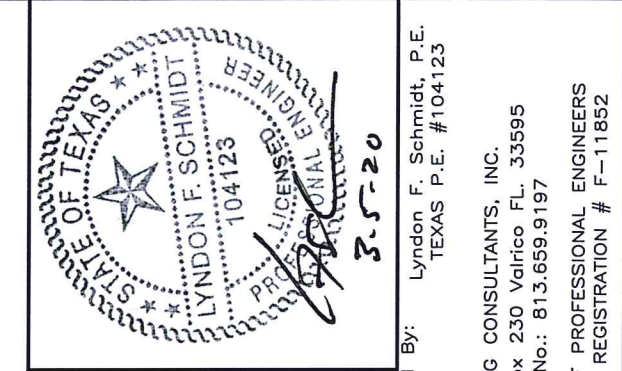
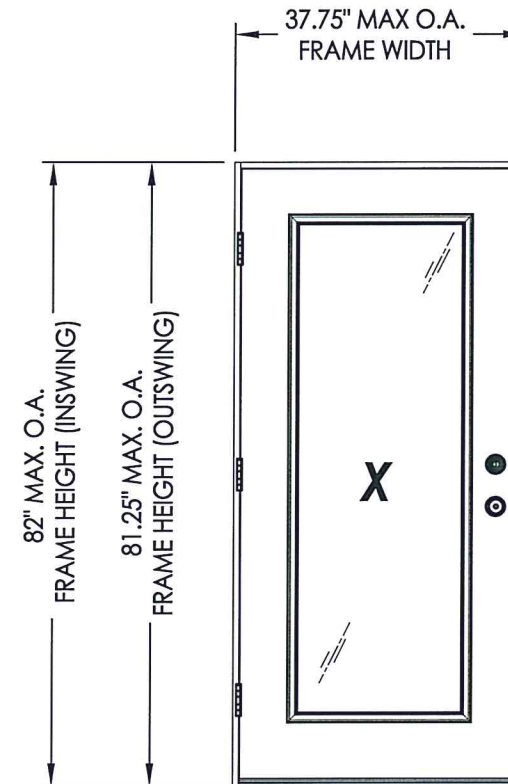


## FIBERGLASS GLAZED SINGLE DOOR

INSWING/OUTSWING  
"IMPACT"



Documents Prepared By: Lyndon F. Schmidt, P.E.  
TEXAS P.E. #104123

RW BUILDING CONSULTANTS, INC.  
P.O. Box 230 Valrico FL 33595  
Phone No.: 813.659.9197

TEXAS BOARD OF PROFESSIONAL ENGINEERS  
CERTIFICATE OF REGISTRATION # F-11852

### EVALUATED FOR USE IN THE STATE OF TEXAS

The Fiberglass Door system described herein complies with the 2018 International Residential Code (IRC), Sections R301 & R609 and the 2018 International Building Code (IBC), Sections 1404.13, 1609, 1709.5, 2403 and 2404 subject to the following conditions:

1. Anchors shall be as listed and spaced as shown in the details. Anchor embedment to base material shall be beyond wall dressing or stucco.
2. This system has been tested and evaluated as a large missile impact protective system for installation in areas that require wind borne debris protection. This product meets missile level "D" as defined in ASTM E 1996.
3. Allowable design pressure requirements must be equal to or less than the design pressure rating shown in the design pressure chart, sheet 1 of this drawing.
4. Conditions not covered by this drawing are subject to further engineering analysis.

### TABLE OF CONTENTS

SHEET #	DESCRIPTION
1	Typical Elevations, Design Pressures & General Notes
2	Door Panel Details
3	Glazing Details
4	Elevation
5	Horizontal & Vertical Cross Sections (2X Framing)
6	Horizontal & Vertical Cross Sections (1X Buck)
7	Vertical Cross Sections (Thresholds)
8	Frame Anchoring & Hardware Details
9	Bill of Materials & Components

CONFIGURATION	DESIGN PRESSURE (PSF) INSWING		DESIGN PRESSURE (PSF) OUTSWING	
	POSITIVE	NEGATIVE	POSITIVE	NEGATIVE
X	+50.0	-55.0	+50.0	-50.0

PRODUCT: MASTERGRAIN FIBERGLASS DOOR

PART OR ASSEMBLY: TYPICAL ELEVATION, DESIGN PRESSURES & GENERAL NOTES

NO.	DATE	REVISIONS
1	3/05/20	UPDATE TO 2018 IBC/IRC CODE
		LFS
		BY

DATE: 9/04/18

SCALE: N.T.S.

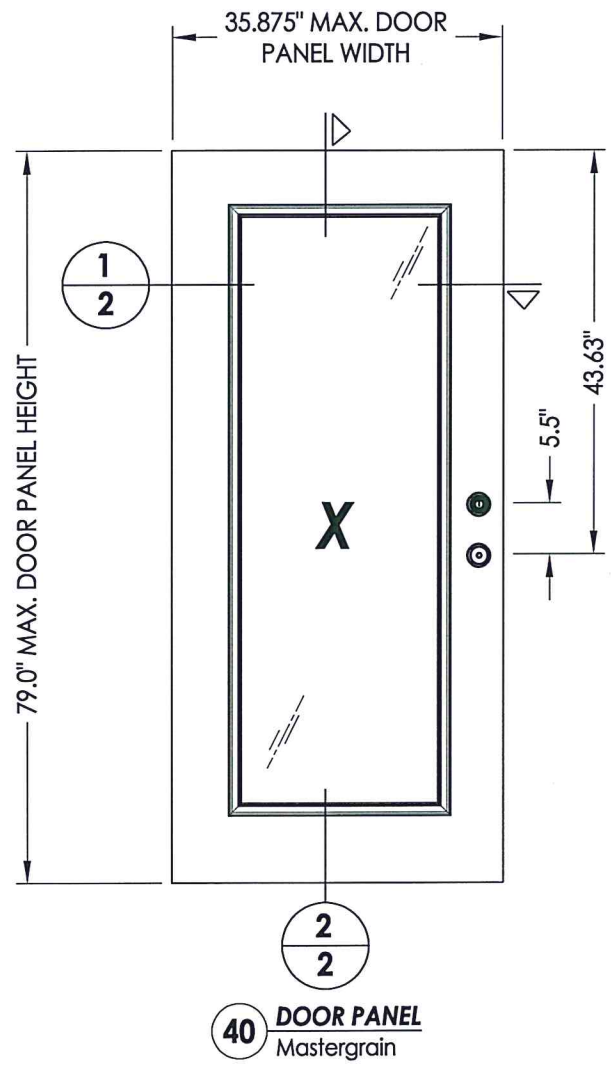
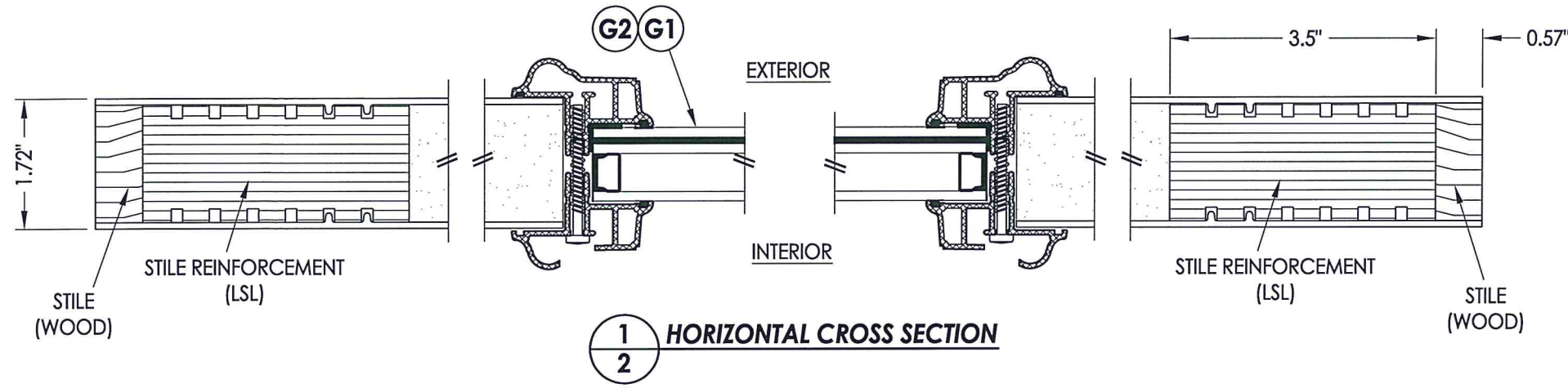
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CHK. BY: LFS

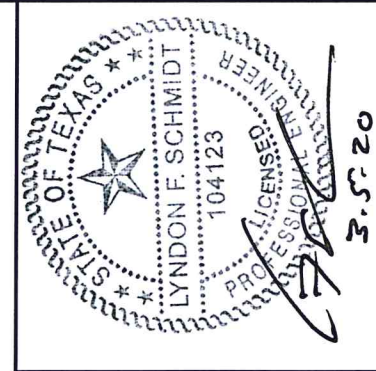
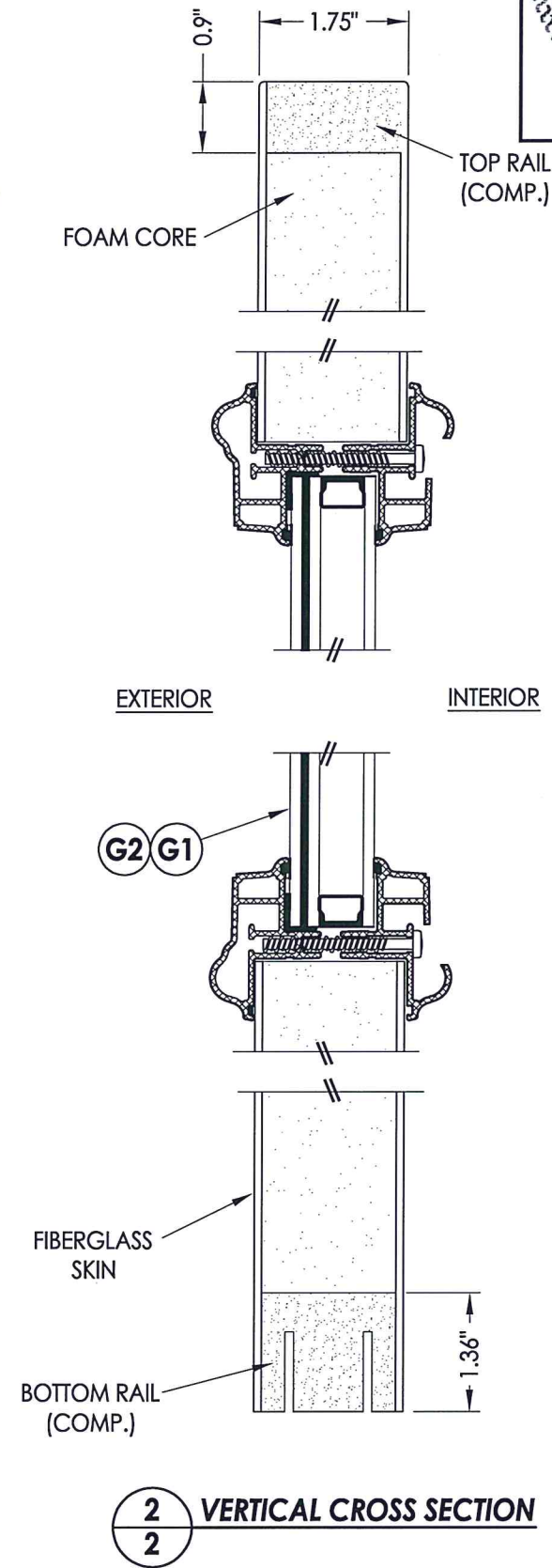
DRAWING NO.: TX-4888

SHEET 1 OF 9

R:\Clients\Mastergrain PERMANENT\B - Texas Dept of Ins\YDI - DR 990 Fiberglass Door - Glazed\_Impact (6-8)\Drawings\TX-4889-90.dwg, 2.1



FIBERGLASS DOOR SKIN: 0.095" MIN. THK.  
FOAM CORE: POLYURETHANE - 1.9 PCF MIN.

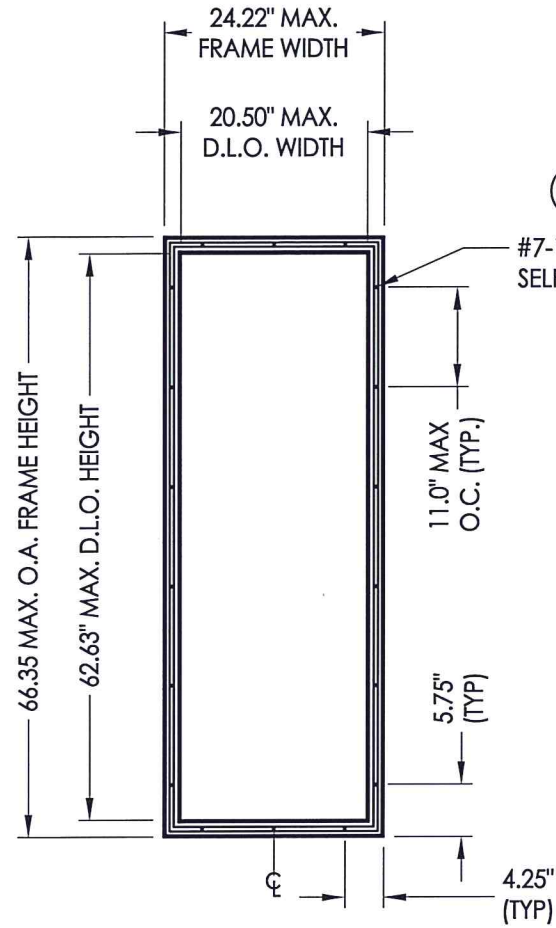


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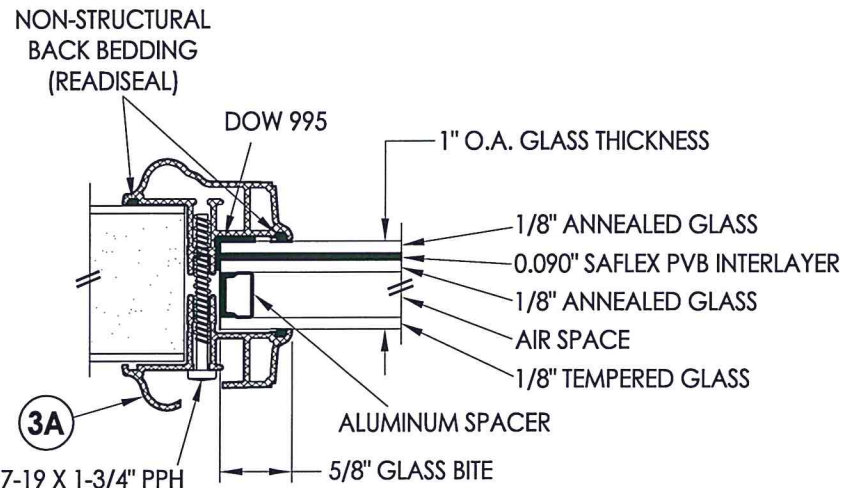
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Phone No.: 813.659.9197  
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CERTIFICATE OF REGISTRATION # F-11852

PRODUCT: MASTERGRAIN FIBERGLASS DOOR	
PART OR ASSEMBLY: DOOR PANEL DETAILS	
NO.	DATE
1	3/05/20
UPDATE TO 2018 IBC/IRC CODE	
LFS	BY
REVISIONS	
DATE: 9/04/18	
SCALE: N.T.S.	
DWG. BY: JK	
CHK. BY: LFS	
DRAWING NO.: TX-4888	
SHEET 2 OF 9	

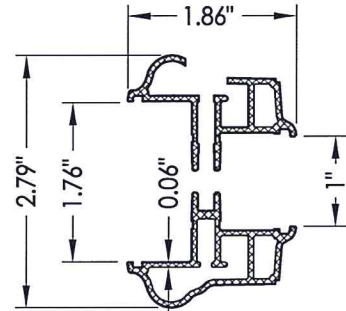
© 2018 R.W. BUILDING CONSULTANTS INC.



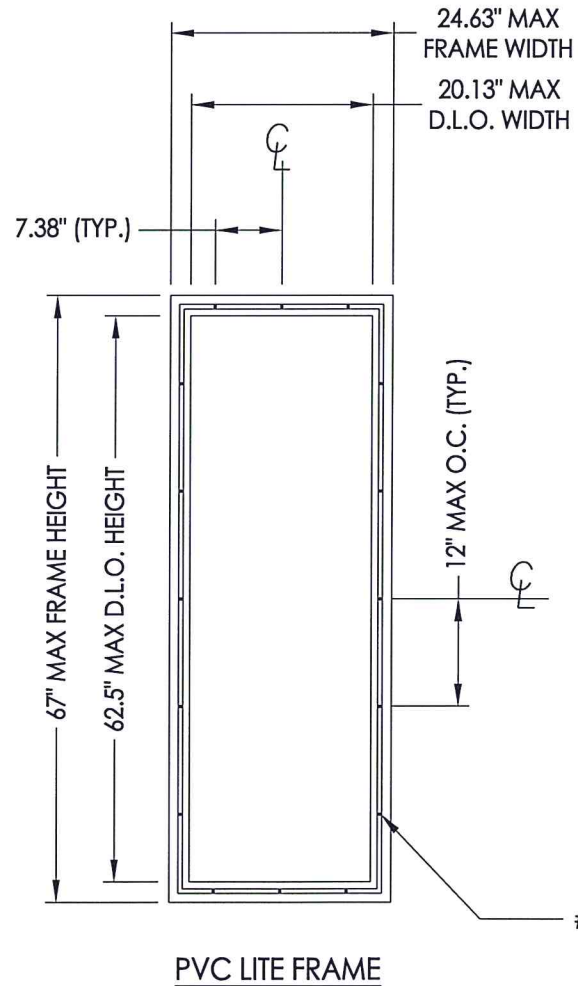
ODL LITE FRAME DETAIL



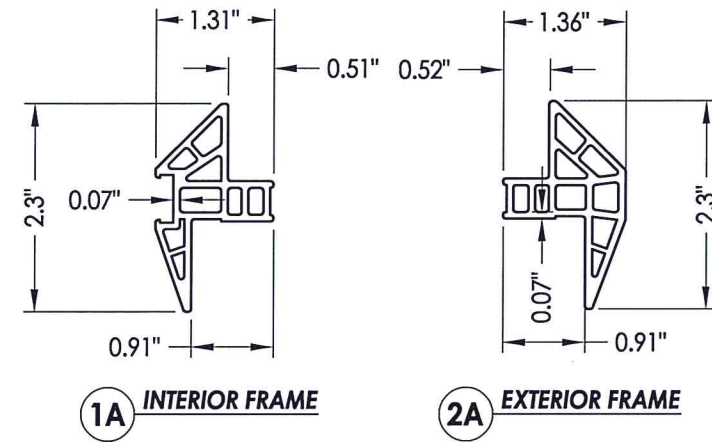
G1 GLAZING DETAIL



3A ODL LITE FRAME Aluminum

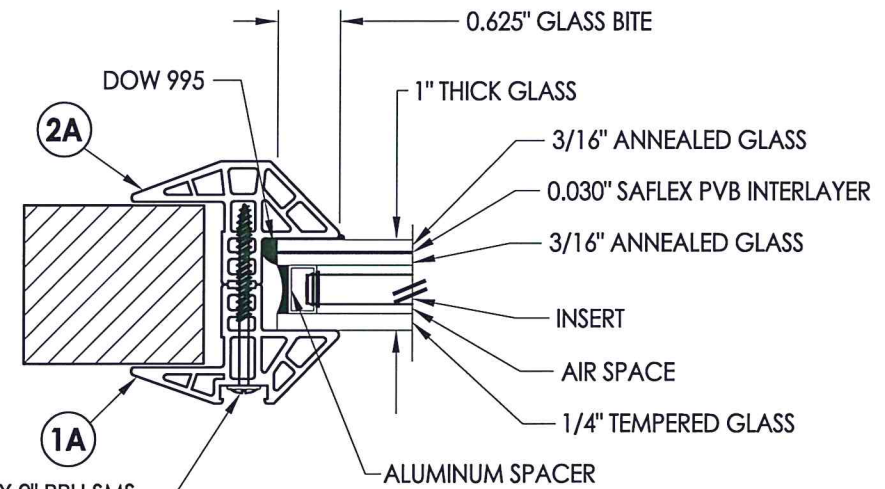


PVC LITE FRAME

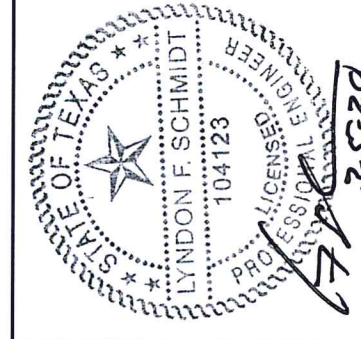


1A INTERIOR FRAME

2A EXTERIOR FRAME



G2 GLAZING DETAIL



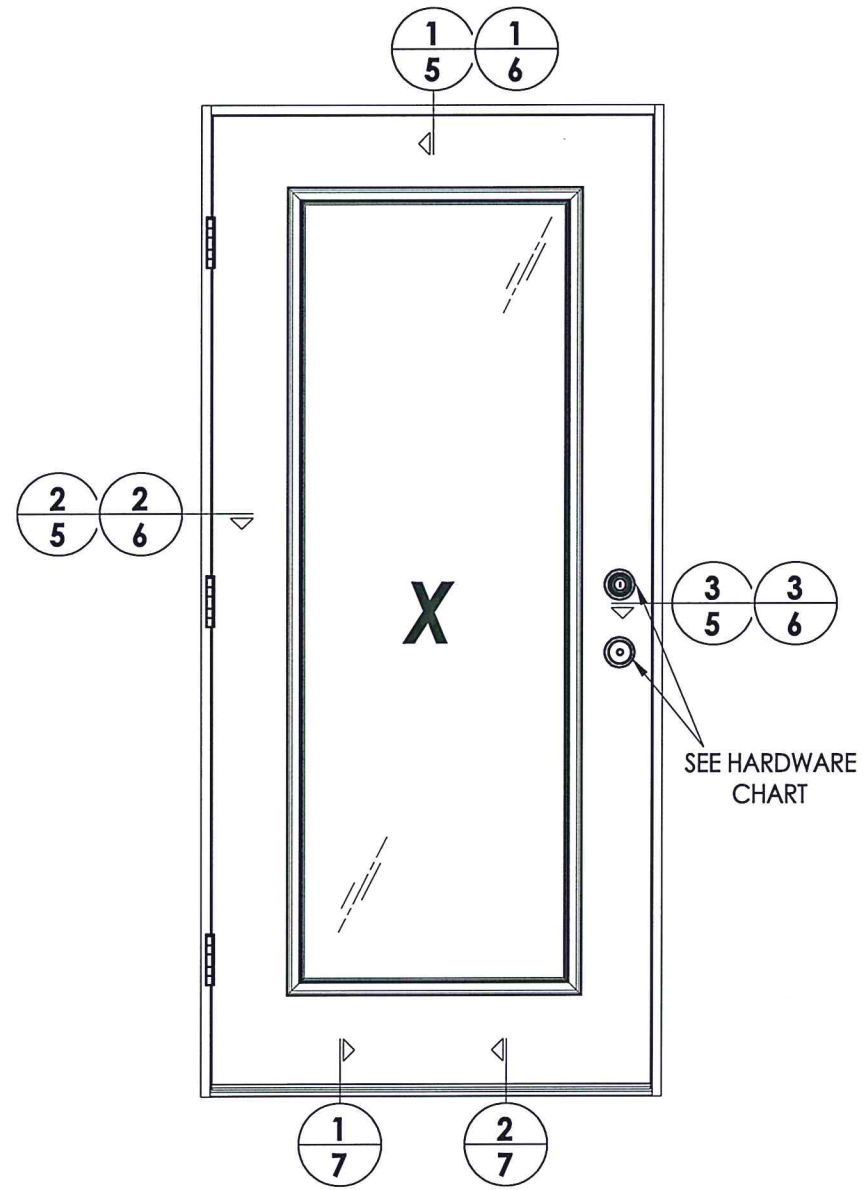
Documents Prepared By: Lyndon F. Schmidt, P.E.  
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CERTIFICATE OF REGISTRATION # F-11852

PRODUCT:	MASTERGRAIN FIBERGLASS DOOR
PART OR ASSEMBLY:	GLAZING DETAILS

NO.	DATE	DESCRIPTION	LFS	BY
1	3/05/20	UPDATE TO 2018 IBC/IRC CODE	LFS	

DATE:	9/04/18
SCALE:	N.T.S.
DWG. BY:	JK
CHK. BY:	LFS
DRAWING NO.:	TX-4889
SHEET	3 OF 9



HARDWARE TABLE	
MANUFACTURER	MODEL
PAMEX	KNOB: FLU600 DEADBOLT: FD261
KWIKSET	KNOB: SIGNATURE SERIES DEADBOLT: SIGNATURE SERIES (980)
SCHLAGE	KNOB: F51 DEADBOLT: B60N
HOPPE	MULTIPOINT: HLS™ ONE (3 pt. Manual Tongue)



Documents Prepared By: Lyndon F. Schmidt, P.E.  
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TEXAS BOARD OF PROFESSIONAL ENGINEERS  
CERTIFICATE OF REGISTRATION # F-11852

PRODUCT: MASTERGRAIN FIBERGLASS DOOR

PART OR ASSEMBLY: ELEVATION

REVISIONS	
NO.	DATE
1	3/05/20
	UPDATE TO 2018 IBC/IRC CODE
	LFS
	BY

DATE: 9/04/18

SCALE: N.T.S.

DWG. BY: JK

CHK. BY: LFS

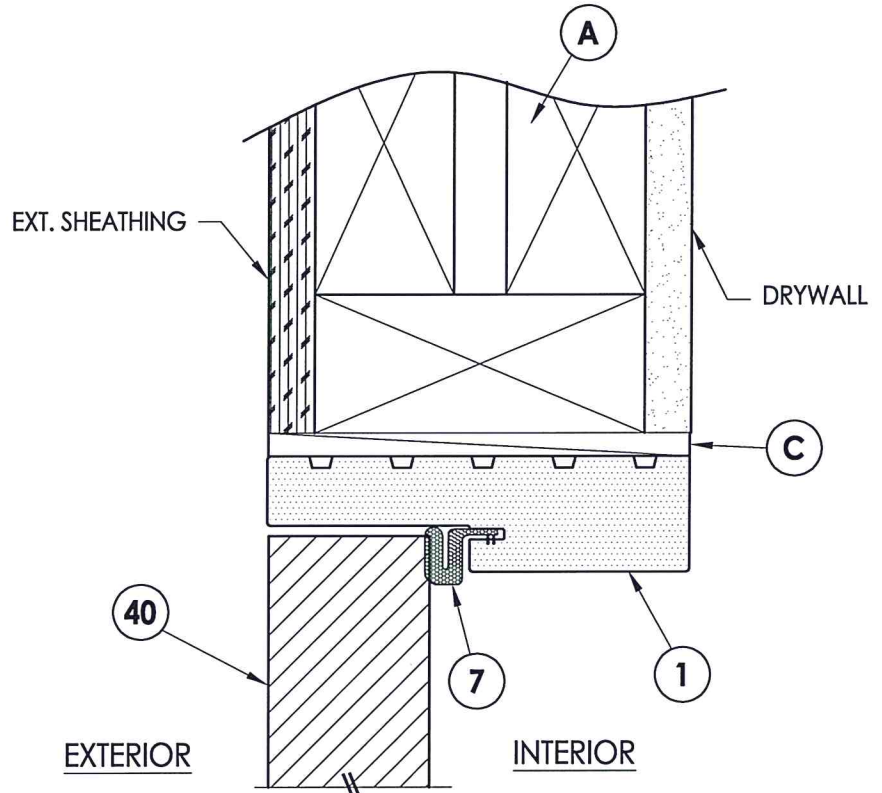
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SHEET 4 OF 9

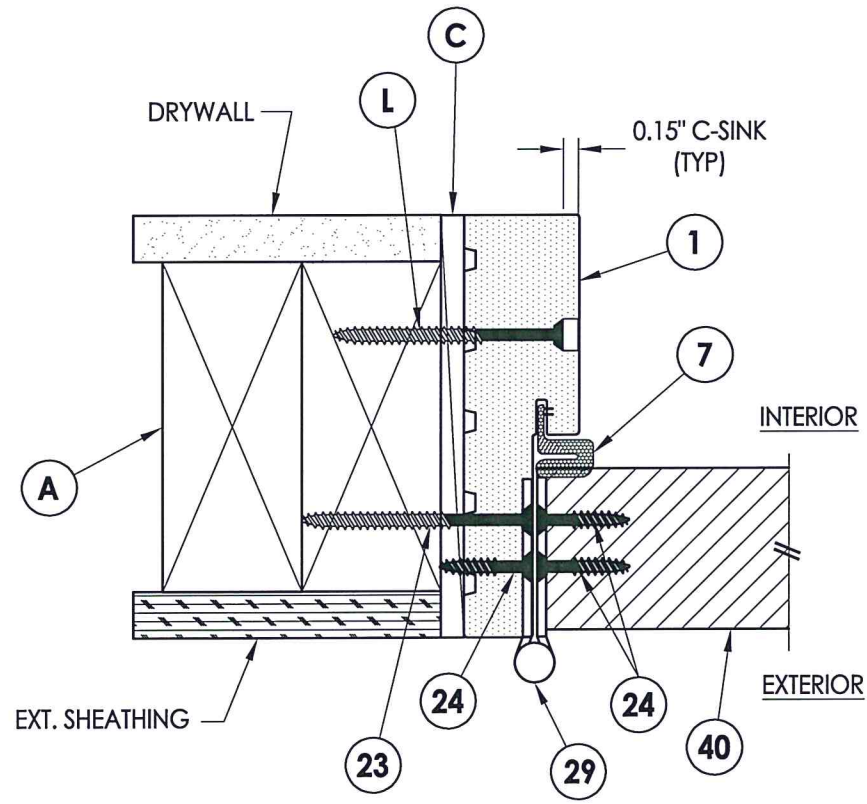


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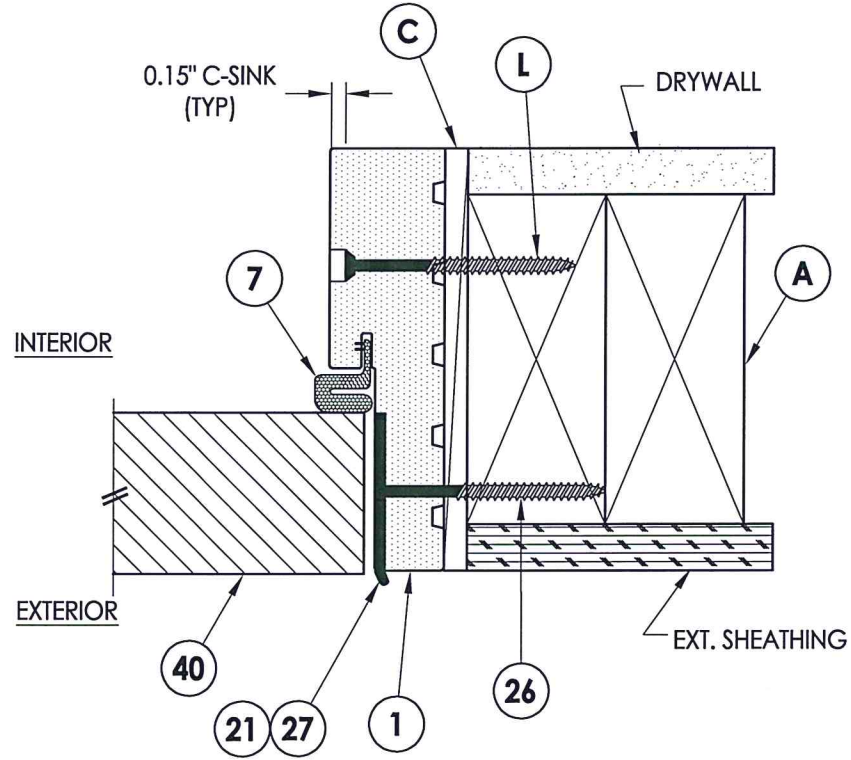
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CERTIFICATE OF REGISTRATION # F-11852



**1 VERTICAL CROSS SECTION**  
5 Shown w/ 2X Buck  
Outswing shown (Inswing similar)

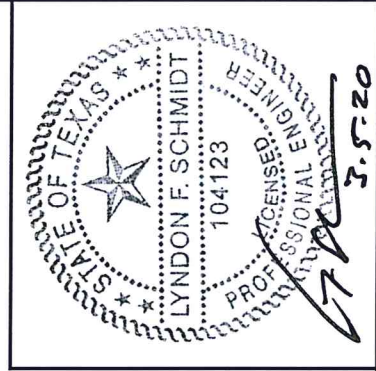


**2 HORIZONTAL CROSS SECTION**  
5 Shown w/ 2X Buck  
Outswing shown (Inswing similar)



**3 HORIZONTAL CROSS SECTION**  
5 Shown w/ 2X Buck  
Outswing shown (Inswing similar)

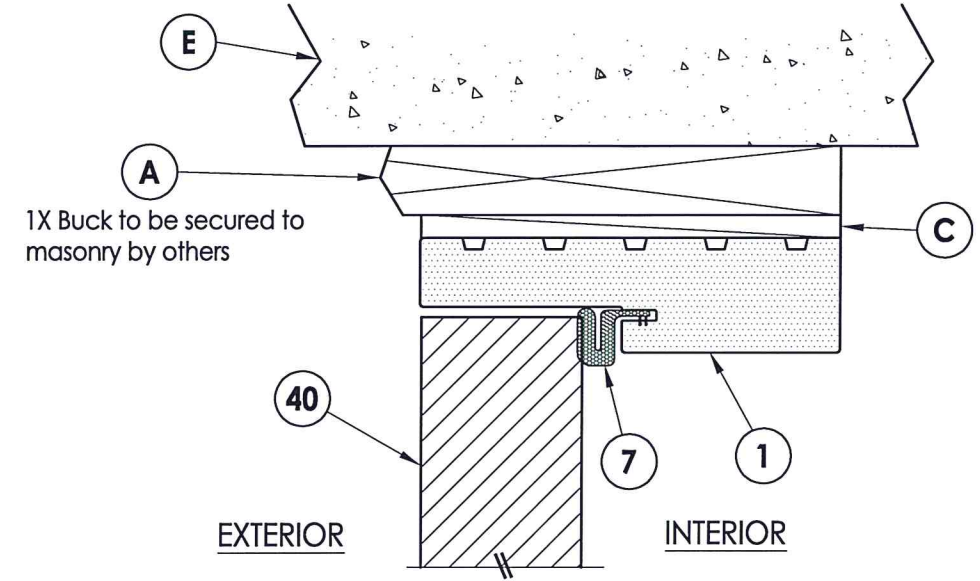
PRODUCT: MASTERGRAIN FIBERGLASS DOOR	
PART OR ASSEMBLY: HORIZONTAL & VERTICAL CROSS SECTIONS (2X BUCK)	
NO.	DATE
1	3/05/20
UPDATE TO 2018 IBC/IRC CODE	
LFS	BY
REVISIONS	
DATE: 9/04/18	
SCALE: N.T.S.	
DWG. BY: JK	
CHK. BY: LFS	
DRAWING NO.: TX-4888	
SHEET 5 of 9	



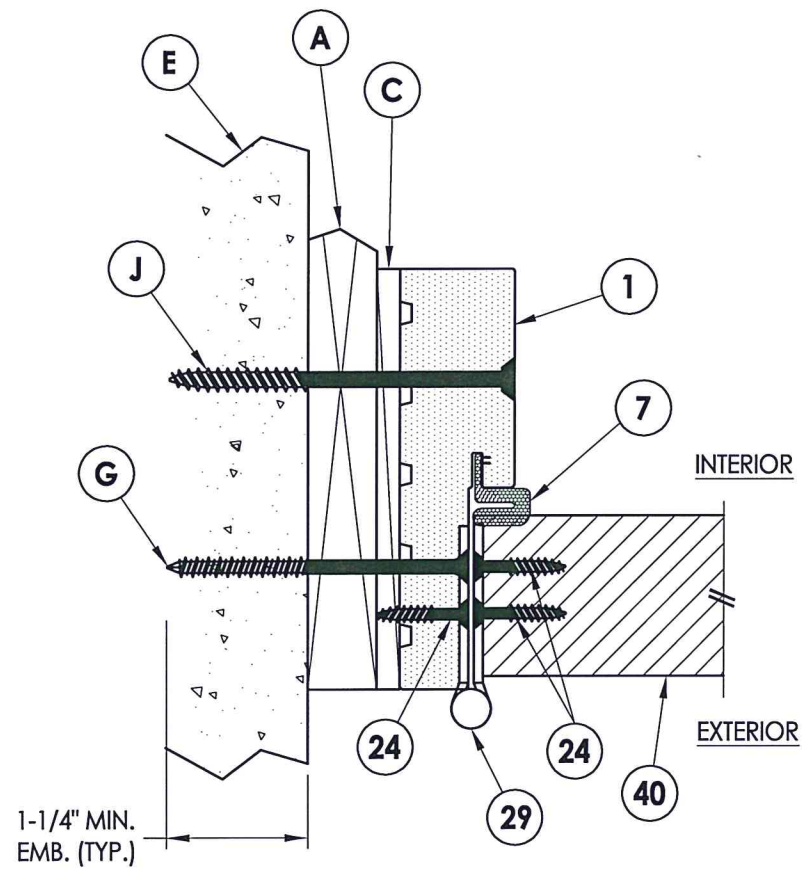
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 TEXAS P.E. #104123

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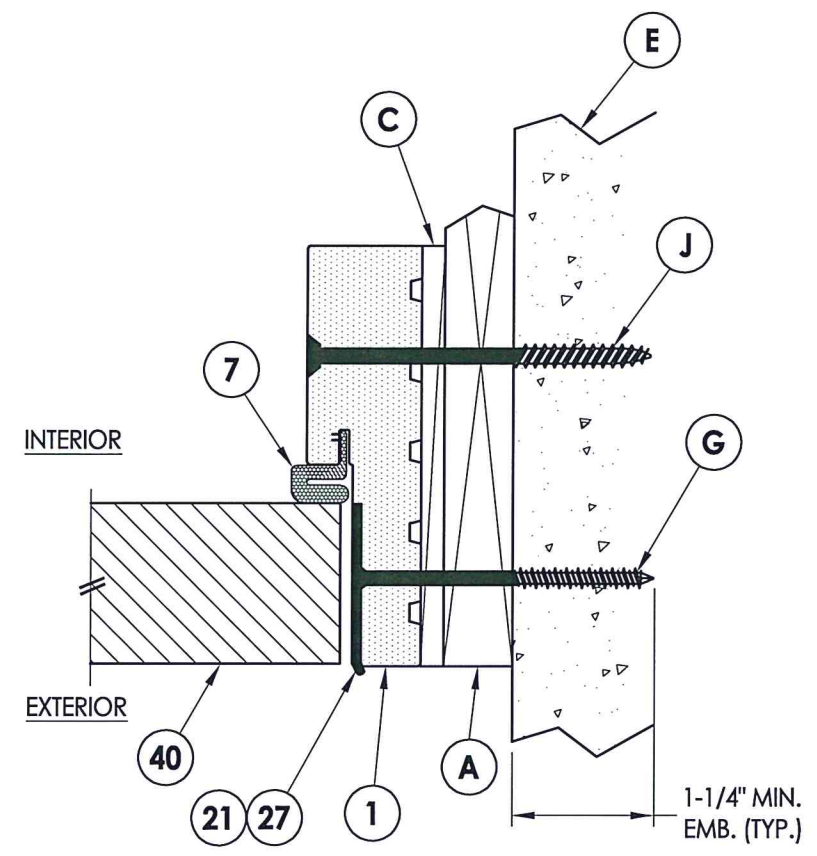
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**1 VERTICAL CROSS SECTION**  
 6 Shown w/ 1X sub-buck  
 Outswing shown (Inswing similar)



**2 HORIZONTAL CROSS SECTION**  
 6 Shown w/ 1X sub-buck  
 Outswing shown (Inswing similar)



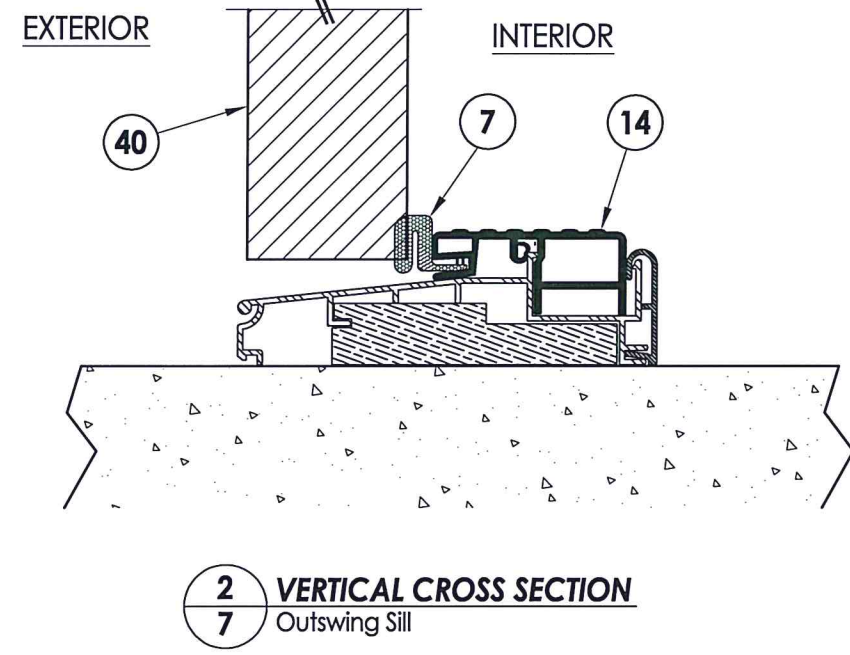
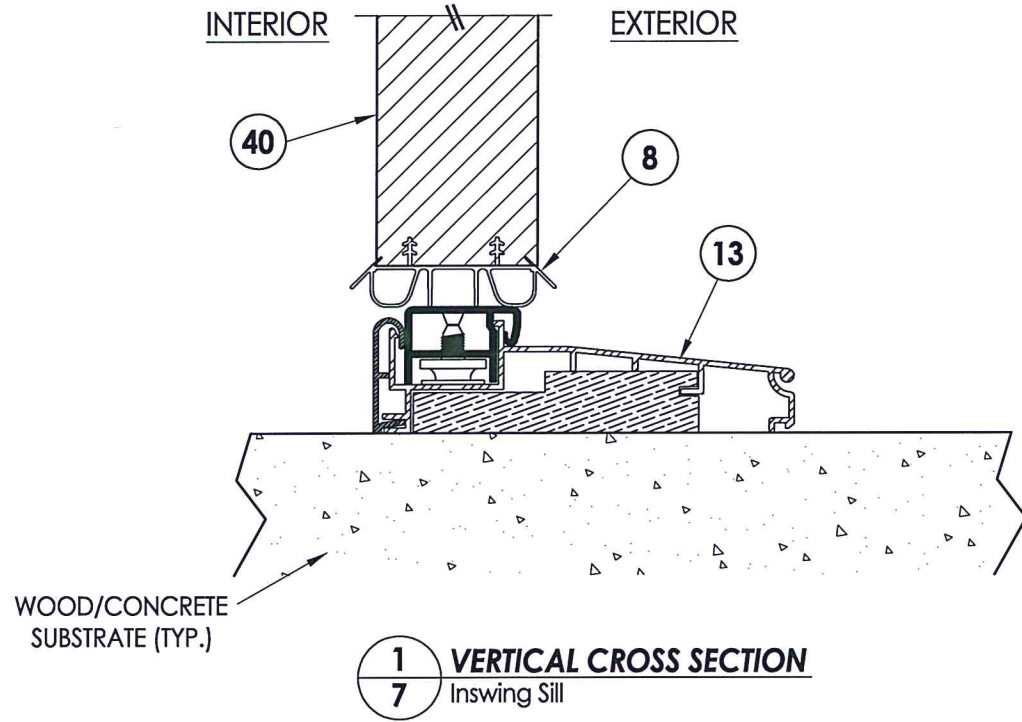
**3 HORIZONTAL CROSS SECTION**  
 6 Shown w/ 1X sub-buck  
 Outswing shown (Inswing similar)

PRODUCT: MASTERGRAIN FIBERGLASS DOOR

PART OR ASSEMBLY: HORIZONTAL & VERTICAL CROSS SECTIONS (1X BUCK)

NO.	DATE	REVISIONS
1	3/05/20	UPDATE TO 2018 IBC/IRC CODE
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		BY

DATE: 9/04/18  
 SCALE: N.T.S.  
 DWG. BY: JK  
 CHK. BY: LFS  
 DRAWING NO.: TX-4888  
 SHEET 6 OF 9

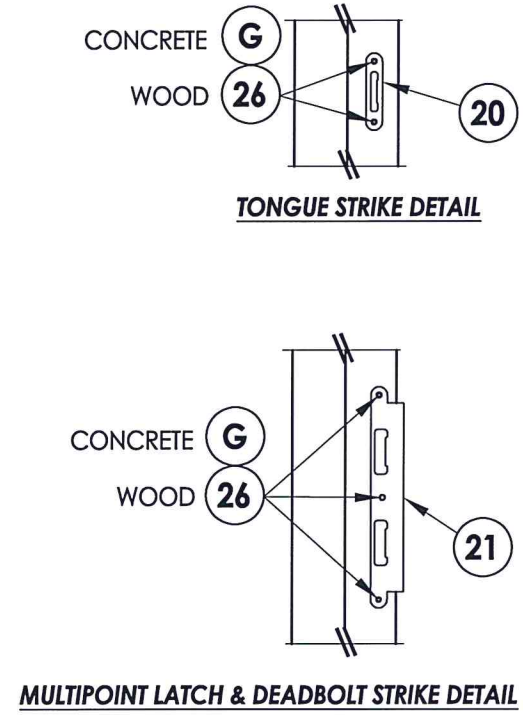
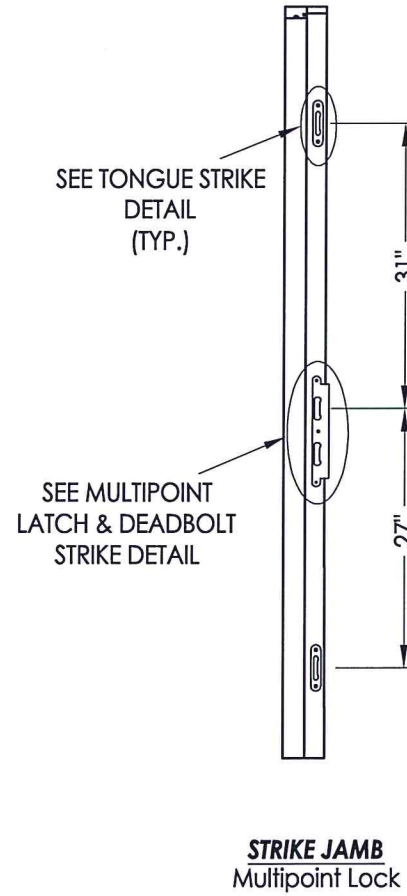
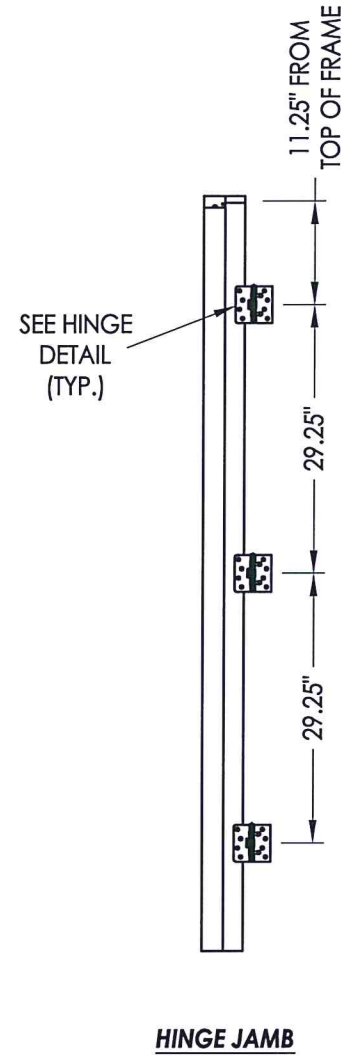
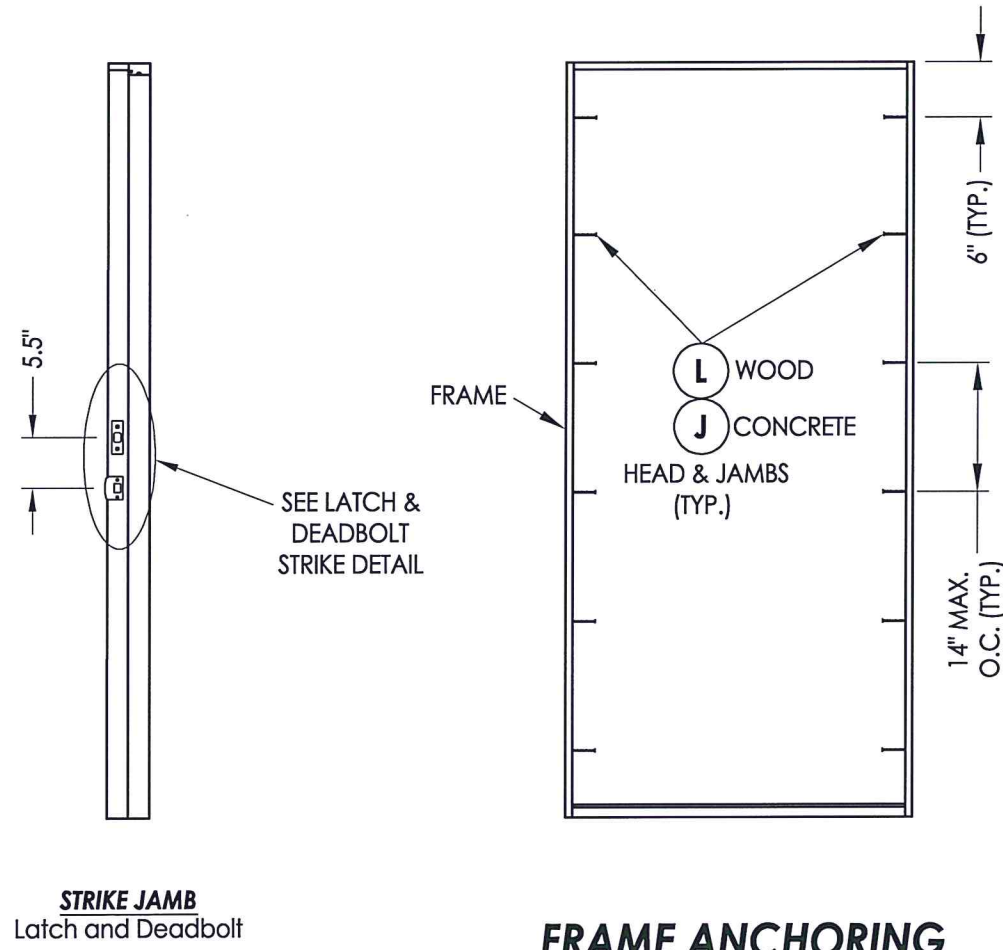
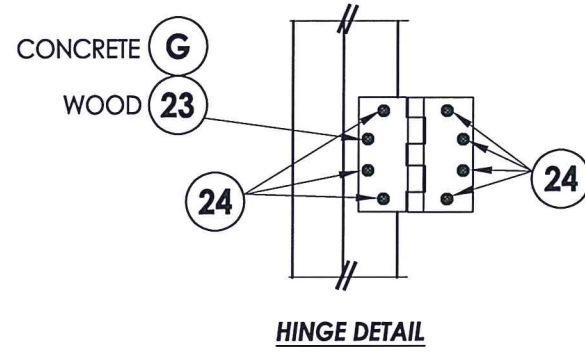
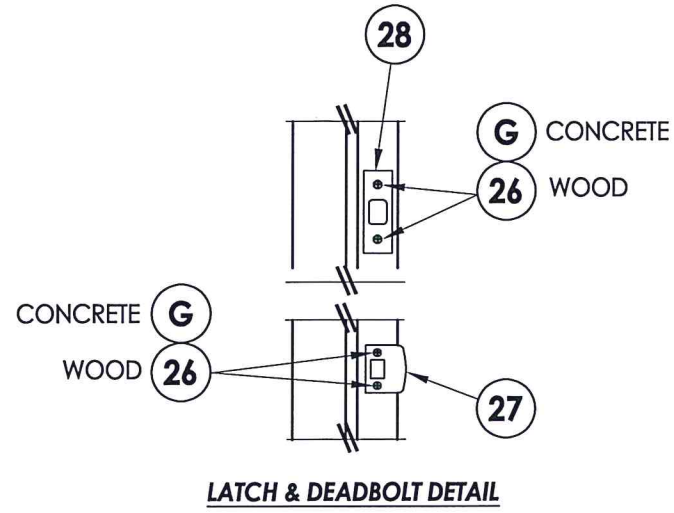


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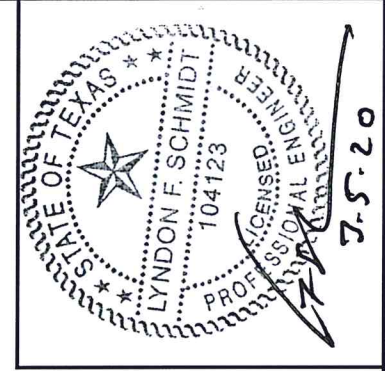
TEXAS BOARD OF PROFESSIONAL ENGINEERS  
CERTIFICATE OF REGISTRATION # F-11852

PRODUCT: MASTERGRAIN FIBERGLASS DOOR	
PART OR ASSEMBLY: VERTICAL CROSS SECTIONS (THRESHOLDS)	
NO.	DATE
1	3/05/20
UPDATE TO 2018 IBC/IRC CODE	
LFS	BY
REVISIONS	
DATE: 9/04/18	
SCALE: N.T.S.	
DWG. BY: JK	
CHK. BY: LFS	
DRAWING NO.: TX-4888	
SHEET 7 OF 9	



**LATCH & DEADBOLT HARDWARE DETAILS**

**MULTIPOINT LOCK HARDWARE DETAILS**



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TEXAS BOARD OF PROFESSIONAL ENGINEERS  
CERTIFICATE OF REGISTRATION # F-11852

PRODUCT: MASTERGRAIN FIBERGLASS DOOR

PART OR ASSEMBLY: HARDWARE DETAILS

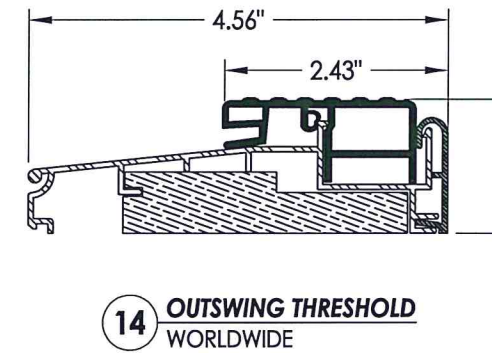
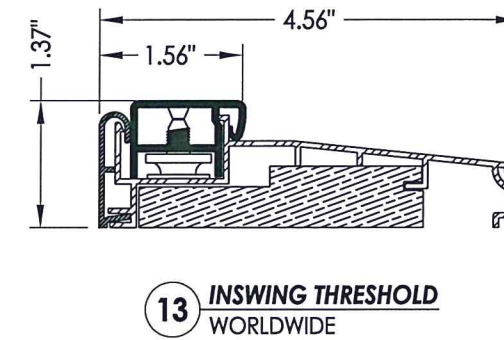
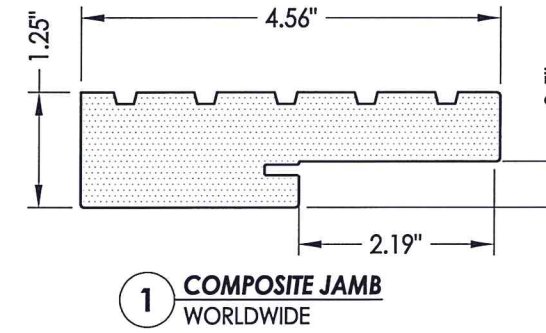
NO.	DATE	DESCRIPTION	BY
1	3/05/20	UPDATE TO 2018 IBC/IRC CODE	LFS

DATE: 9/04/18  
SCALE: N.T.S.  
DWG. BY: JK  
CHK. BY: LFS  
DRAWING NO.: TX-4888  
SHEET 8 OF 9



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BILL OF MATERIALS		
ITEM #	DESCRIPTION	MATERIAL
A	2X FRAMING (SG >= 0.42)	WOOD
B	1X BUCK (SG >= 0.42)	WOOD
C	1/4" MAX. SHIM SPACE	-
E	MASONRY - 3,000 PSI MIN. CONCRETE CONFORMING TO ACI 301 OR HOLLOW BLOCK CONFORMING TO ASTM C90	CONCRETE
G	3/16" X 3-1/4" PFH ITW CONCRETE SCREW	STEEL
J	1/4" X 3-3/4" PFH ELCO OR ITW CONCRETE SCREW	STEEL
L	#10 X 2-1/2" PFH WOOD SCREW (1.15" MIN. EMBEDMENT)	STEEL
1	COMPOSITE JAMB	COMP
7	WEATHERSTRIP	FOAM
8	SWEEP	VINYL
13	INSWING ADJUSTABLE THRESHOLD	ALUM/COMP
14	OUTSWING BUMP THRESHOLD	ALUM/COMP
20	MULTIPOINT TONGUE STRIKE PLATE	STEEL
21	MULTIPOINT LATCH & DEADBOLT STRIKE PLATE	STEEL
23	#12 X 2-1/2" PFH WOOD SCREW	STEEL
24	#12 x 1" PFH WOOD SCREW	STEEL
26	#8 X 2-1/2" PFH WOOD SCREW	STEEL
27	LATCH STRIKE PLATE	STEEL
28	DEADBOLT STRIKE PLATE	STEEL
29	4.5" X 4.5" HINGE	STEEL
40	DOOR PANEL	-



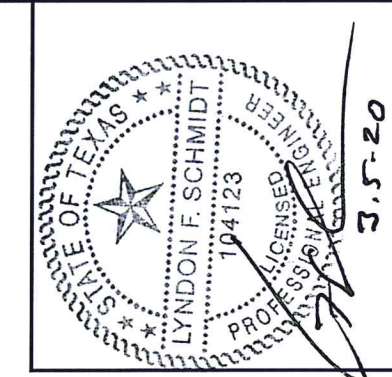
**CONCRETE ANCHOR NOTES:**

- Concrete anchor locations at the corners may be adjusted to maintain the min. edge distance to mortar joints.
- Concrete anchor locations noted as "MAX. ON CENTER" must be adjusted to maintain the min. edge distance to mortar joints, additional concrete anchors may be required to ensure the "MAX. ON CENTER" dimension are not exceeded.
- Concrete anchor table:

ANCHOR TYPE	ANCHOR SIZE	MIN. EMBEDMENT	MIN. CLEARANCE TO MASONRY EDGE	MIN. CLEARANCE TO ADJACENT ANCHOR
ITW TAPCON®	1/4"	1-1/4"	2"	4"
ELCO ULTRACON®	1/4"	1-1/4"	1"	4"
ITW TAPCON®	3/16"	1-1/4"	3"	1-1/2"

**WOOD SCREW INSTALLATION NOTES:**

- Maintain a minimum 5/8" edge distance, 1" end distance, & 1" o.c. spacing of wood screws to prevent the splitting of wood.



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TEXAS BOARD OF PROFESSIONAL ENGINEERS  
CERTIFICATE OF REGISTRATION # F-11852

PRODUCT: MASTERGRAIN FIBERGLASS DOOR  
PART OR ASSEMBLY: BILL OF MATERIALS AND COMPONENTS

NO.	DATE	DESCRIPTION	BY
1	3/05/20	UPDATE TO 2018 IBC/IRC CODE	LFS

REVISIONS

DATE: 9/04/18  
SCALE: N.T.S.  
DWG. BY: JK  
CHK. BY: LFS  
DRAWING NO.: TX-4888  
SHEET 9 OF 9