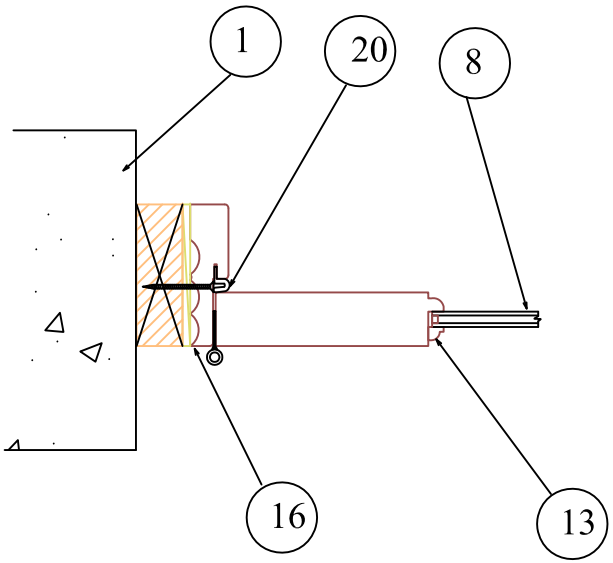

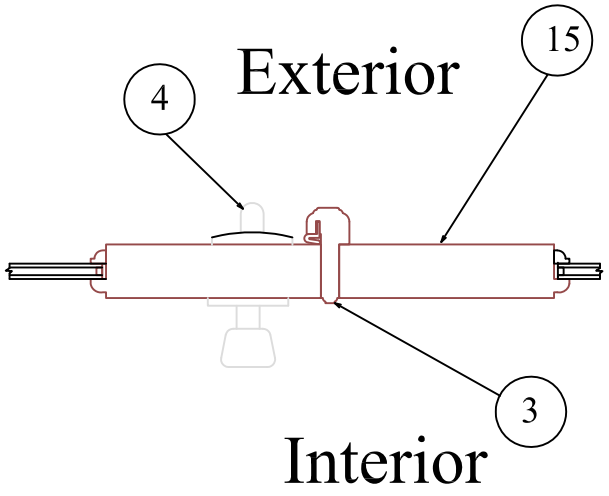

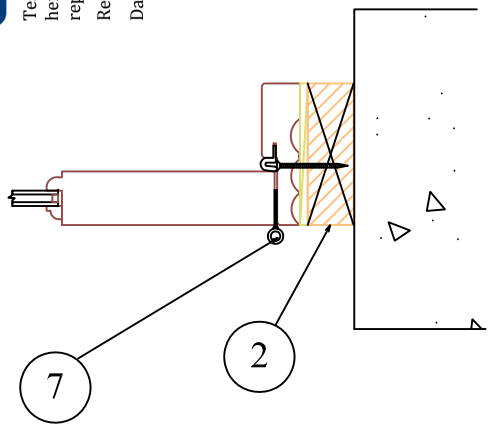

Architectural Testing

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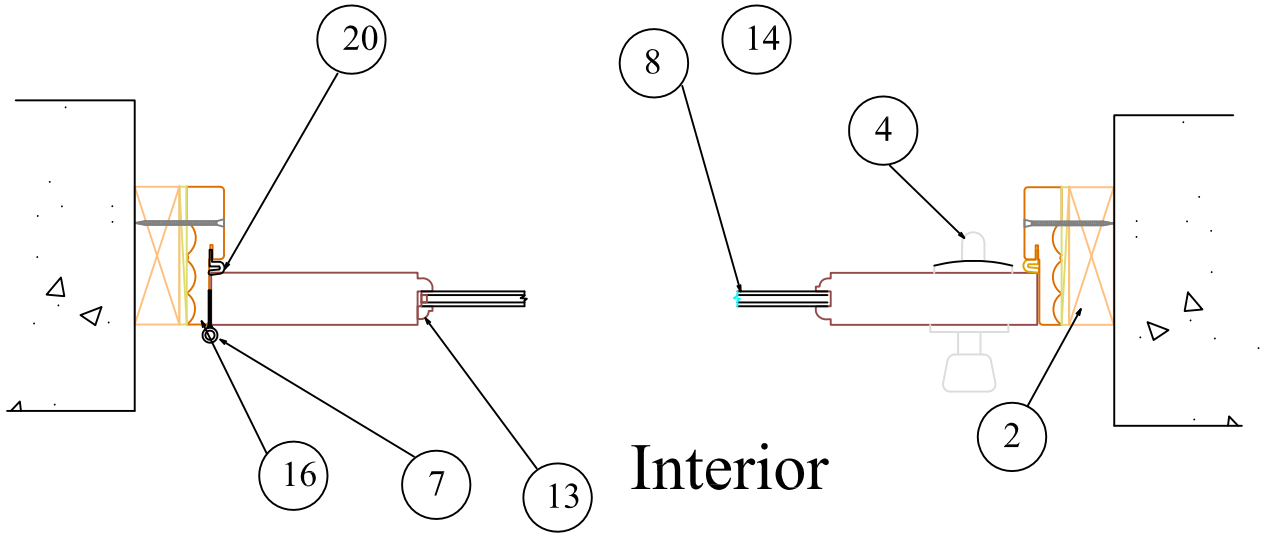
Horizontal Cross Section

Glass*Craft

Hardwood Glazed Double TDL Doors

Exterior



Interior

Horizontal Cross Section

Architectural Testing

Intertek

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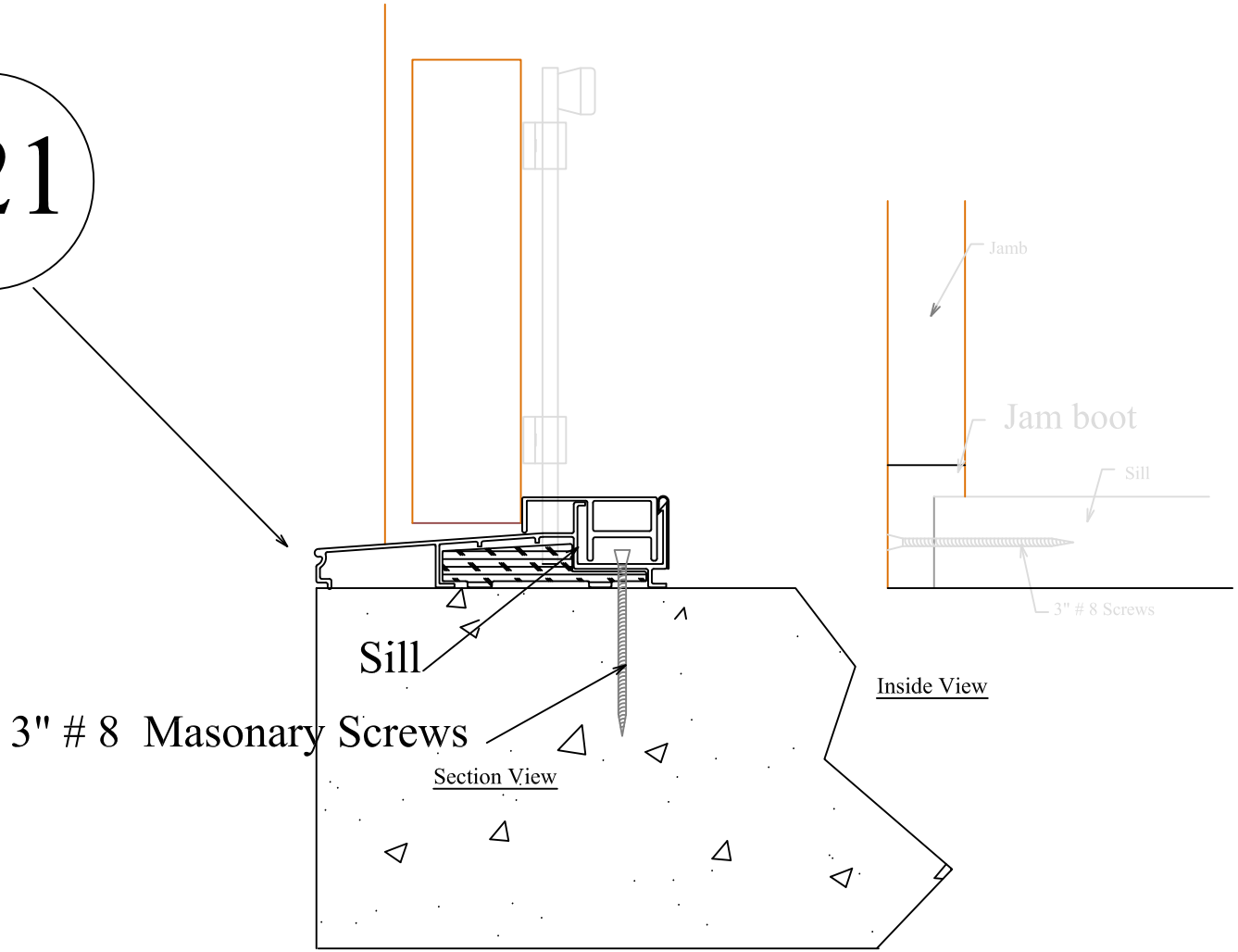
Glass*Craft

Hardwood Glazed Double TDL Doors

21



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A Threshold Outswing Sill

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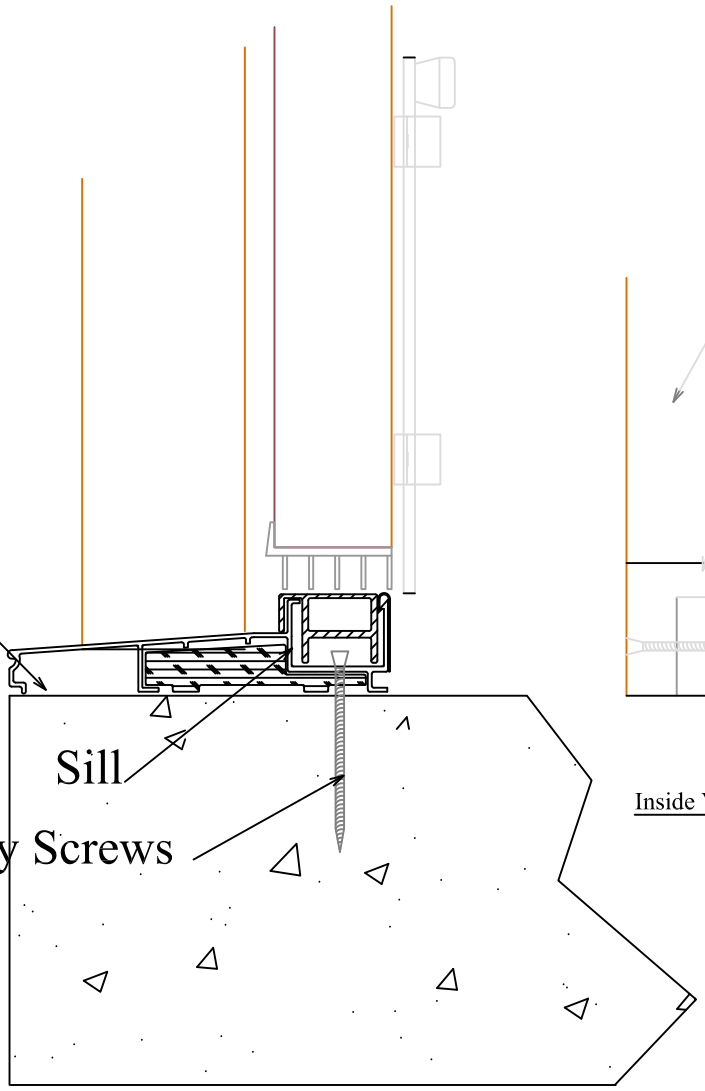
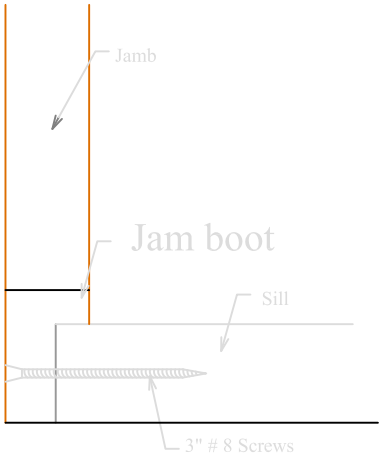
Hardwood Glazed Double TDL Doors

10





Inside View

A Threshold Inswing Sill

Architectural Testing

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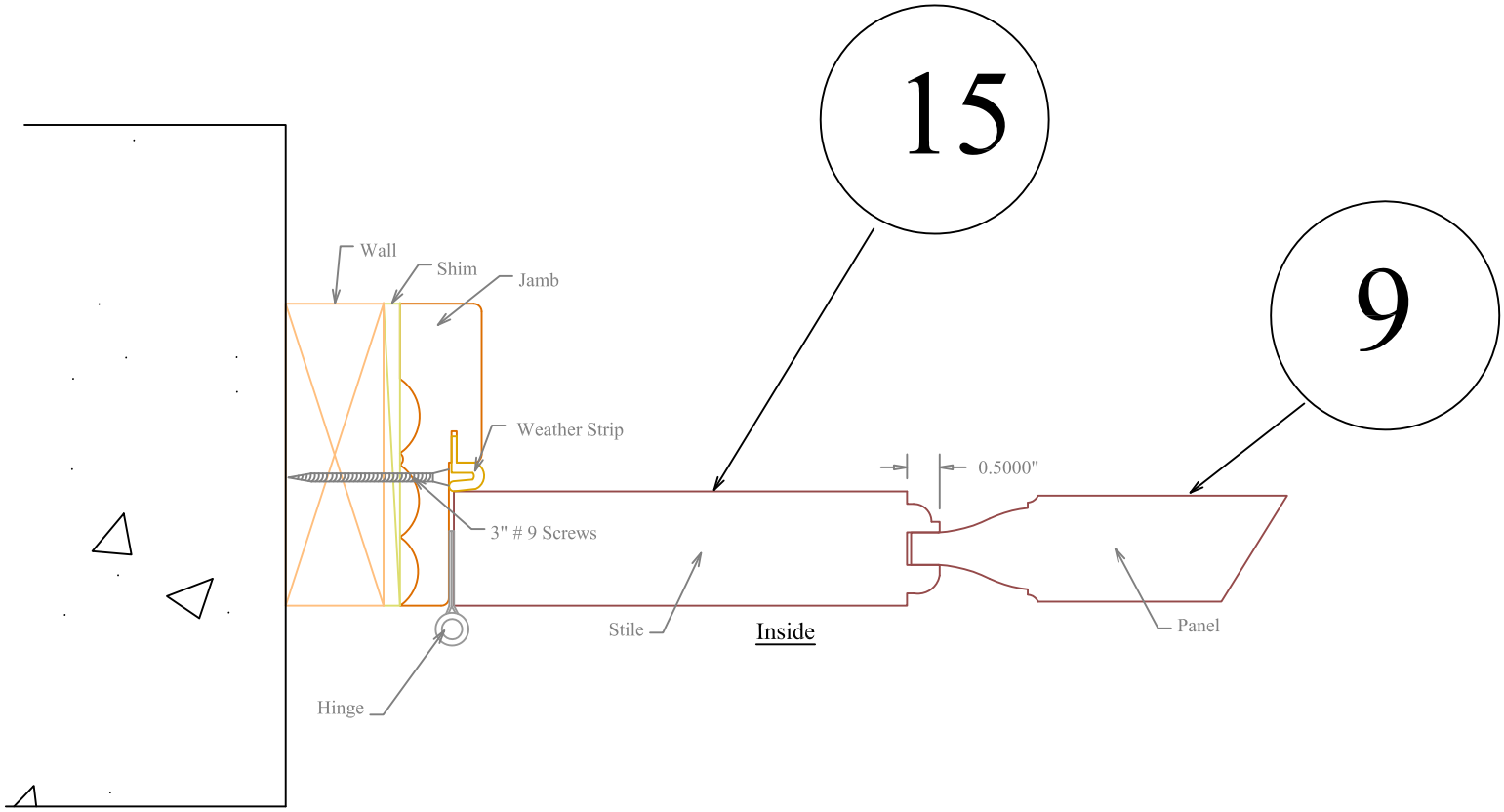
Hardwood Glazed Double TDL Doors



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B Panel

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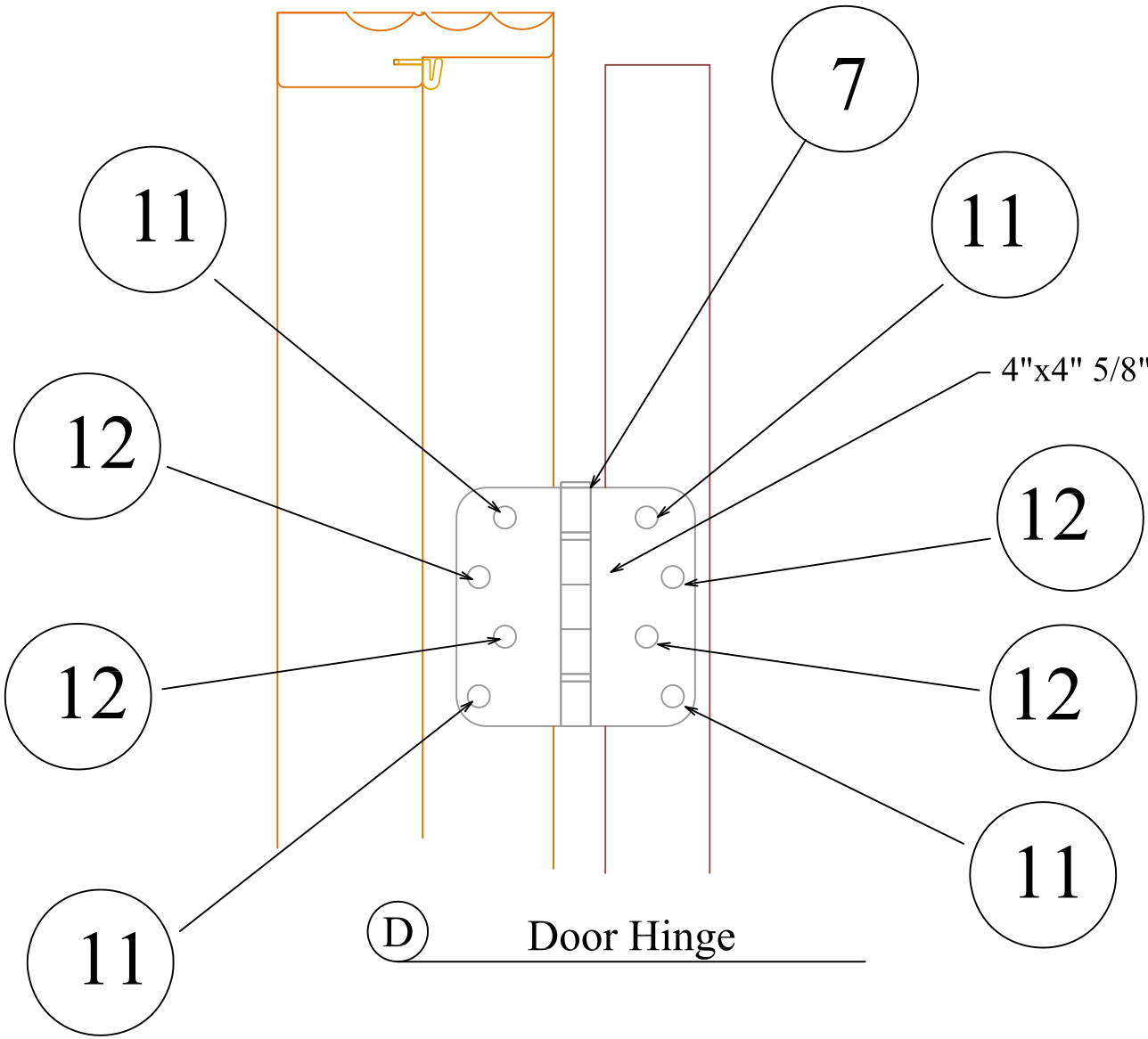
Hardwood Glazed Double TDL Doors



D Door Hinge

Architectural Testing

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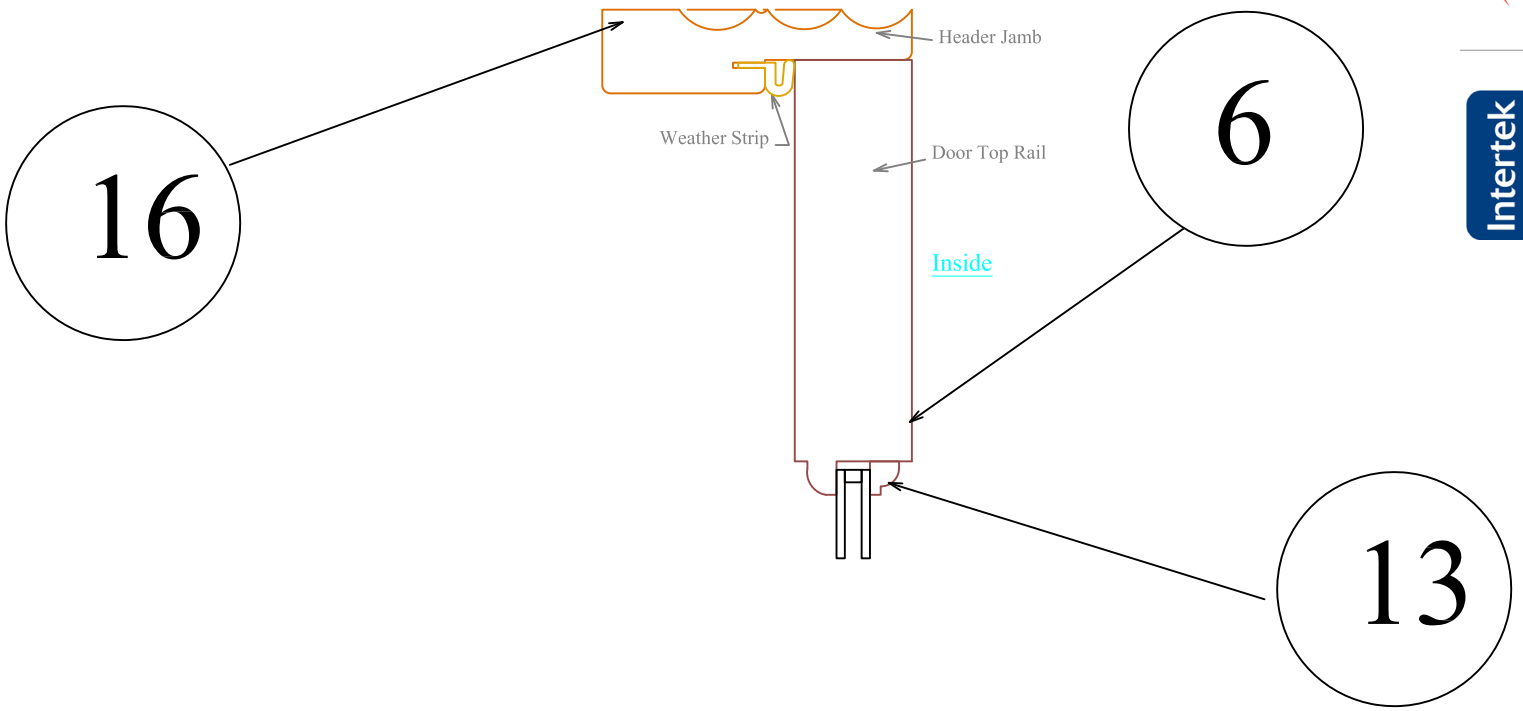
Hardwood Glazed Double TDL Doors



Architectural Testing

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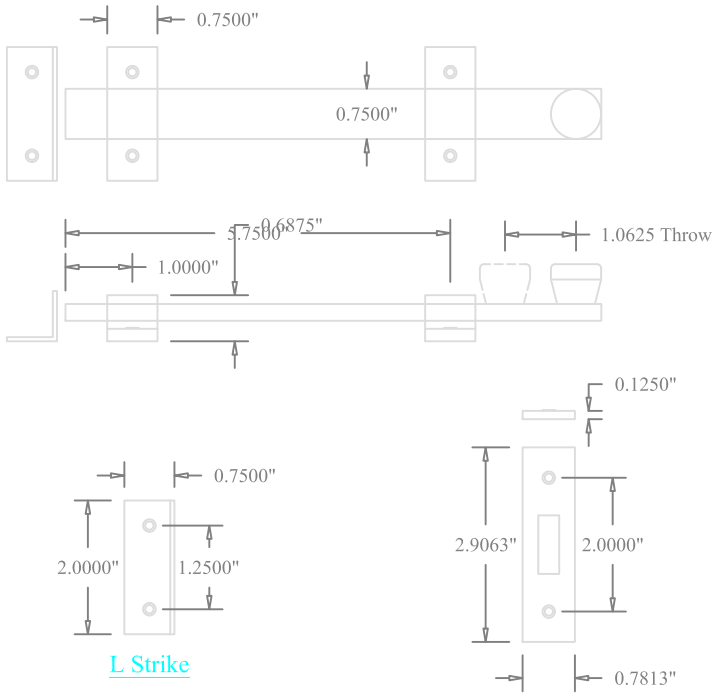
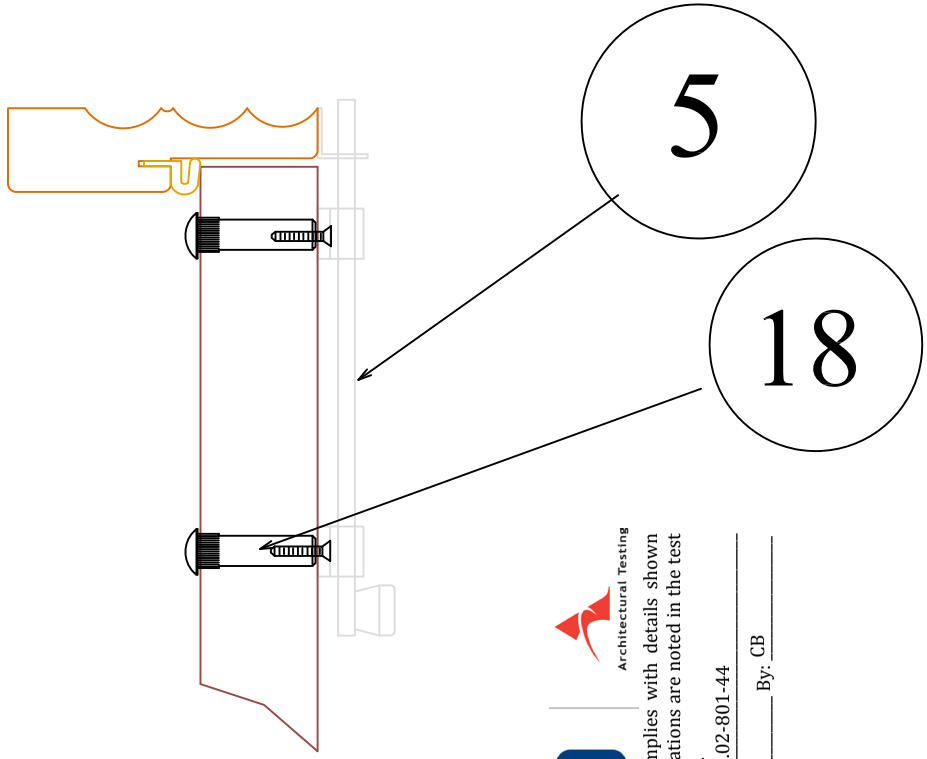
Date: 10/30/17 By: CB

E Header

Glass*Craft

Hardwood Glazed Double TDL Doors





Intertek Architectural Testing

Test sample complies with details shown herein. Any deviations are noted in the test report drawings.

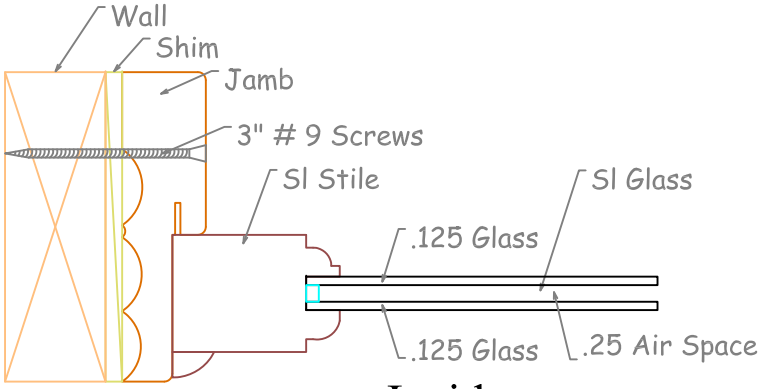
Report#: H4307.02-801-44

Date: 10/30/17 By: CB

F Surface Bolt

Glass*Craft

Hardwood Glazed Double TDL Doors



Inside

L Sidelite

Architectural Testing

Intertek

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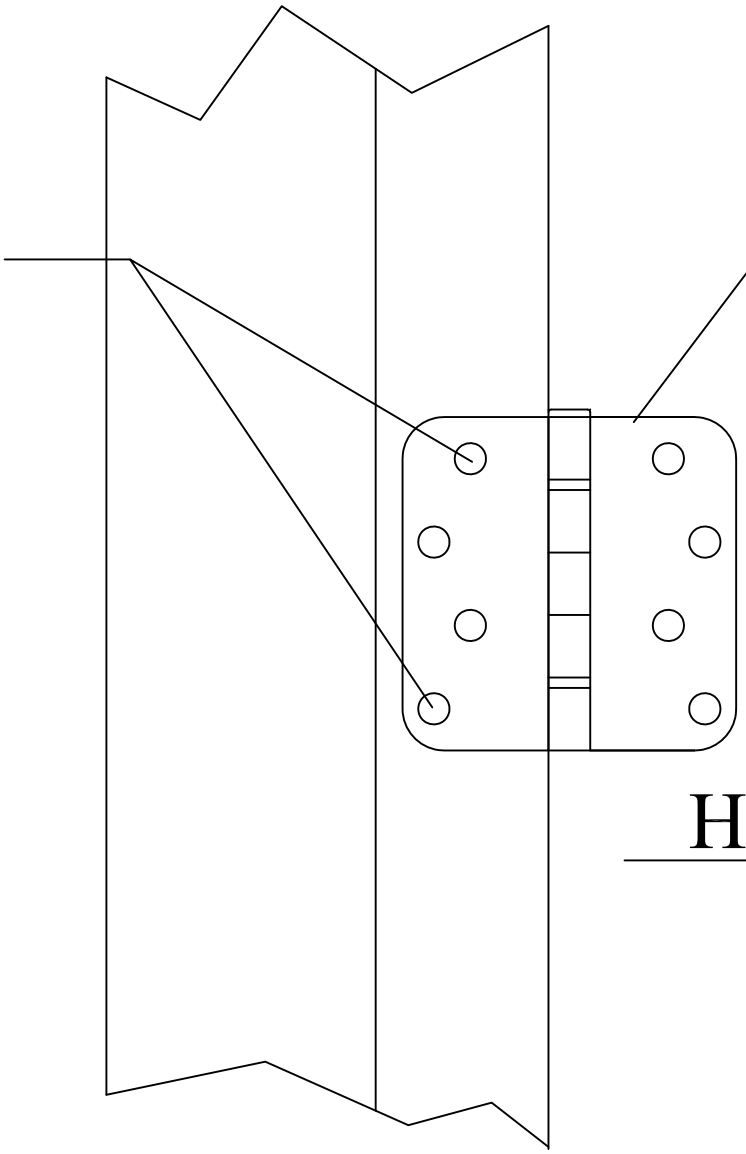
Glass*Craft

Hardwood Glazed Double TDL Doors

4"x4" 5/8" Radius Hinge

Install (2) 3" #8 Wood Screws Per Henge.



Architectural Testing

Intertek

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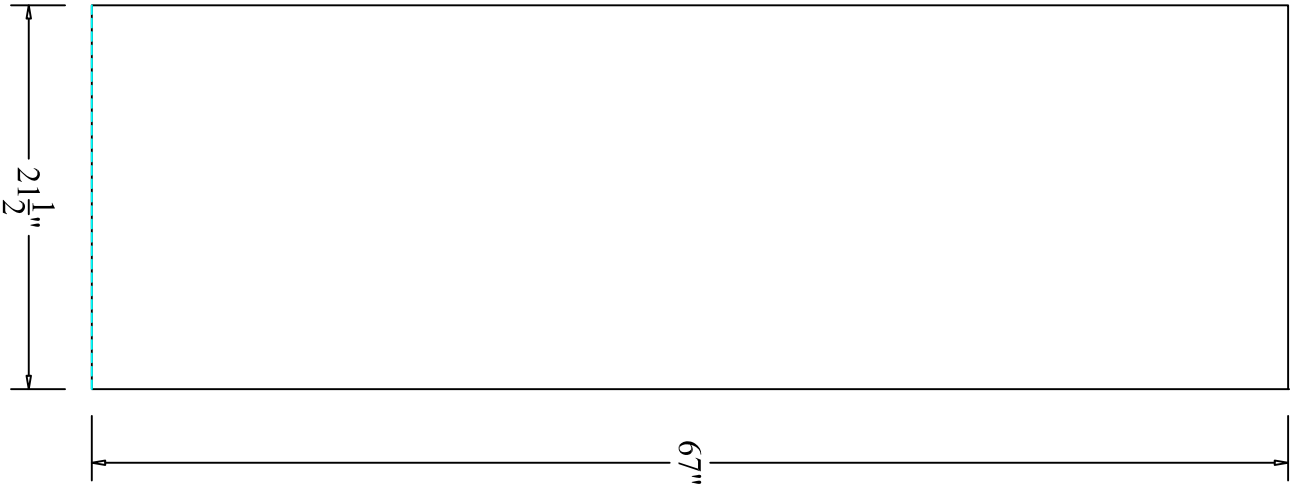
Hinge Detail

Glass*Craft

Hardwood Glazed Double TDL Doors



Glass*Craft

Hardwood Glazed Double TDL Doors

Intertek

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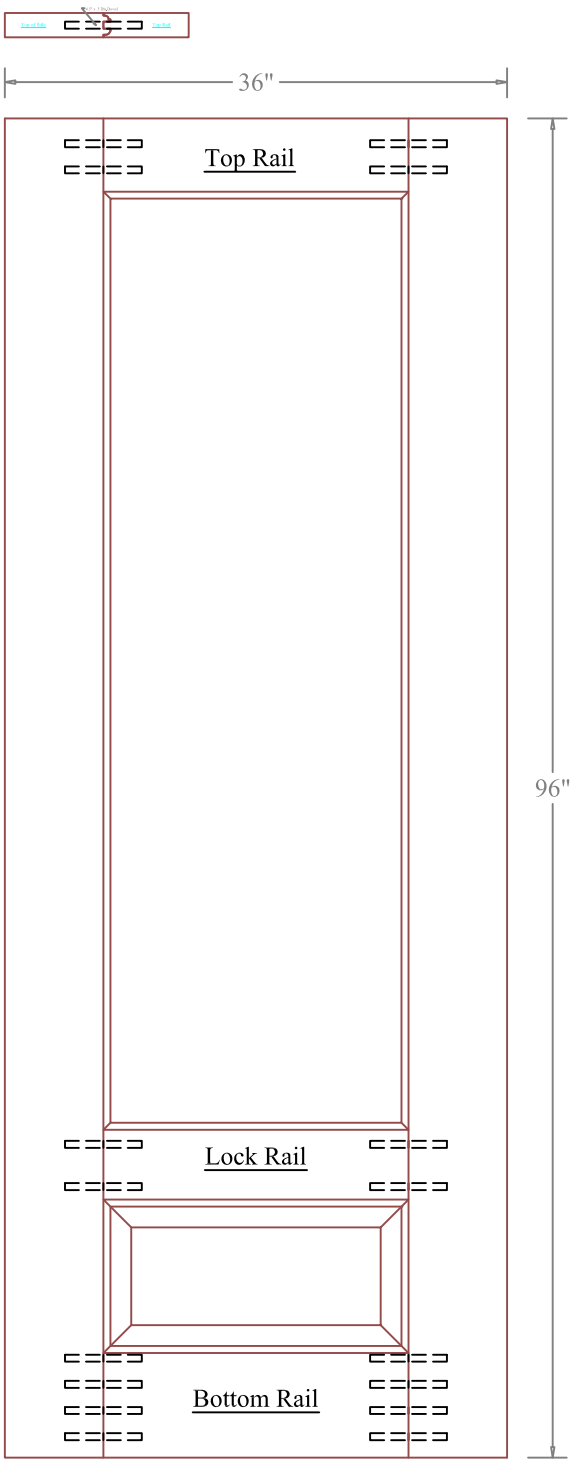

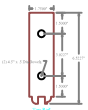

Intertek

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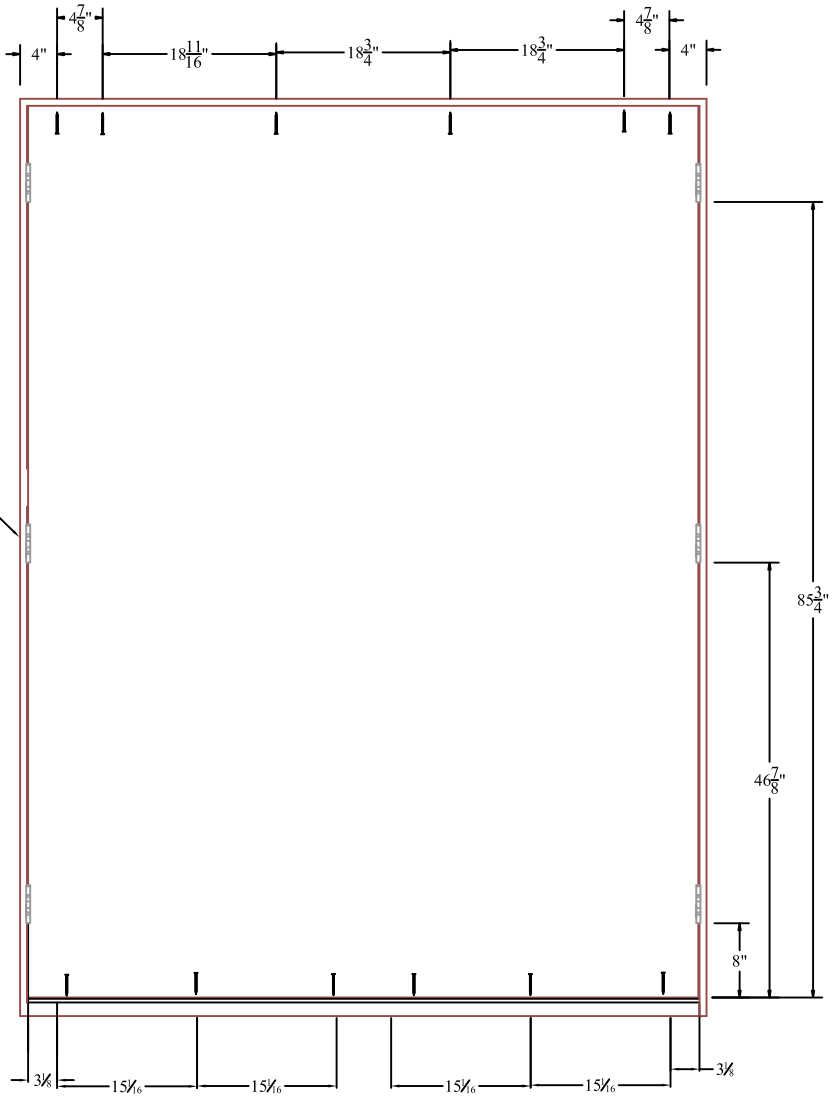
Glass*Craft

Hardwood Glazed Double 3/4 Lite Doors

See Hinge Detail



ANCHORING DIMENSION

Intertek Architectural Testing

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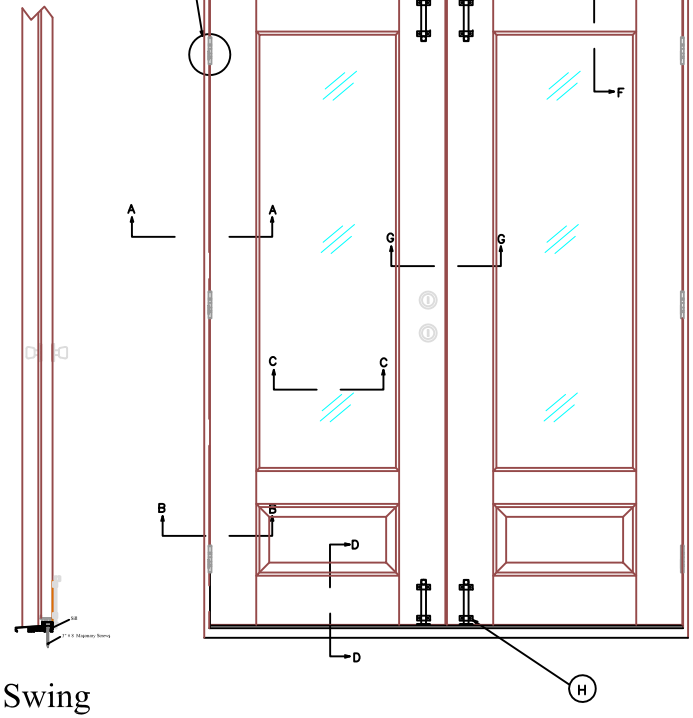
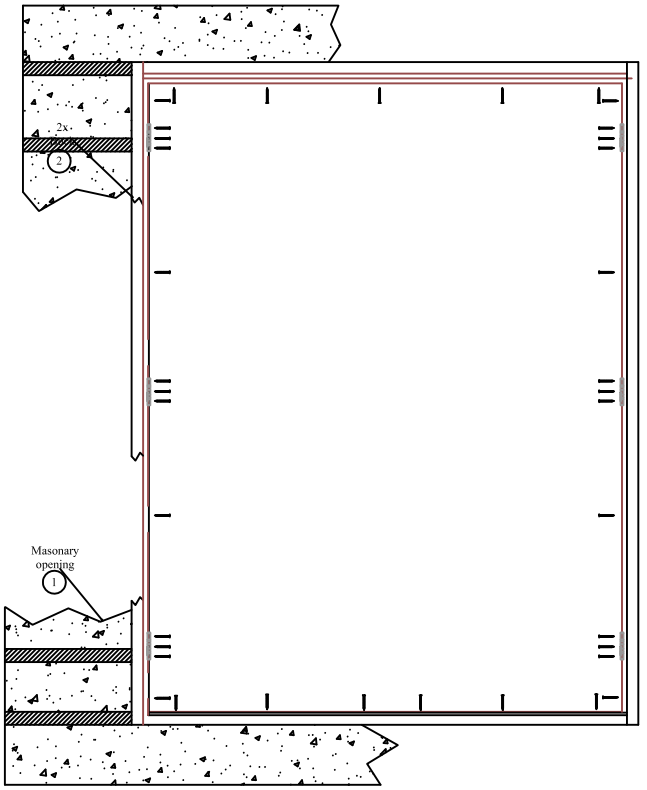
Glass*Craft

Hardwood Glazed Double 3/4 Lite Doors

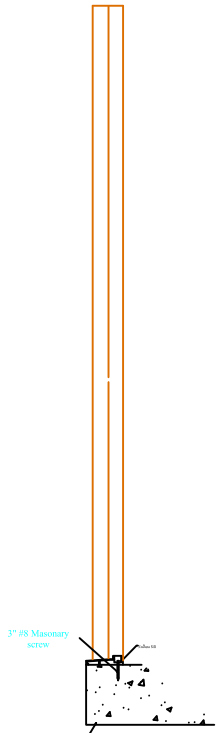


In Swing

ELEVATION



ANCHORING LAYOUT



Set frame sill in concrete
or bed of caulk

Architectural Testing

Intertek

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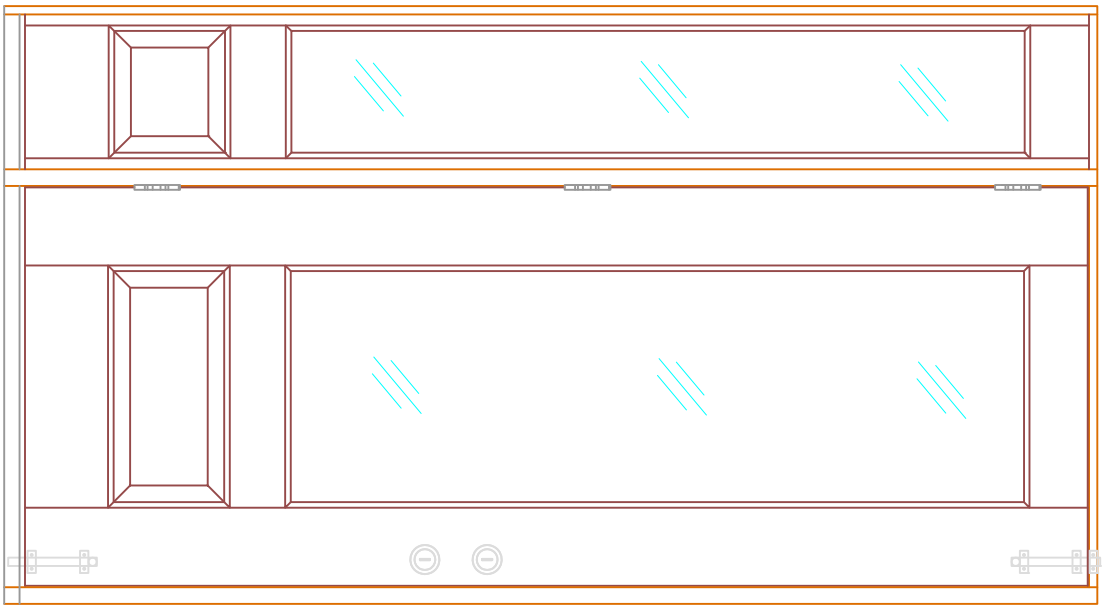
Inside View / In Swing

Glass*Craft

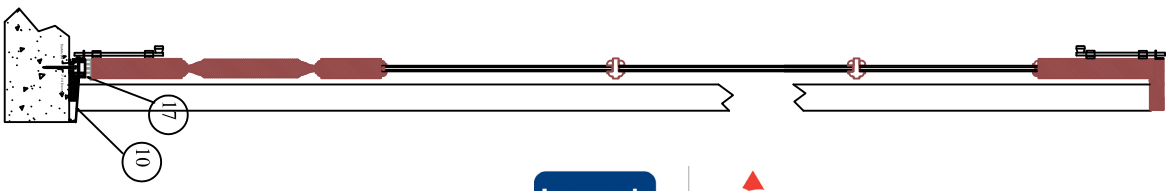
Hardwood Glazed Double 3/4 Lite Doors

Glass*Craft

Hardwood Glazed Double 3/4 Lite Doors



Section H-H



Intertek

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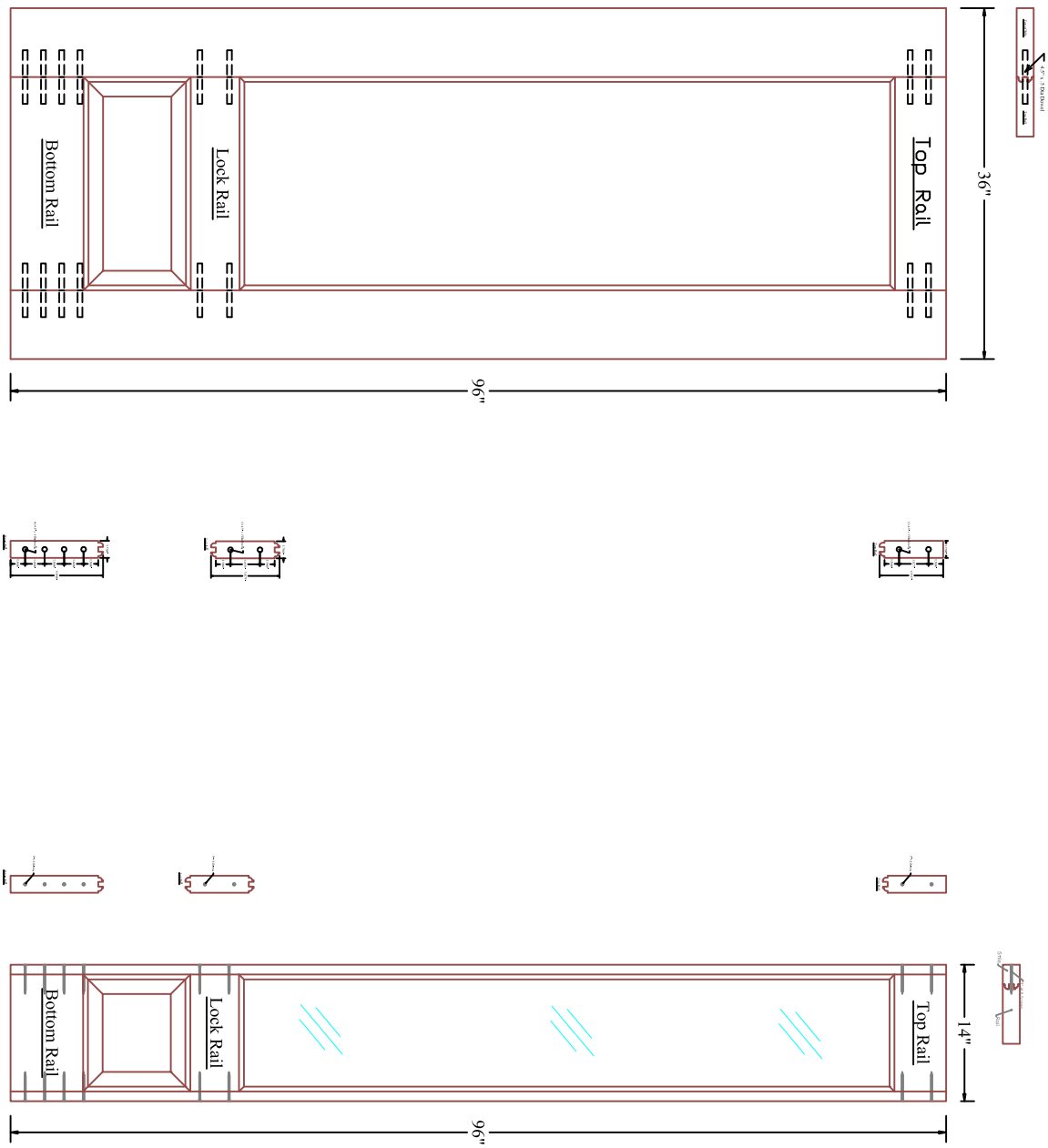

Glass*Craft

Hardwood Glazed Double 3/4 Lite Doors

Intertek

Architectural Testing

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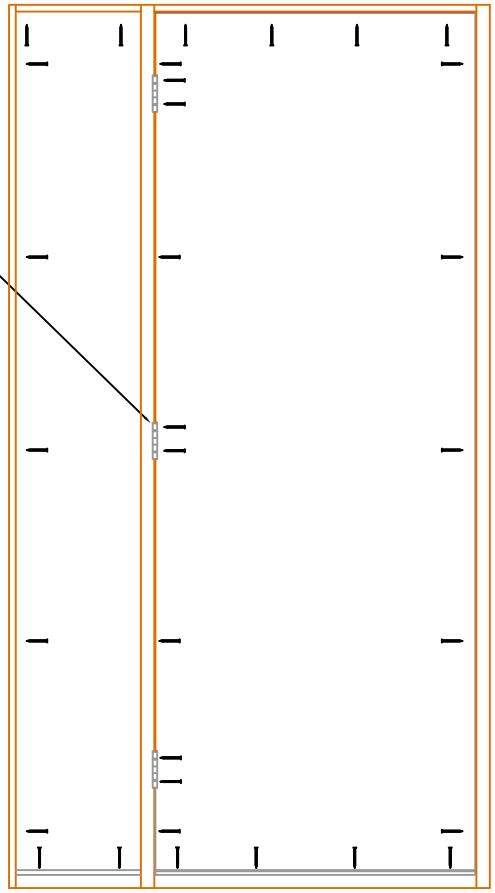
See Hinge Detail



ANCHORING LOCATION

Architectural Testing

Intertek

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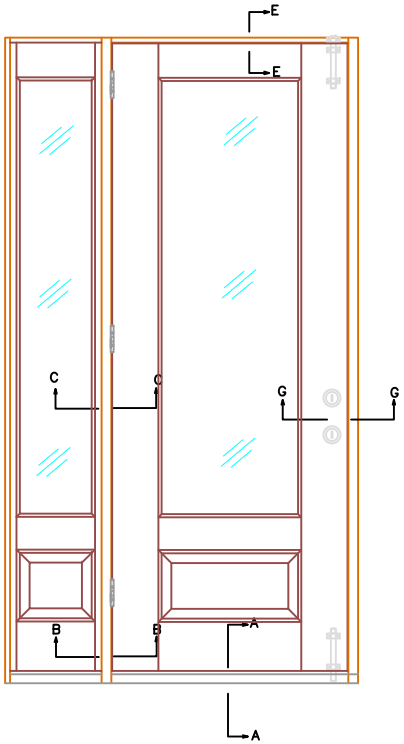
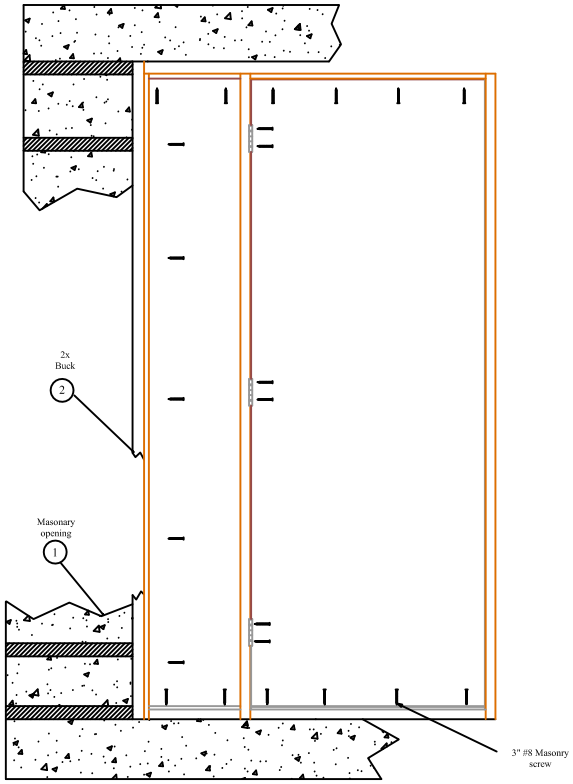
Glass*Craft

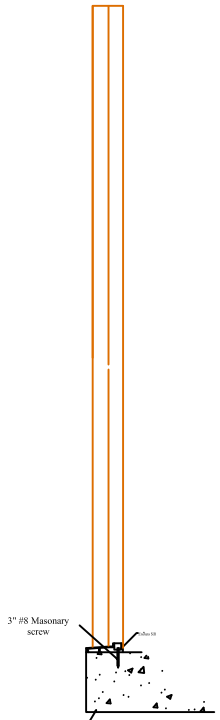
Hardwood Glazed Double 3/4 Lite Doors



ELEVATION



ANCHORING LAYOUT



Set frame sill in concrete
or bed of caulk

Inside View / In swing

Intertek
Architectural Testing

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Glass*Craft

Hardwood Glazed Double 3/4 Lite Doors