TEST REPORT

Report No.: F8186.01-801-44

Rendered to:

GLASSCRAFT DOOR COMPANY
Houston, Texas

PRODUCT TYPE: Inswing and Outswing 8'0" Triple Steel Door Glazed
SERIES/MODEL: Inswing and Outswing 8'0" Triple Steel Door Glazed
In-Swing (Specimen #1) Out-Swing (Specimen #2)

	Summary of Results	
Title	**Test Specimen #1**	**Test Specimen #2**
Design Pressure	±3840 Pa (±80.20 psf)	±3840 Pa (±80.20 psf)
Uniform Load Structural Test Pressure	±5760 Pa (±120.30 psf)	±5760 Pa (±120.30 psf)

TYLER WESTERLING LICENSE No. 72012 STATE OF FLORIDA PROFESSIONAL ENGINEER

Digitally Signed by: Tyler Westerling
2016.06.27 10:23:30 -07'00'

STATE OF TEXAS JOHN H. WASKOW 78232 REGISTERED PROFESSIONAL ENGINEER

Texas Firm F-11869

Digitally Signed by: John H. Waskow
2016.06.27 13:23:15 -05'00'

Reference must be made to Report No. E8186.04-801-44, dated 06/13/16 for complete test specimen description and detailed test results.

1.0 Report Issued To: Glasscraft Door Company
2002 Brittmoore Street
Houston, Texas 77043

2.0 Test Laboratory: Intertek-ATI
1909 10th Street
Plano, Texas 75074
(469) 814-0687

3.0 Project Summary:

3.1 Product Type: Inswing and Outswing 8'0" Triple Steel Door Glazed

3.2 Series/Model: Inswing and Outswing 8'0" Triple Steel Door Glazed (Inswing is specimen #1; Outswing is specimen #2).

3.3 Compliance Statement: Results obtained are tested values and were secured by using the designated test method(s). Test specimen description and results are reported herein.

3.4 Test Dates: 5/23/16

3.5 Test Record Retention End Date: All test records for this report will be retained until May 23, 2020.

3.6 Test Location: Intertek-ATI test facility in Plano, Texas.

3.7 Test Sample Source: The test specimens were 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.

3.8 Drawing Reference: The test specimen drawings have been reviewed by Architectural Testing and are representative of the test specimen(s) reported herein. Test specimen construction was verified by Architectural Testing per the drawings located in Appendix A. Any deviations are documented herein or on the drawings.

3.9 List of Official Observers:

Name	Company
Clint Barnett	Intertek-ATI

4.0 Test Method(s):

ASTM E 330-02, *Test Method for Structural Performance of Exterior Windows, Curtain Walls and Doors by Uniform Static Air Pressure Difference.*

5.0 Test Specimen Description:

5.1 Product Sizes:

Test Specimens #1 and #2:

Overall Area: 8.2 m^2 (87.80 ft^2)	**Width**		**Height**	
	millimeters	**inches**	**millimeters**	**inches**
Overall size	3008	119-3/8	2505	98
Single Door Glazed Leaf (3)	914	36	2438	96

The following descriptions apply to all specimens.

5.2 Frame Construction:

Frame Member	**Material**	**Description**
Head and jambs	Fiberglass	1-1/4" x 4-5/8" cross section
Threshold	Aluminum-clad vinyl composite with extruded vinyl trim	6" wide with slope towards exterior.

	Joinery Type	**Detail**
All corners	Screwed partial rabbet	Secured with four #8 x 3" wood screws

5.0 Test Specimen Description: (Continued)

5.3 Panel Construction:

Frame Member	Material	Description
All members	18 Gauge Steel	Steel Panels with foam

	Joinery Type	Detail
All corners	Bonding Glue	Panels were backed with foam

5.4 Weatherstripping:

Description	Quantity	Location
U-shaped foam-filled vinyl gasket with kerf insert	1 Row	Shoulder of the jambs and header
Five fin rubber door sweep	1 Row	Threshold face of leaf

5.5 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	1/2" Aluminum box	1/8" Tempered	1/8" Tempered	Exterior wet glazed

Location	Quantity	Daylight Opening		Glass Bite
		millimeters	inches	
Glazed Doors	3	533 x 1600	21 x 63	0.50"

5.6 Drainage: Sloped threshold was utilized.

5.0 Test Specimen Description: (Continued)

5.7 Hardware:

Description	Quantity	Location
Door hinge	12	12" and 28" from bottom; 9" and 34-1/2" from top; attached with two #9 x 3" and two #9 x 1" wood screws
3 point lock set	3	Inserted into lock stile of operable leaf, secured with nine #8 x 3" wood screws at 7-3/8", 14-1/4", 17-9/16", 26-5/16", 45-13/16", 55-13/16", 62-3/16", 65-7/16" and 72-3/4" from bottom
Strike plate	12	On lock jamb in line with 3 point lock and dead bolt; secured with two #9 x 3" wood screws each
Flush Bolt	4	Top and bottom of each operable door leaf

5.8 Reinforcement: No reinforcement was utilized.

6.0 Installation:

The specimen was installed into a Spruce-Pine-Fir wood buck. The rough opening allowed for a 1/2" shim space. A 2 x 6 was placed at the center of the buck to separate the double door from the single door.

Location	Anchor Description	Anchor Location
Jambs	#9 x 3" wood screws	12" from corners and center; through top and bottom mounting holes of hinges
Head and threshold	#9 x 3" wood screws	4" from corners, 12" on center thereafter

7.0 Test Results: The temperature during testing was 26.7°C (80°F). The results are tabulated as follows:

Test Specimen #1: Inswing

Title of Test	Results	Allowed	Note
Uniform Load Deflection, per ASTM E 330 taken at leaf lock edge			
+3840 Pa (+80.20 psf)	5 mm (0.21")		
-3840 Pa (-80.20 psf)	10 mm (0.39")	Report Only	1, 2
Uniform Load Structural, per ASTM E 330 taken at leaf lock edge			
+5760 Pa (+120.30 psf)	1 mm (0.02")	10 mm (0.38") max.	
-5760 Pa (-120.30 psf)	1 mm (0.03")	10 mm (0.38") max.	1, 2

Test Specimen #2: Outswing

Title of Test	Results	Allowed	Note
Uniform Load Deflection, per ASTM E 330 taken at leaf lock edge			
+3840 Pa (+80.20 psf)	8 mm (0.31")		
-3840 Pa (-80.20 psf)	5 mm (0.21")	Report Only	1, 2
Uniform Load Structural, per ASTM E 330 taken at leaf lock edge			
+5760 Pa (+120.30 psf)	1 mm (0.02")	10 mm (0.38") max.	
-5760 Pa (-120.30 psf)	1 mm (0.02")	10 mm (0.38") max.	1, 2

7.0 Test Results: (Continued)

***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.

Architectural Testing will service this report for the entire test record retention period. Test records that are retained such as detailed drawings, datasheets, representative samples of test specimens, or other pertinent project documentation will be retained by Architectural Testing, Inc. for the entire test record retention period.

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.

Digitally Signed by: Clint Barnett

Clint Barnett
Technician

Digitally Signed by: John H. Waskow

John H. Waskow, P.E.
Director – Regional Operations

Digitally Signed by: Tyler Westerling

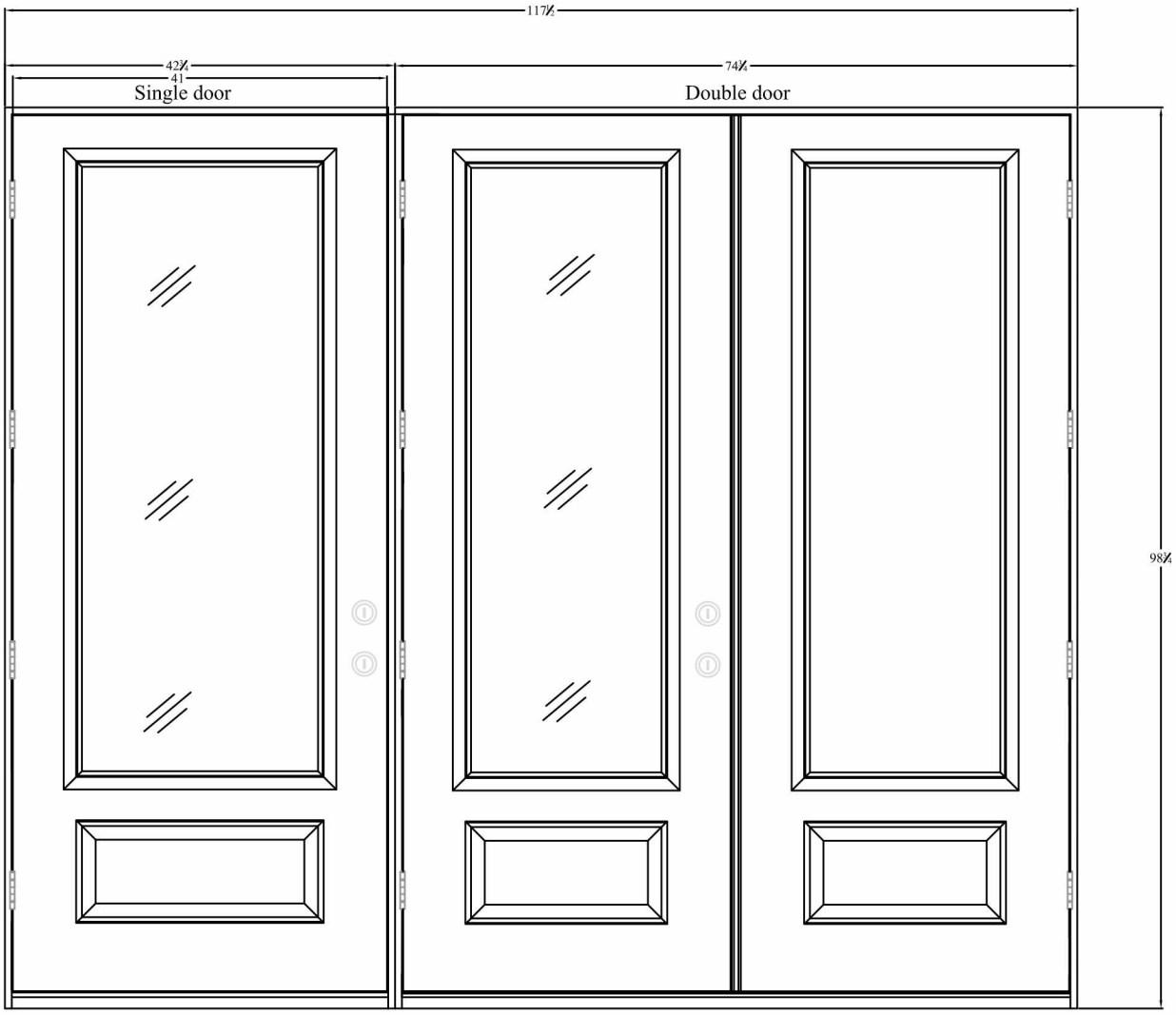
Tyler Westerling, P.E.
Senior Project Engineer

CB : cm

Attachments (pages): This report is complete only when all attachments listed are included.
Appendix-A: Drawings (13)

Appendix A

Drawings



Wind Load In-swing Out swing Triple 8'-0 Steel Double Full Light Glazed Door & Single Full Light Glaze Door.

Architectural Testing, Inc
Test sample complies with details shown herein. Any deviations are noted in the test report or drawings.

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Date: 06/22/16 By: CB

Test specifications and Quotes

ASTM E-330-02

Qty. 2 Sample Req'd

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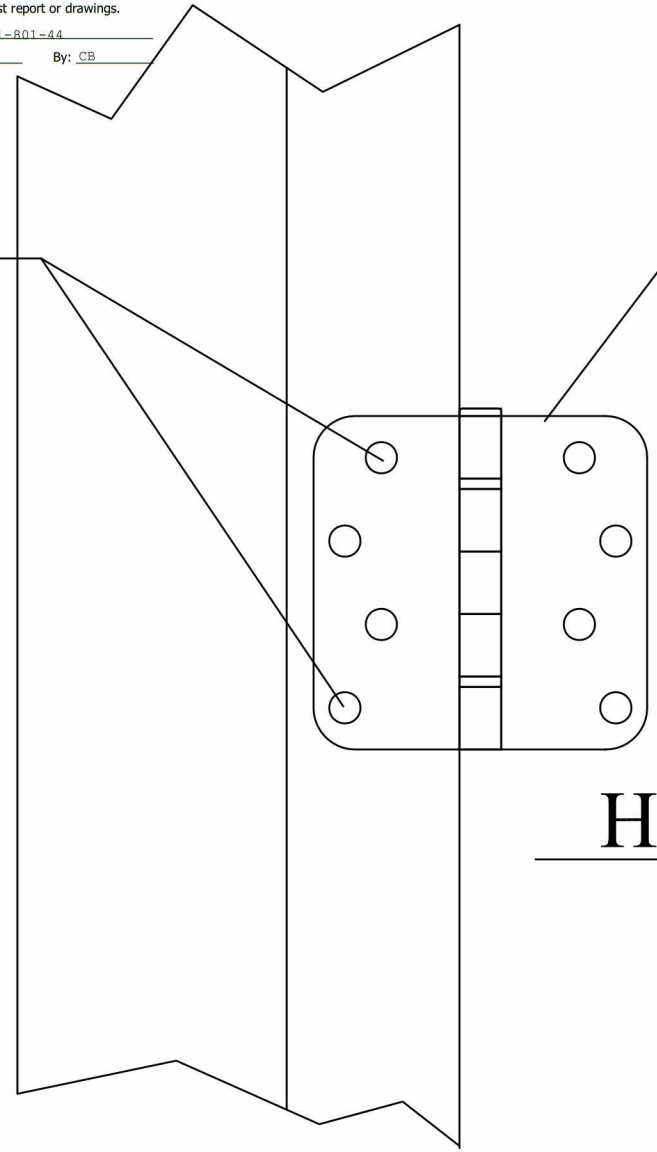
Penrond 4"x4" 5/8" Radius Hinge

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



Hinge Detail

Glass*Craft

Steel Glazed Doors

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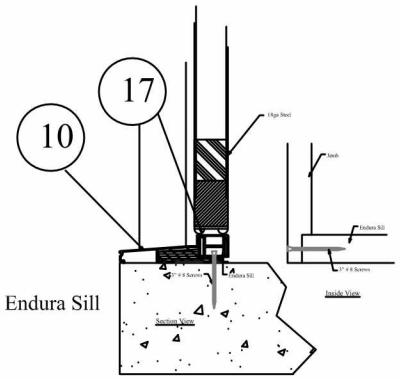
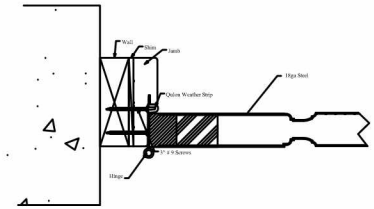
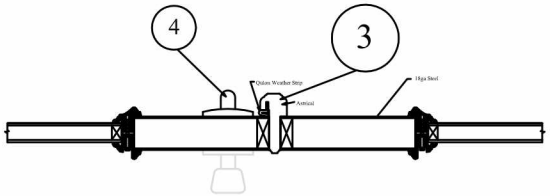
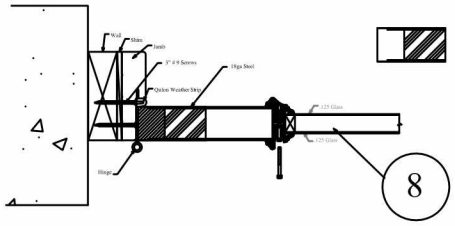


A Threshold In Swing

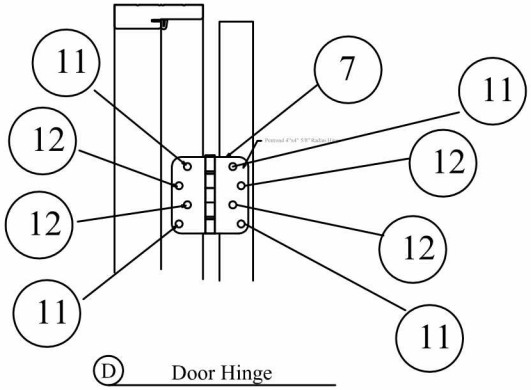


B Panel





C Frame & Glass



D Door Hinge

In Swing

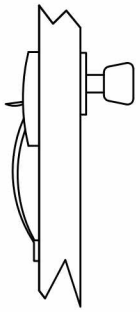
Steel Glazed Doors

Glass*Craft

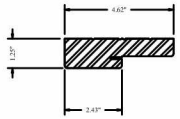
List of Material

Item #	Description	Material
1	Masonry	CONC.
2	2x Buck	Wood
3	Astrical	Alum.
4	Imperial USA Ltd.	Metal
5	Rockwood Surface Bolts #580	Metal
7	Penrond 4"x4" 5/8" Radius Hinge	Metal
8	Glass	Glass
10	Endura Sill ZAIL 5866 / I/S	Alum.
11	3" #9 Wood screw	Metal
12	#9x1" PFH Wood Screw	Metal
13	1/4 Round Trim	Composite
16	Door Jam	Composite
17	Bottom Door sweep	Rubber
18	10-32 Sex Bolt	Metal
20	weather strip	Foam
21	Endura Sill ZAIL 5866 / O/S	Alum.

Endura Sill
ZAIL 5866 / I/S
10



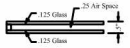
Schlage Lock Set
4



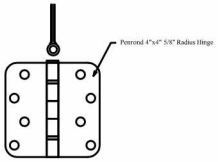
Door Jam
16

Astrical
3

weather strip
20



Glass
8



Penrond 4"x4" 5/8" Radius Hinge
7

Bottom Door sweep
17

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Steel Glazed Doors

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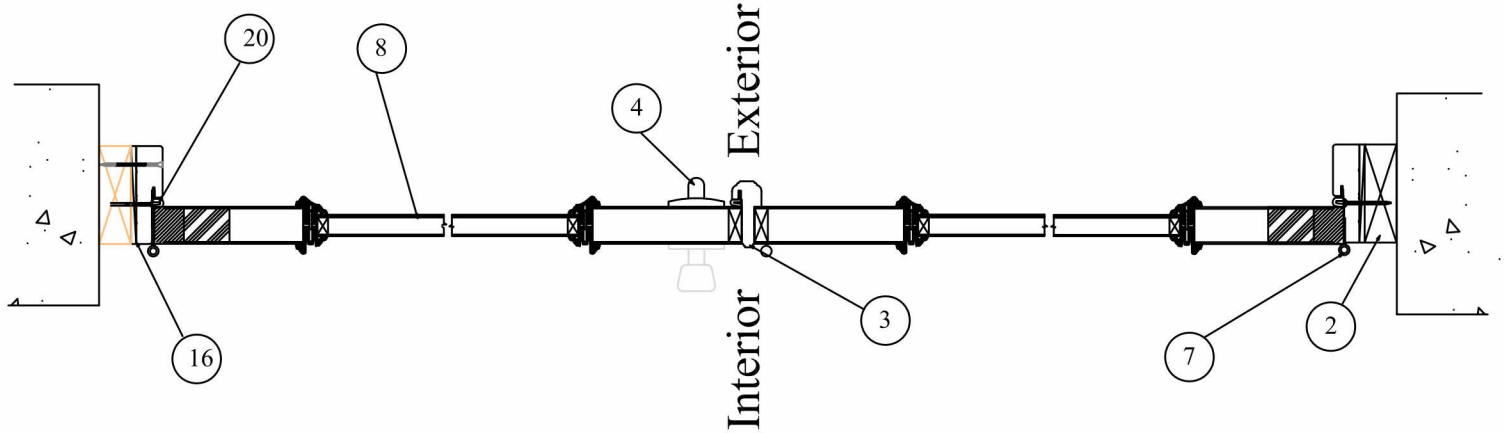
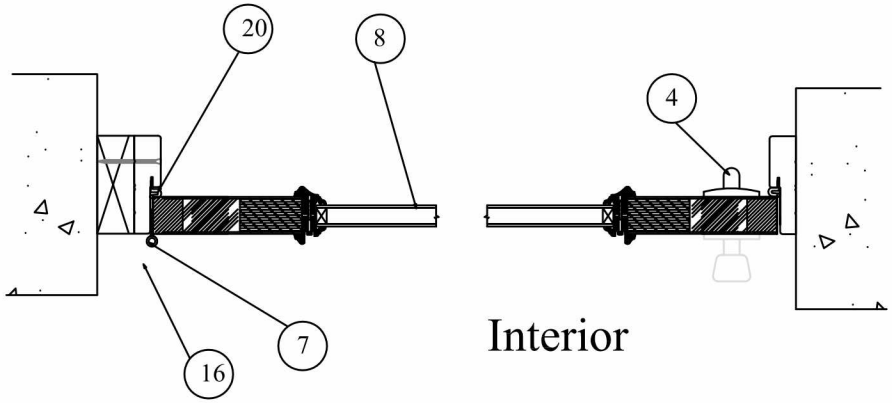


Horizontal Cross Section

steel Glazed Doors

Glass*Craft



Interior

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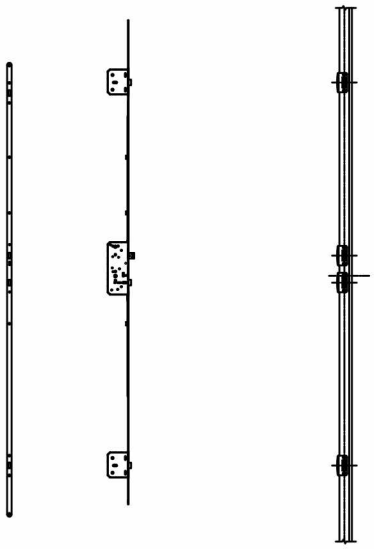
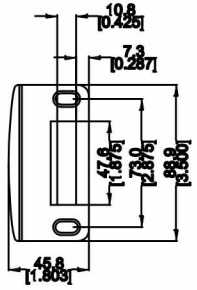
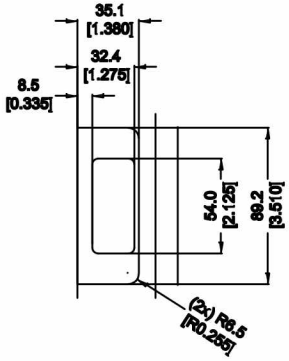
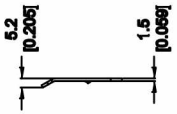
Glass*Craft



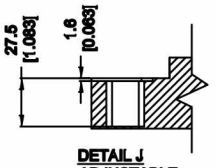
8'-0"
3-point lock set



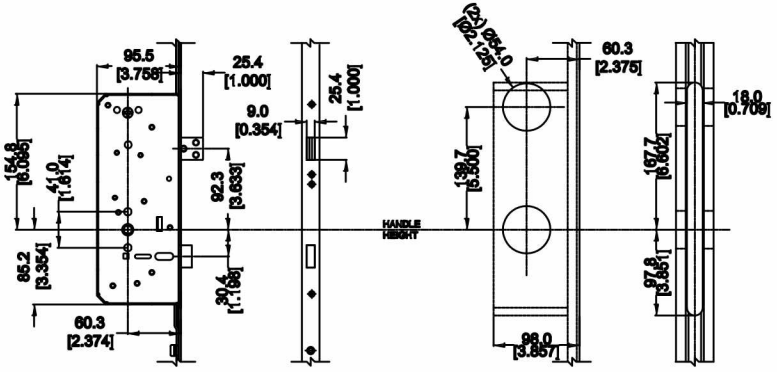




DETAIL I
ADJUSTABLE
STRIKE DETAIL



DETAIL J
ADJUSTABLE
STRIKE ROUTE



DETAIL G
CENTER CASING DETAIL

DETAIL H
CENTER CASING MORTISE DETAIL

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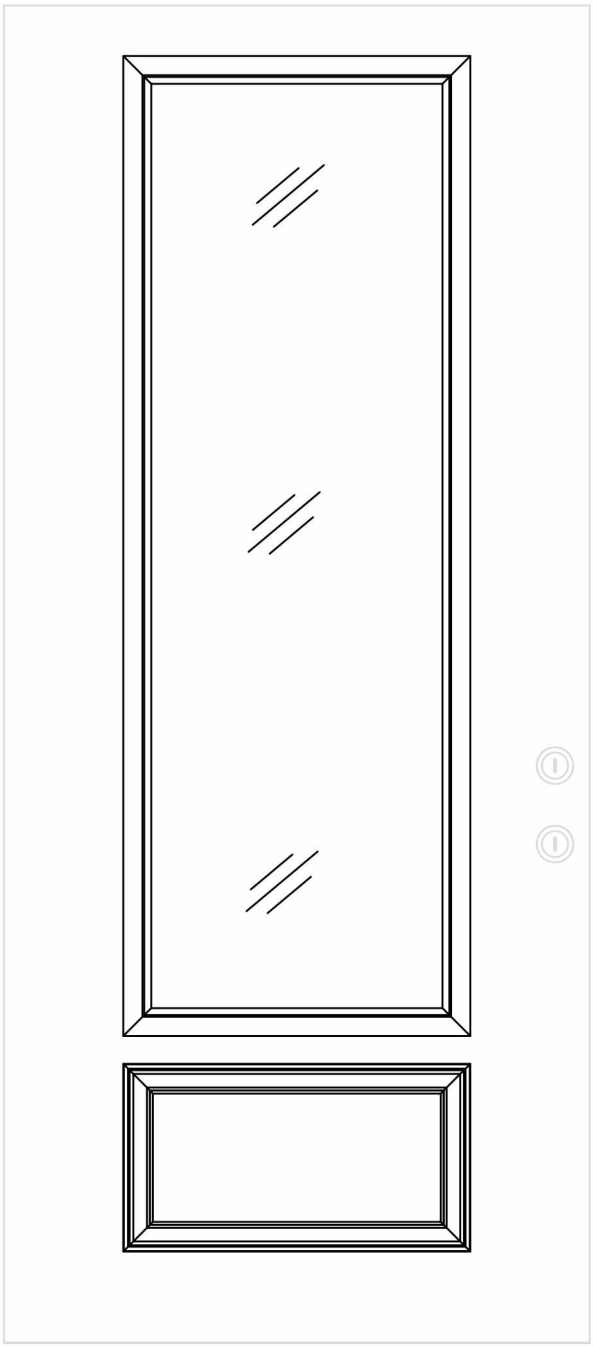
Rockwill Triple point lock set



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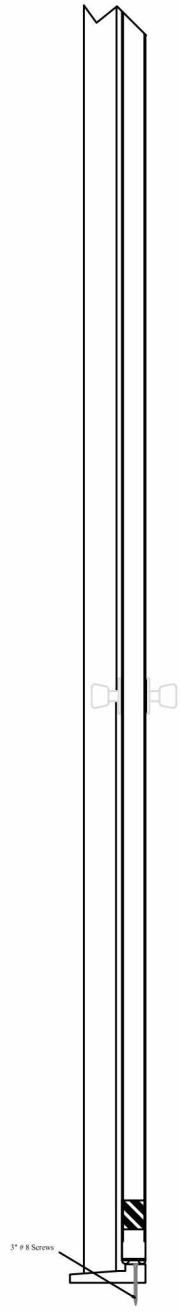
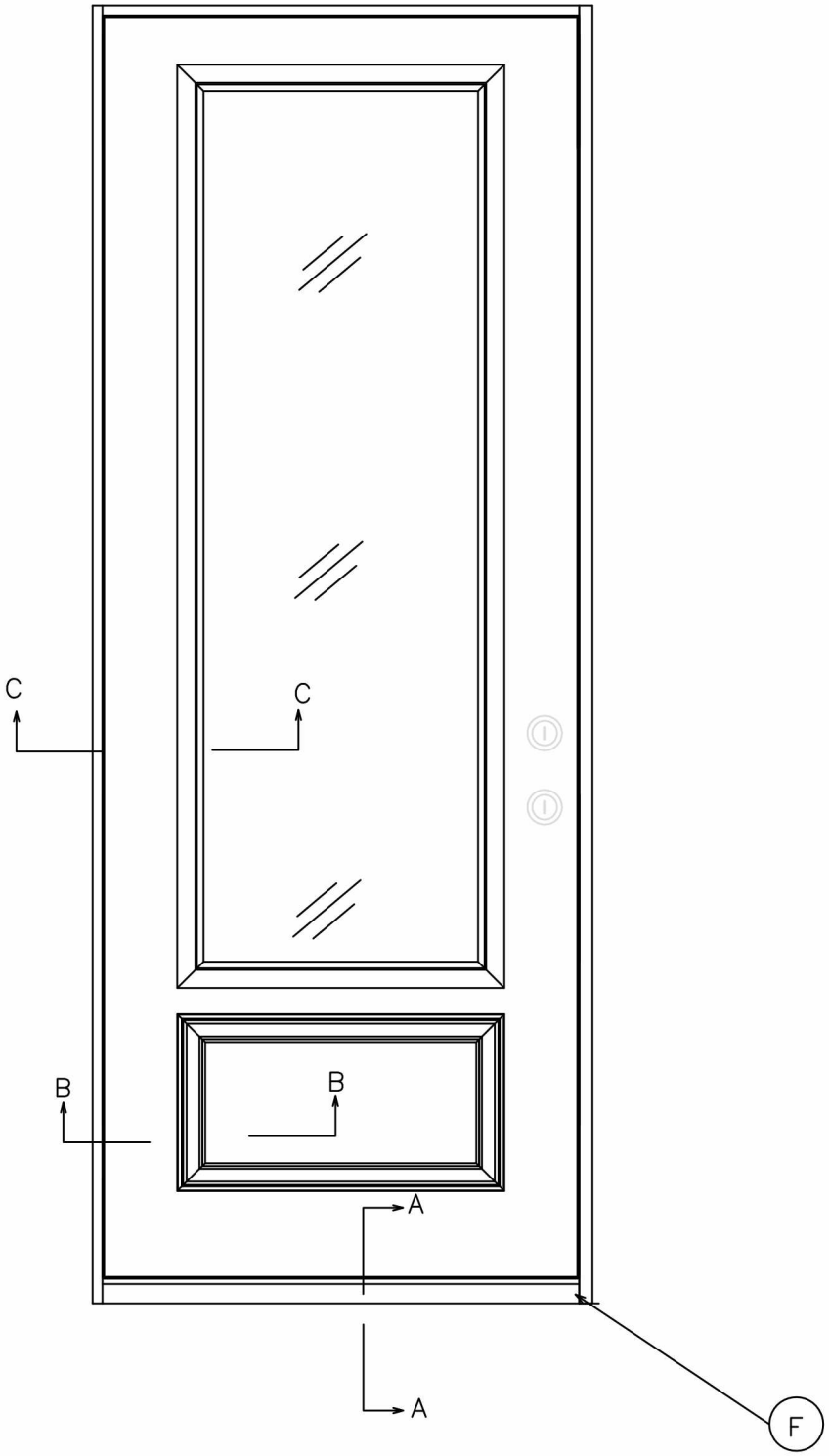
Glass*Craft



In Swing



ELEVATION

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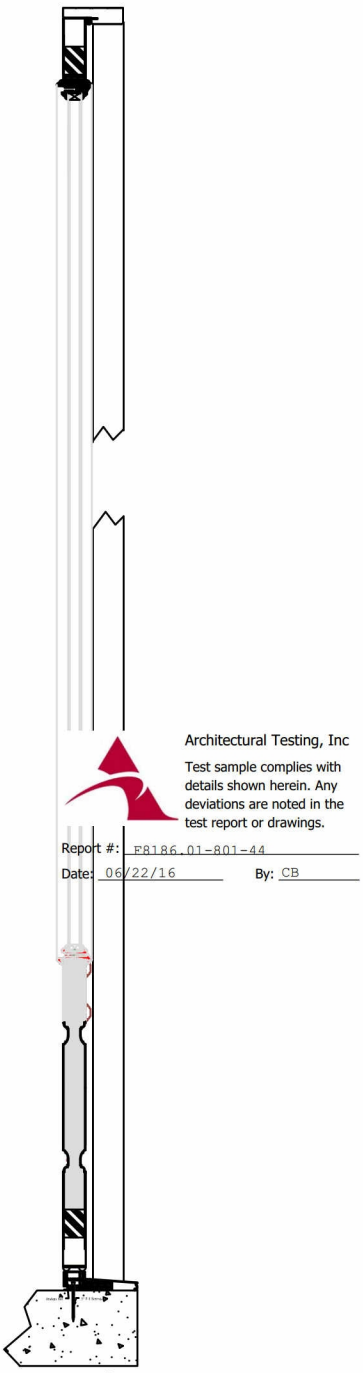
SteelGlazed Doors

Glass*Craft

ELEVATION



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Section
H-H

Steel Glazed Doors

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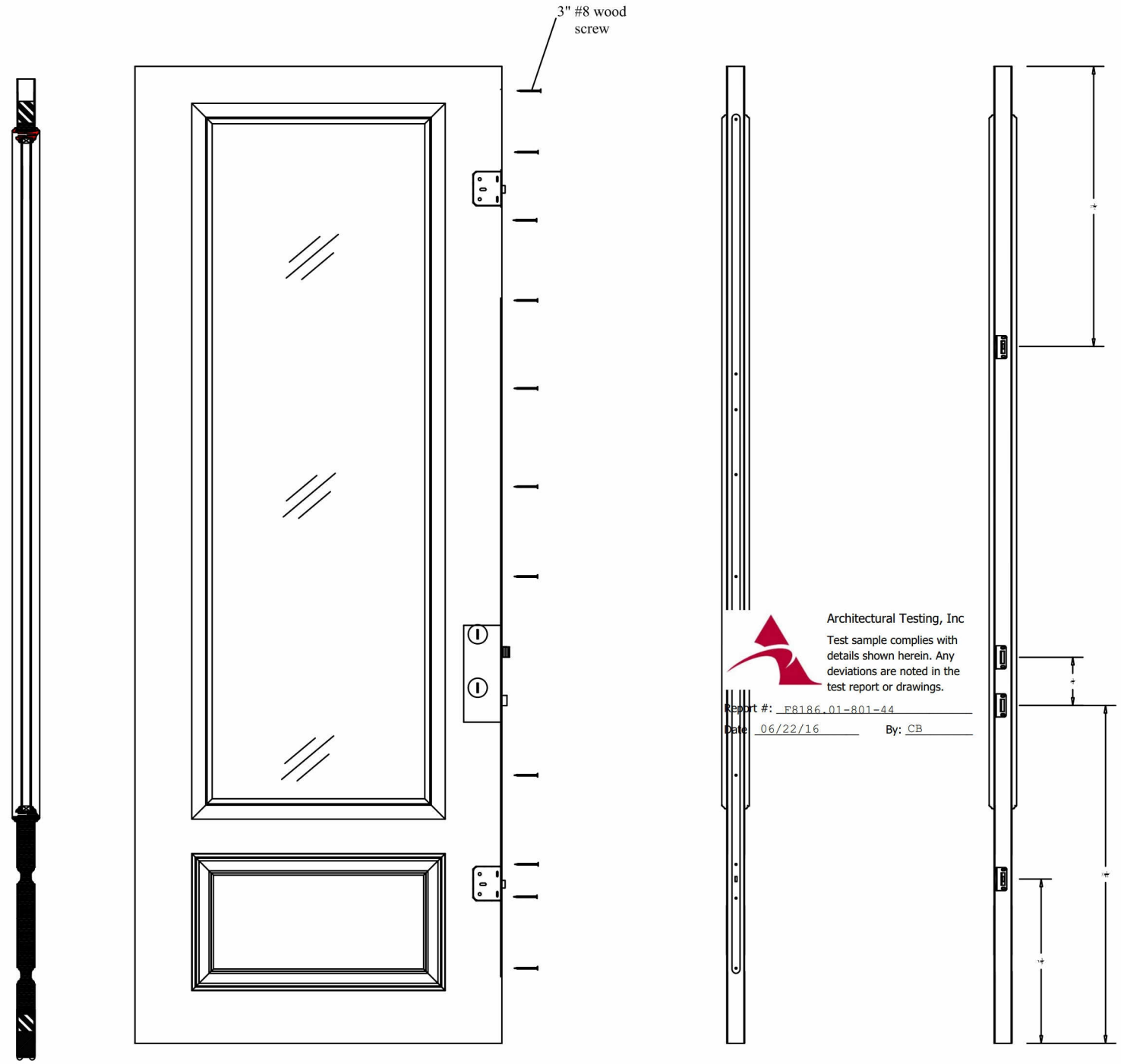
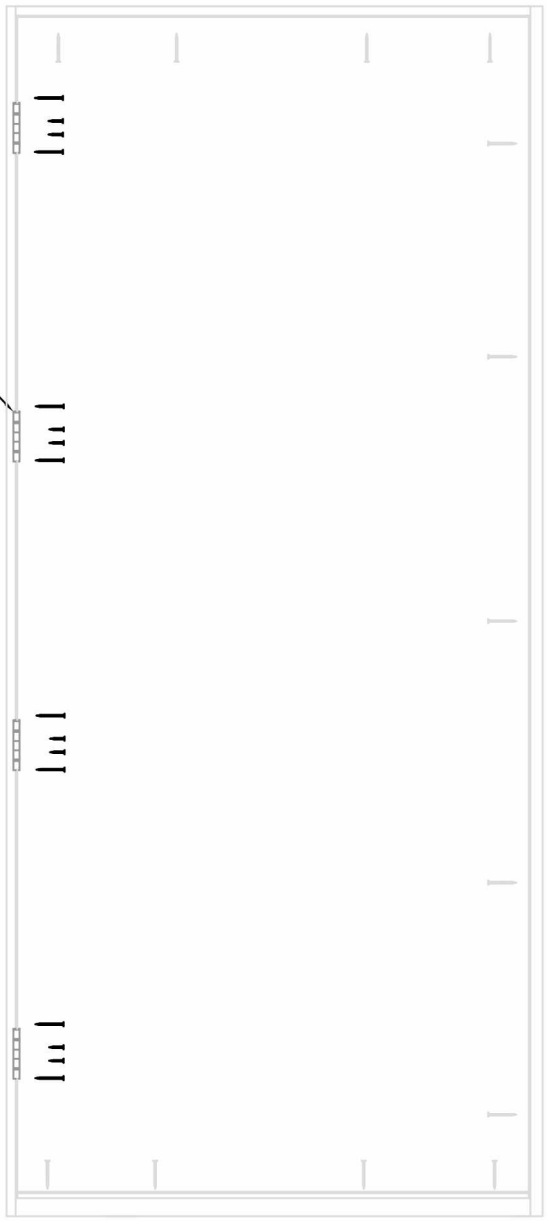


Three point lock set screw location and strike plate

Steel Glazed Doors

Glass*Craft

See Hinge Detail



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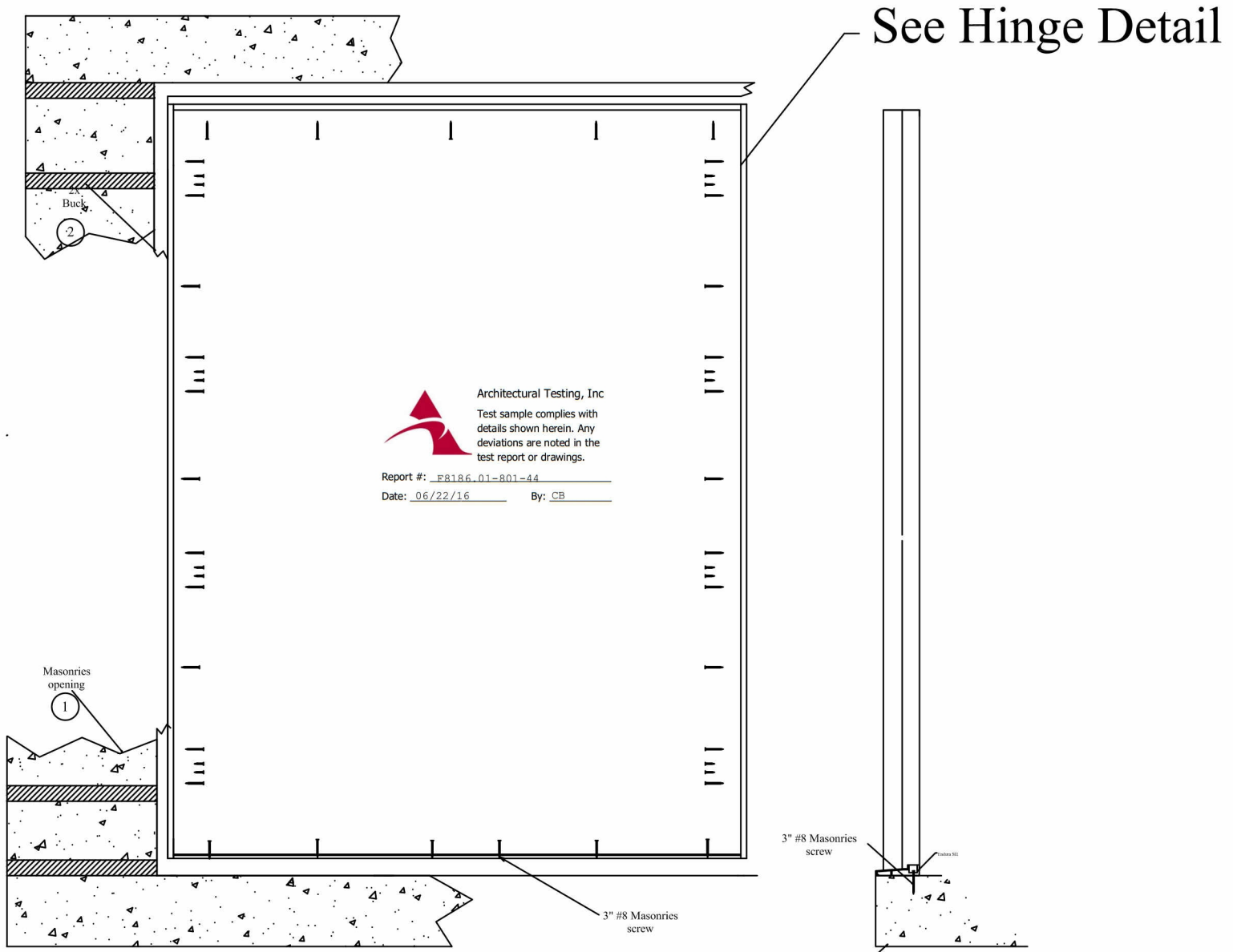
ANCHORING LOCATION

Steel Glazed
Door I/Sing

Glass*Craft

Glass*Craft

Steel Glazed Doors



ANCHORING LAYOUT