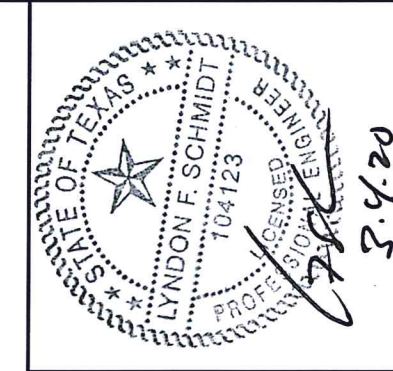


# MASTERGRAIN

16566 HIGHWAY 12 PO BOX 399 MIDLAND, ONTARIO, CANADA

## OPAQUE FIBERGLASS SINGLE DOOR w/ or w/o SIDELITES INSWING "NON-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 Opaque 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. When used in areas requiring wind-borne debris protection this product is required to be protected with an impact resistant covering that complies with Section R301.2.1.2 of the IRC and Section 1609.2 of the IBC.
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.

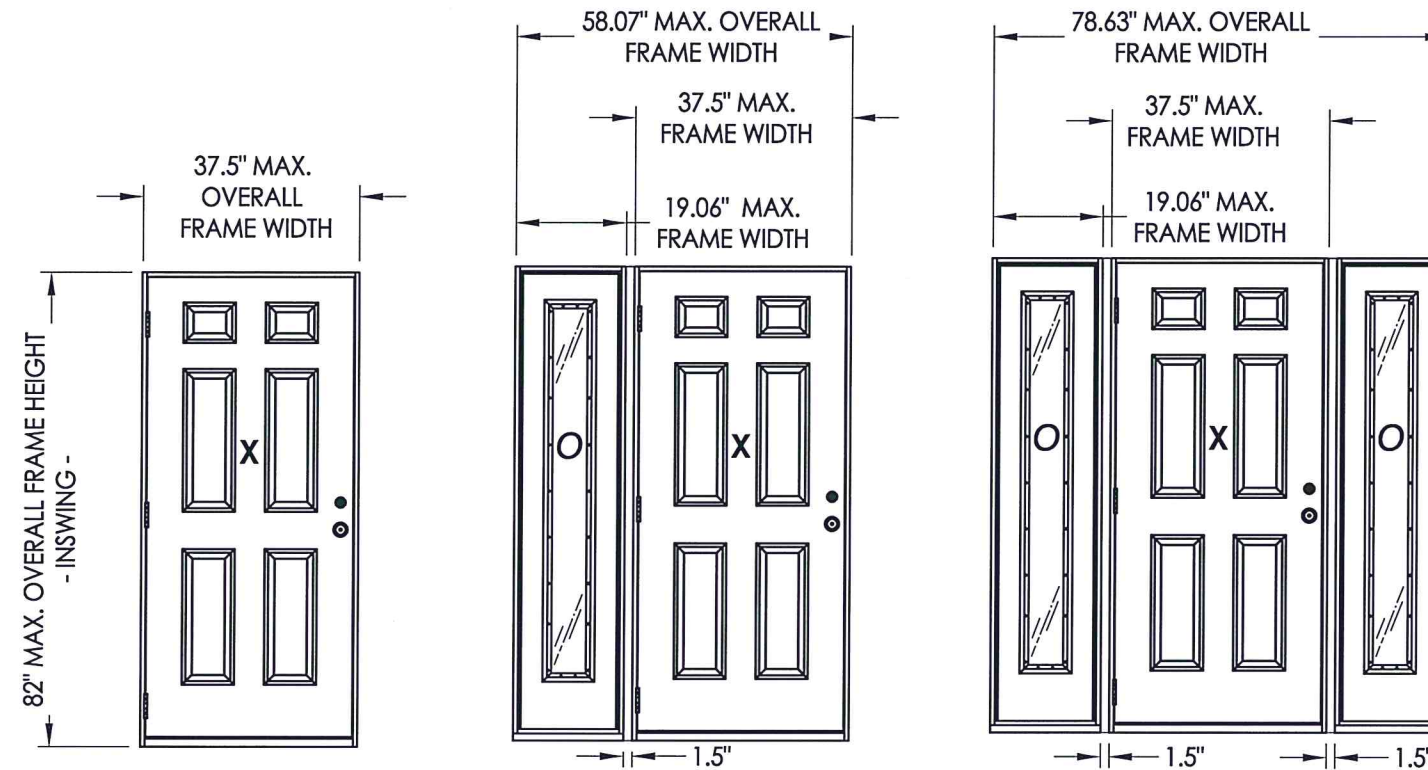
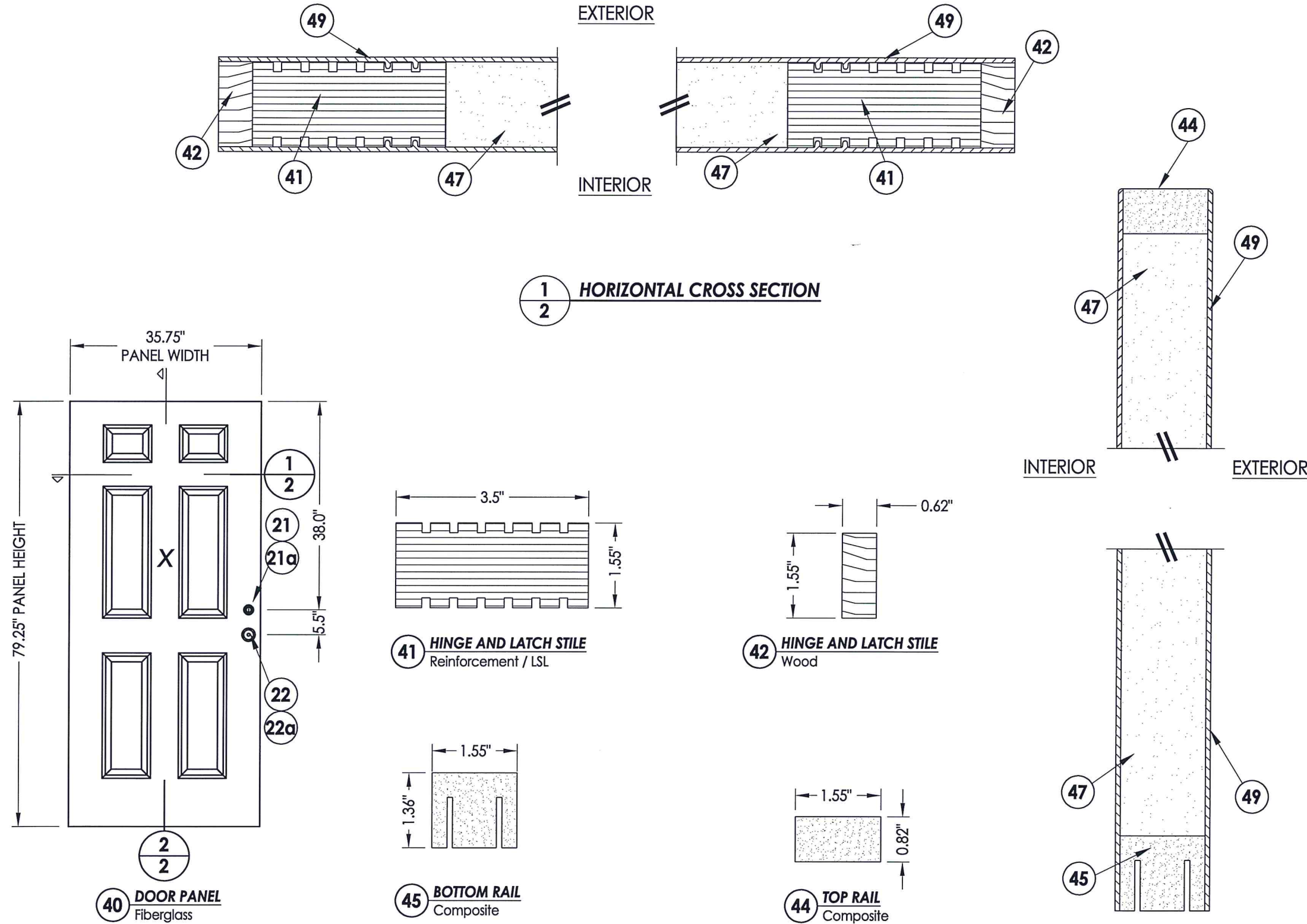


TABLE OF CONTENTS	
SHEET#	DESCRIPTION
1	Typical elevations, design pressures & general notes
2	Door panel details
3	Sidelite panel details and glazing detail
4	Elevations
5	Horizontal cross section
6	Vertical cross sections
7	Vertical cross sections
8	Frame anchoring
9	Frame anchoring
10	Bill of materials and components

CONFIGURATION	MAX. FRAME DIMENSION	MAX. D.L.O. DIMENSION	DESIGN PRESSURE (PSF) INSWING	
			POSITIVE	NEGATIVE
X	37.5" x 82.0"	N/A	+55.0	-60.0
OX / XO	58.07" x 82.0"	7.0" x 63.12"	+55.0	-60.0
OXO	78.63" x 82.0"	7.0" x 63.12"	+55.0	-60.0

PRODUCT:	MASTERGRAIN FIBERGLASS DOOR	
PART OR ASSEMBLY:	TYPICAL ELEVATION, DESIGN PRESSURES & GENERAL NOTES	
NO.	DATE	BY
1	3/03/20	LFS
UPDATE TO 2018 IBC/IRC CODE		
REVISIONS		
DATE:	01/04/10	
SCALE:	N.T.S.	
DWG. BY:	JK	
CHK. BY:	LFS	
DRAWING NO.:	TX-4050	
SHEET	1 OF 10	



**1**  
**2** HORIZONTAL CROSS SECTION

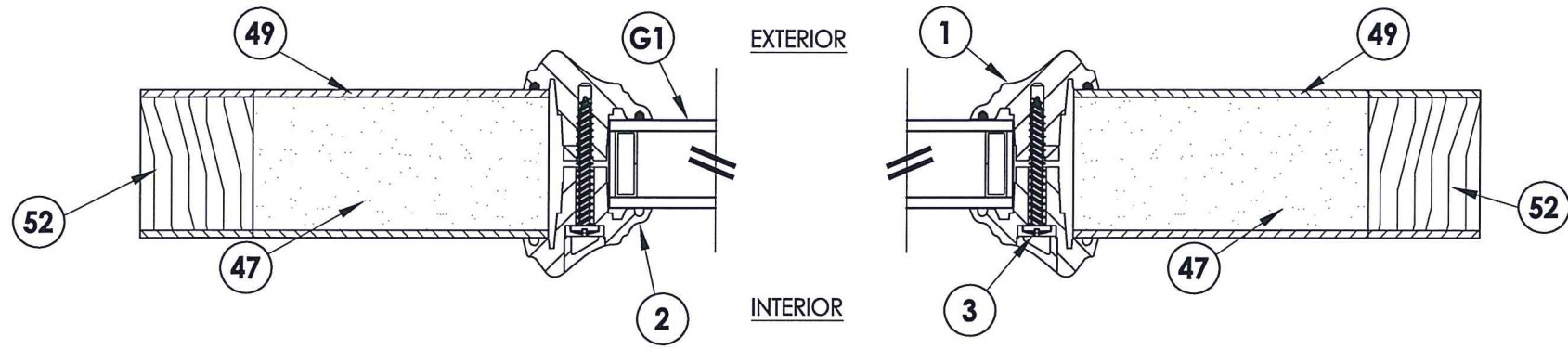
**2**  
**2** VERTICAL CROSS SECTION



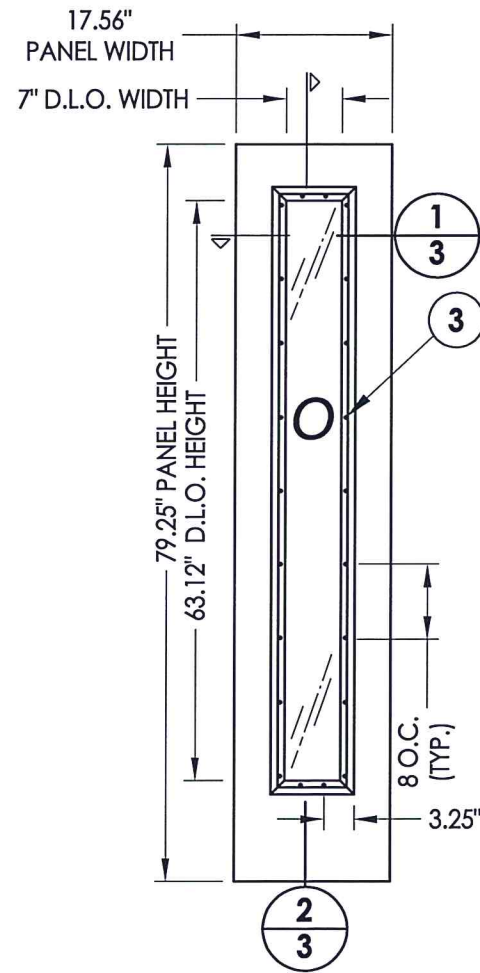
Documents Prepared By: Lyndon F. Schmidt, P.E.  
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CERTIFICATE OF REGISTRATION # F-11852

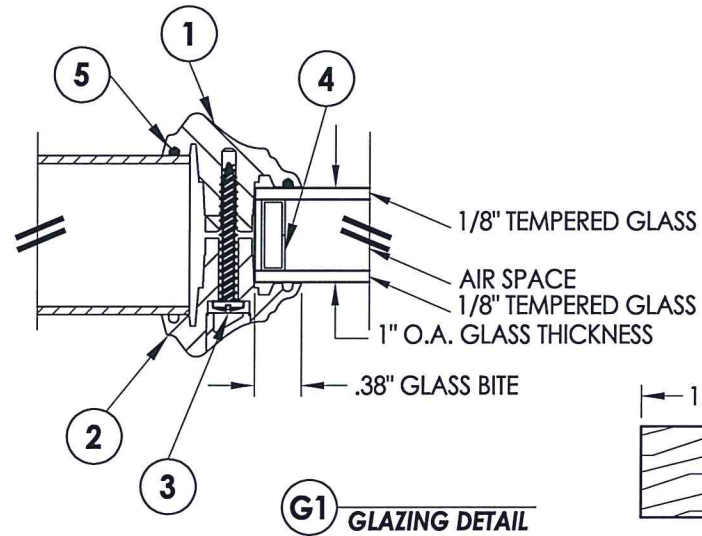
PRODUCT: MASTERGRAIN FIBERGLASS DOOR	
PART OR ASSEMBLY: DOOR PANEL DETAILS	
NO.	DATE
1	3/03/20
UPDATE TO 2018 IBC/IRC CODE	
LFS	BY
REVISIONS	
DATE: 01/04/10	
SCALE: N.T.S.	
DWG. BY: JK	
CHK. BY: LFS	
DRAWING NO.: TX-4050	
SHEET 2 OF 10	



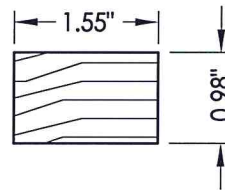
**1**  
**3** **HORIZONTAL CROSS SECTION**



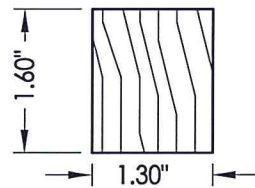
**50** **SIDELITE PANEL**  
Fiberglass



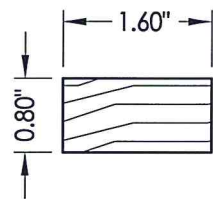
**G1** **GLAZING DETAIL**



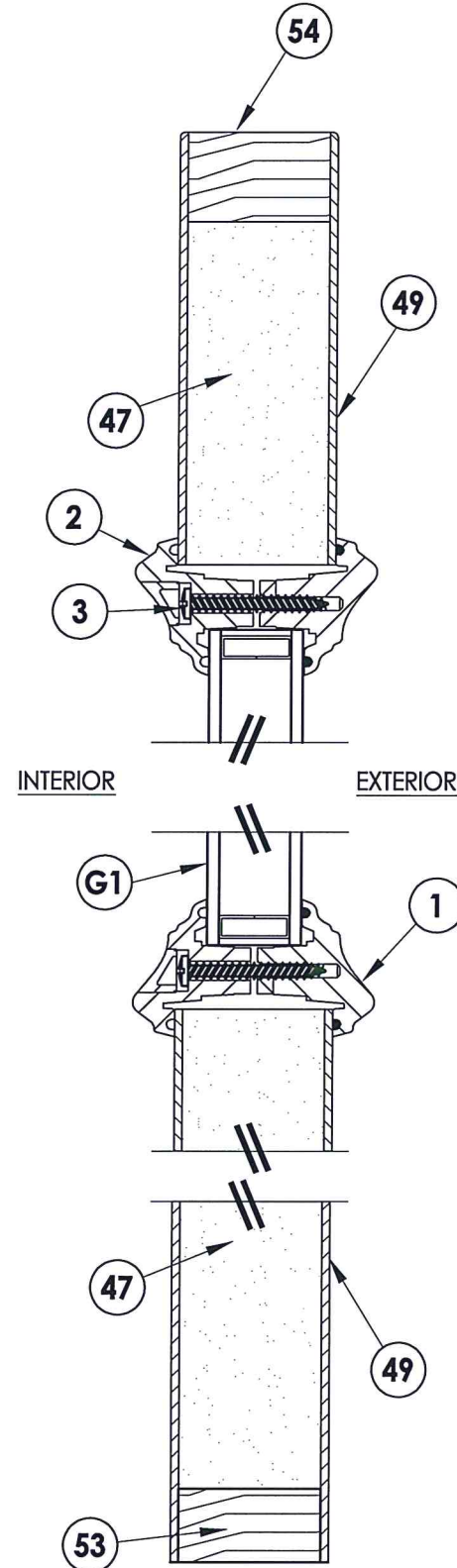
**54** **SIDELITE TOP RAIL**  
Wood



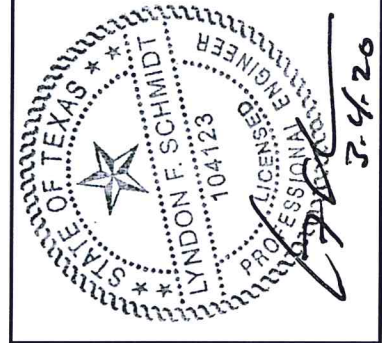
**52** **SIDELITE STILE**  
Wood



**53** **SIDELITE BOTTOM RAIL**  
Wood



**2**  
**3** **VERTICAL CROSS SECTION**



Documents Prepared By: Lyndon F. Schmidt, P.E.  
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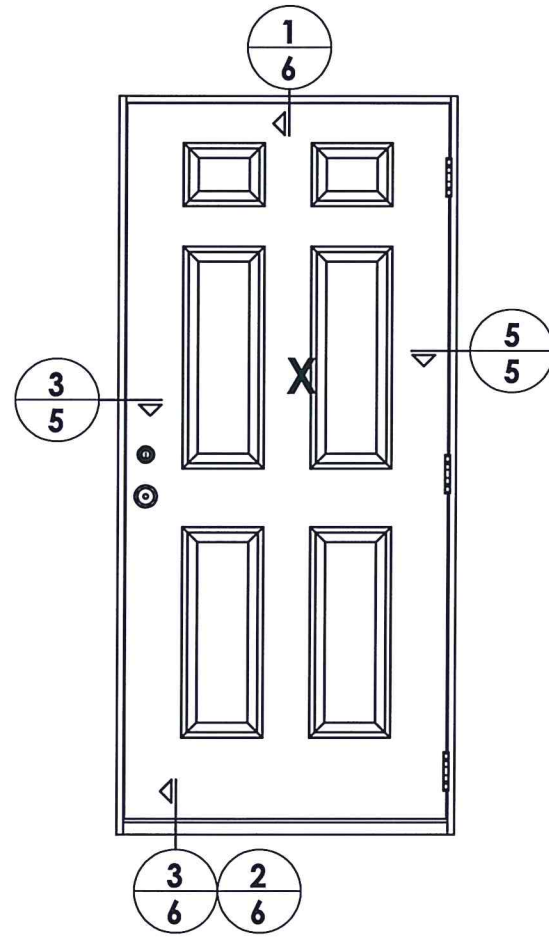
**RW** BUILDING CONSULTANTS, INC.  
P.O. Box 230 Valrico FL 33595  
Phone No.: 813.659.9197

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

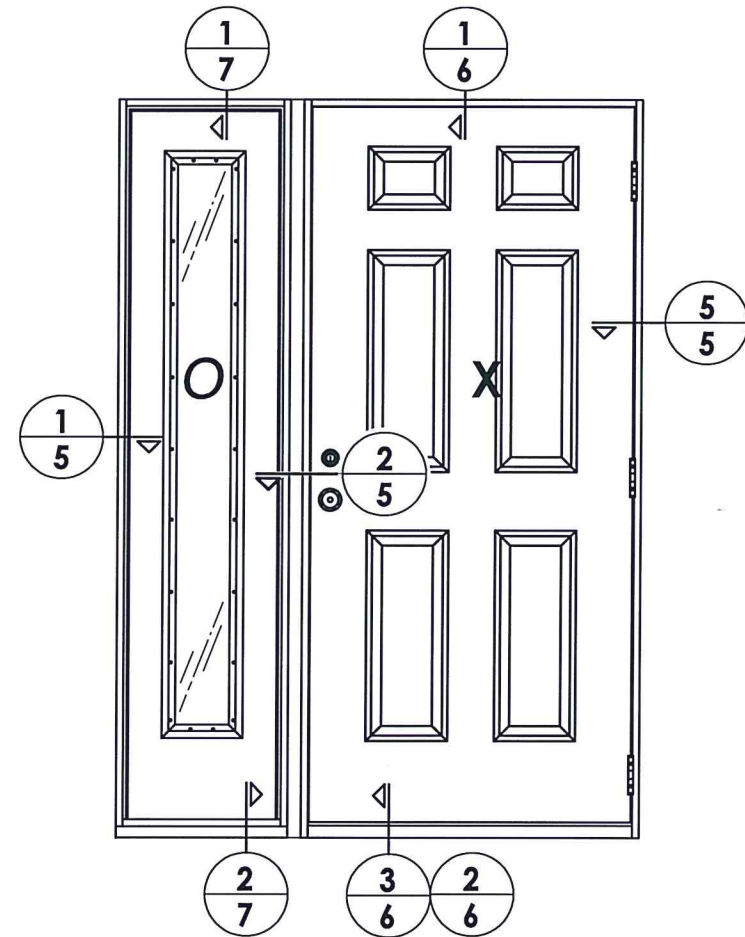
PRODUCT:	MASTERGRAIN FIBERGLASS DOOR
PART OR ASSEMBLY:	SIDELITE PANEL DETAILS AND GLAZING DETAIL

NO.	DATE	DESCRIPTION	BY
1	3/03/20	UPDATE TO 2018 IBC/IRC CODE	LFS

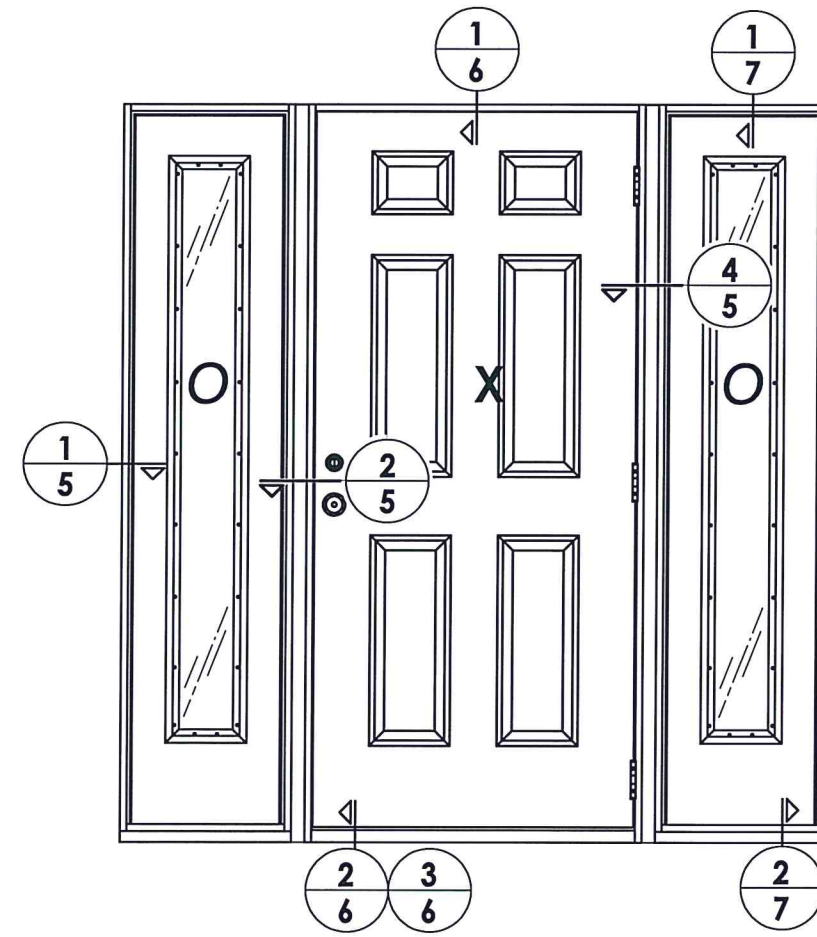
DATE:	01/04/10
SCALE:	N.T.S.
DWG. BY:	JK
CHK. BY:	LFS
DRAWING NO.:	TX-4050
SHEET	3 OF 10



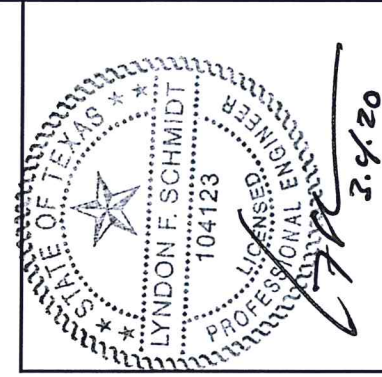
ELEVATION (X)



ELEVATION (OX / XO)



ELEVATION (OXO)



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

PRODUCT: MASTERGRAIN  
FIBERGLASS DOOR

PART OR ASSEMBLY:  
ELEVATIONS

NO.	DATE	DESCRIPTION	LFS	BY
1	3/03/20	UPDATE TO 2018 IBC/IRC CODE	LFS	

REVISIONS

DATE: 01/04/10

SCALE: N.T.S.

DWG. BY: JK

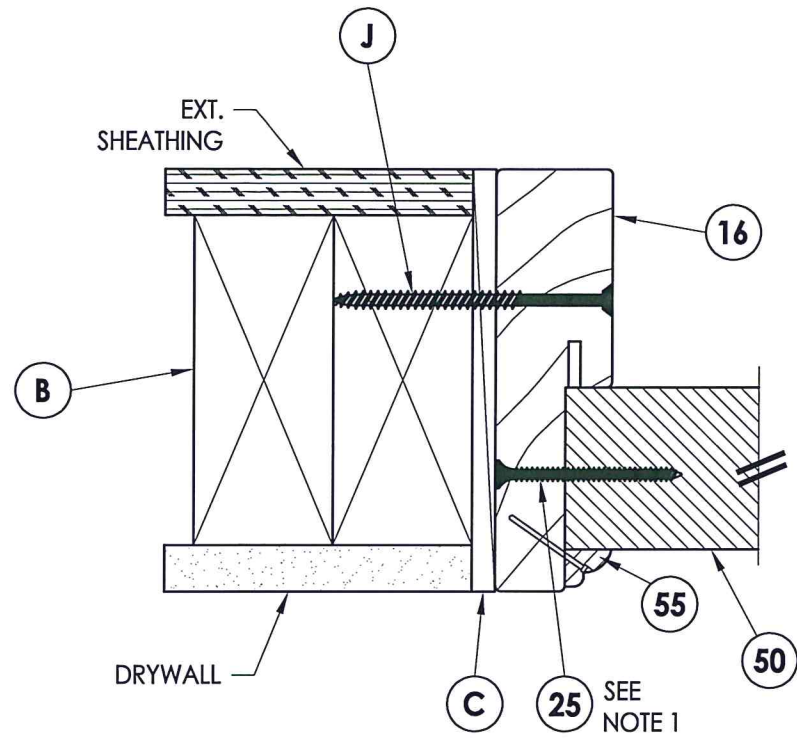
CHK. BY: LFS

DRAWING NO.:

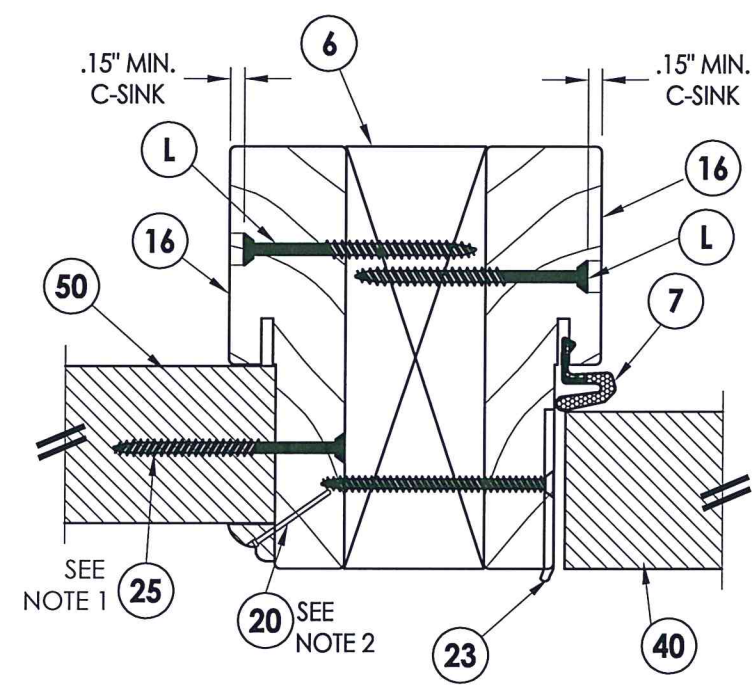
TX-4050

SHEET 4 OF 10

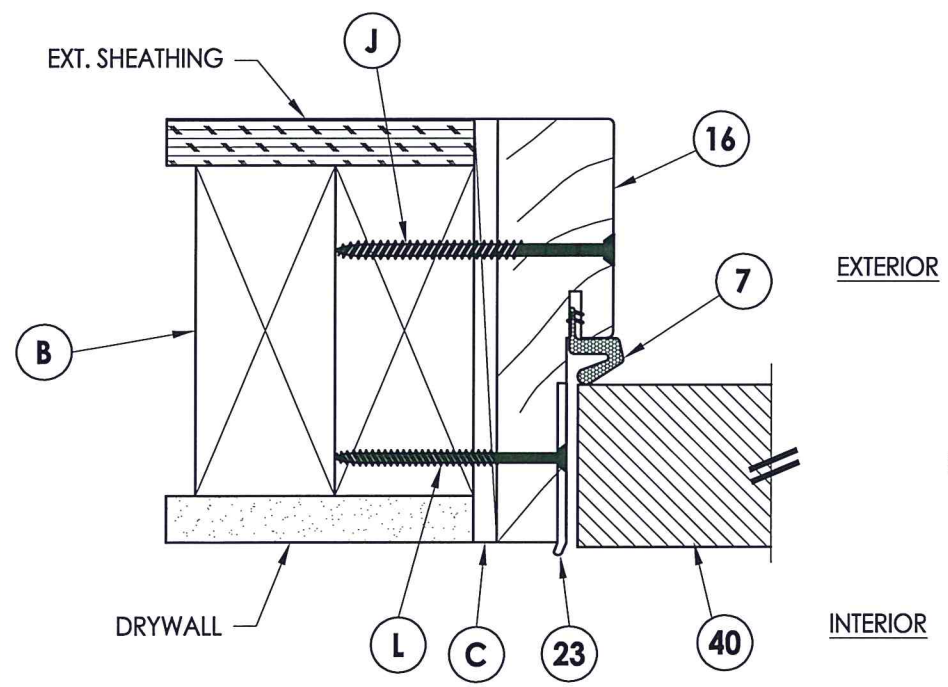
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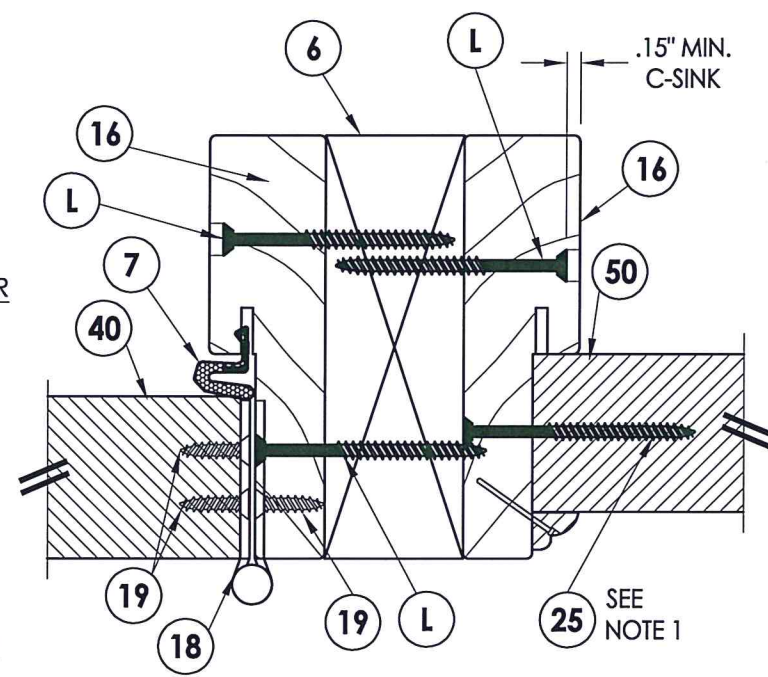
**1**  
**5** HORIZONTAL CROSS SECTION



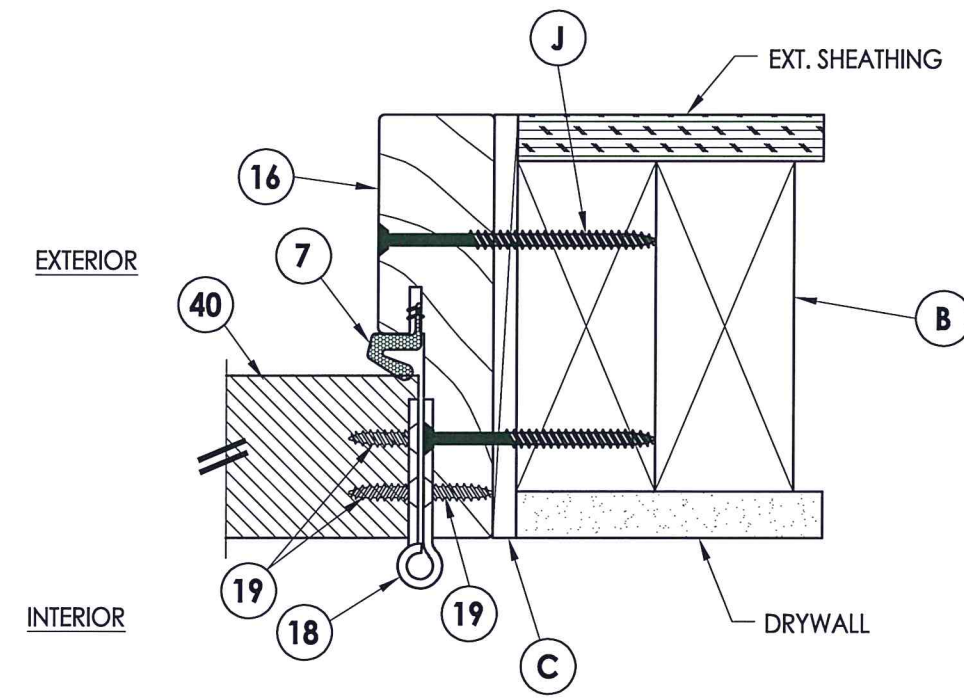
**2**  
**5** HORIZONTAL CROSS SECTION



**3**  
**5** HORIZONTAL CROSS SECTION

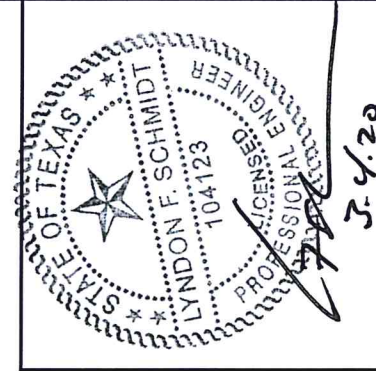


**4**  
**5** HORIZONTAL CROSS SECTION



**5**  
**5** HORIZONTAL CROSS SECTION

- NOTE:**
- Sidelite ass'y fastener; 6" from each end and 6 more screws equally spaced between. (8 screws total per jamb.)
  - Trim secured with 1" Brad Nail @ 6" O.C. (TYP).



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

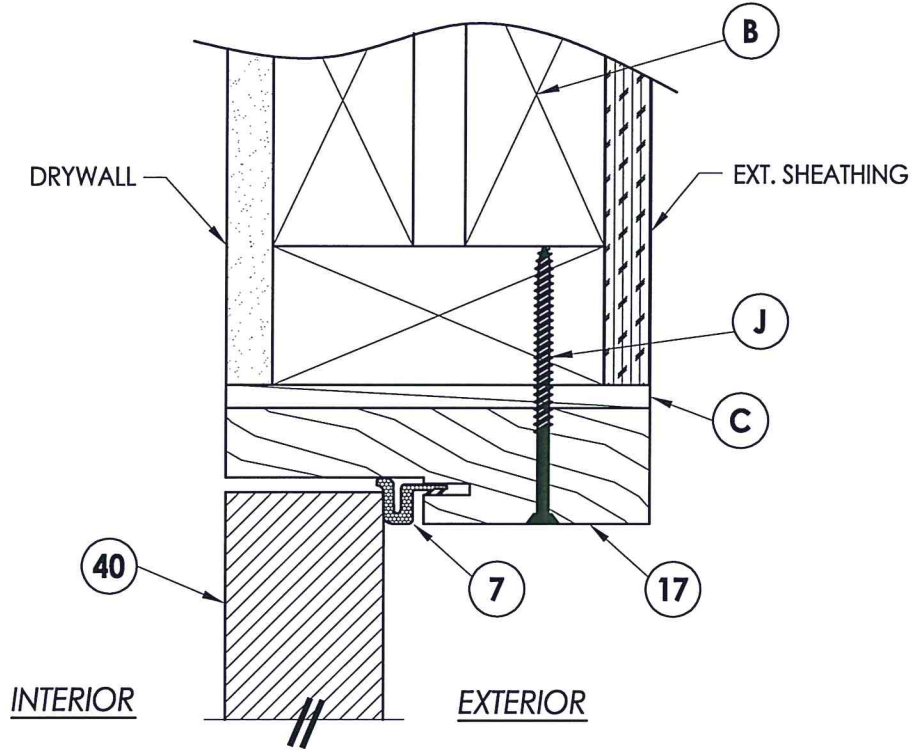
PRODUCT: MASTERGRAIN FIBERGLASS DOOR

PART OR ASSEMBLY: HORIZONTAL CROSS SECTIONS

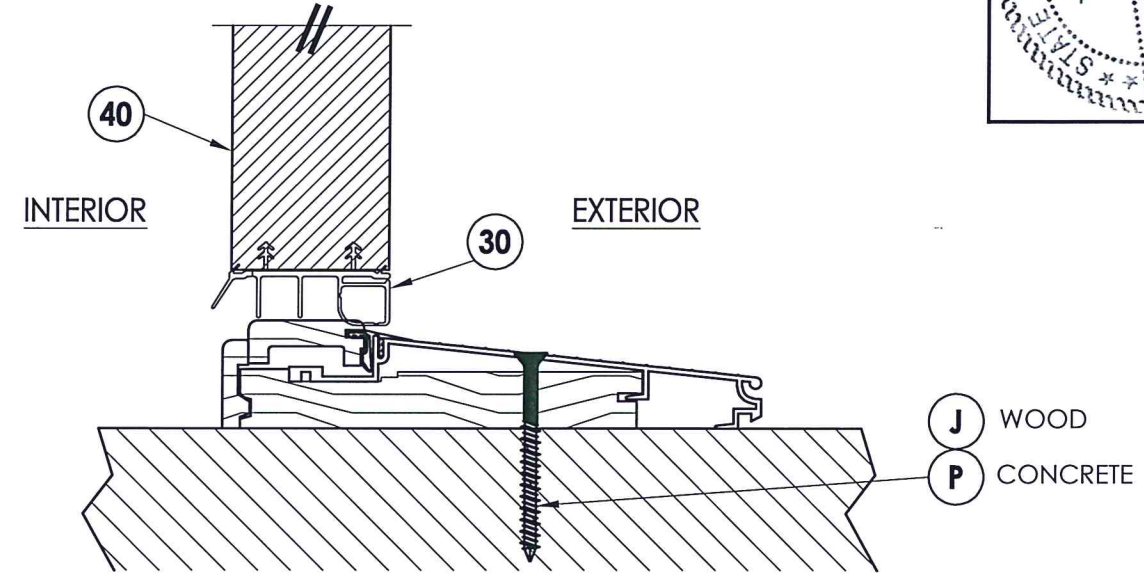
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1	3/03/20	UPDATE TO 2018 IBC/IRC CODE		

DATE: 01/04/10  
SCALE: N.T.S.  
DWG. BY: JK  
CHK. BY: LFS  
DRAWING NO.: TX-4050  
SHEET 5 OF 10

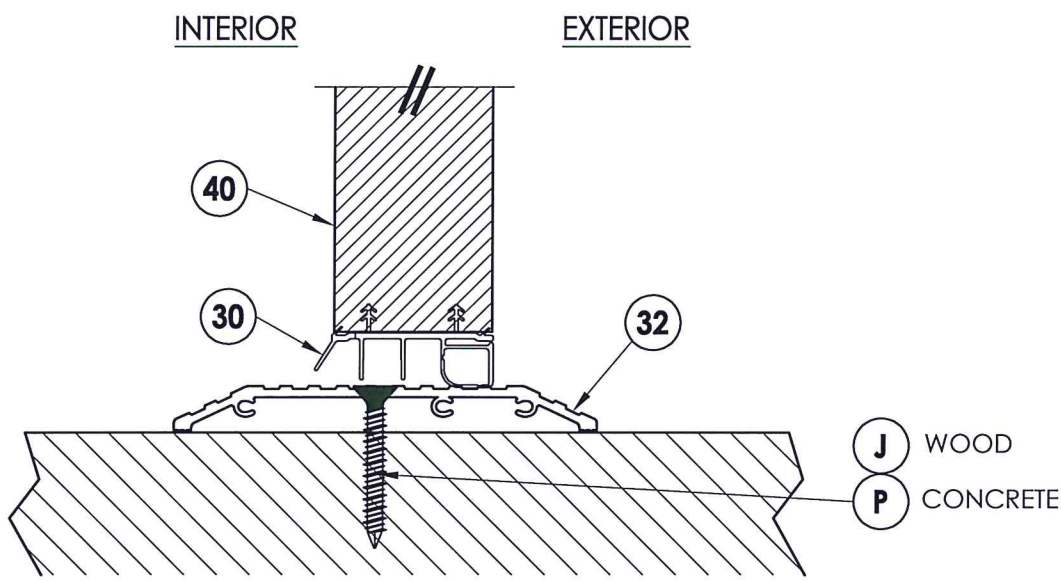
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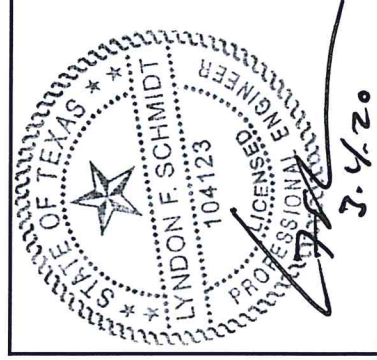
1  
6 VERTICAL CROSS SECTION



2  
6 VERTICAL CROSS SECTION  
Inswing configuration



3  
6 VERTICAL CROSS SECTION  
Shown w/ ADA threshold



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

PRODUCT: MASTERGRAIN FIBERGLASS DOOR

PART OR ASSEMBLY: VERTICAL CROSS SECTIONS

REVISIONS	
NO.	DATE
1	3/03/20
	UPDATE TO 2018 IBC/IRC CODE
	LFS
	BY

DATE: 01/04/10

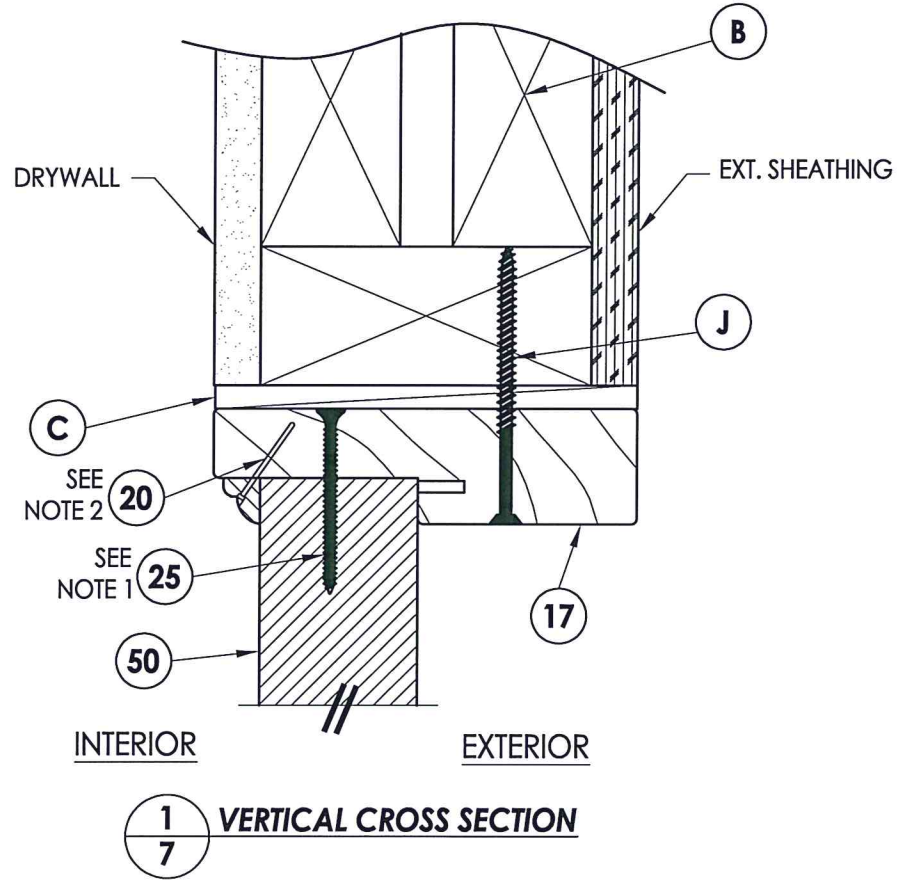
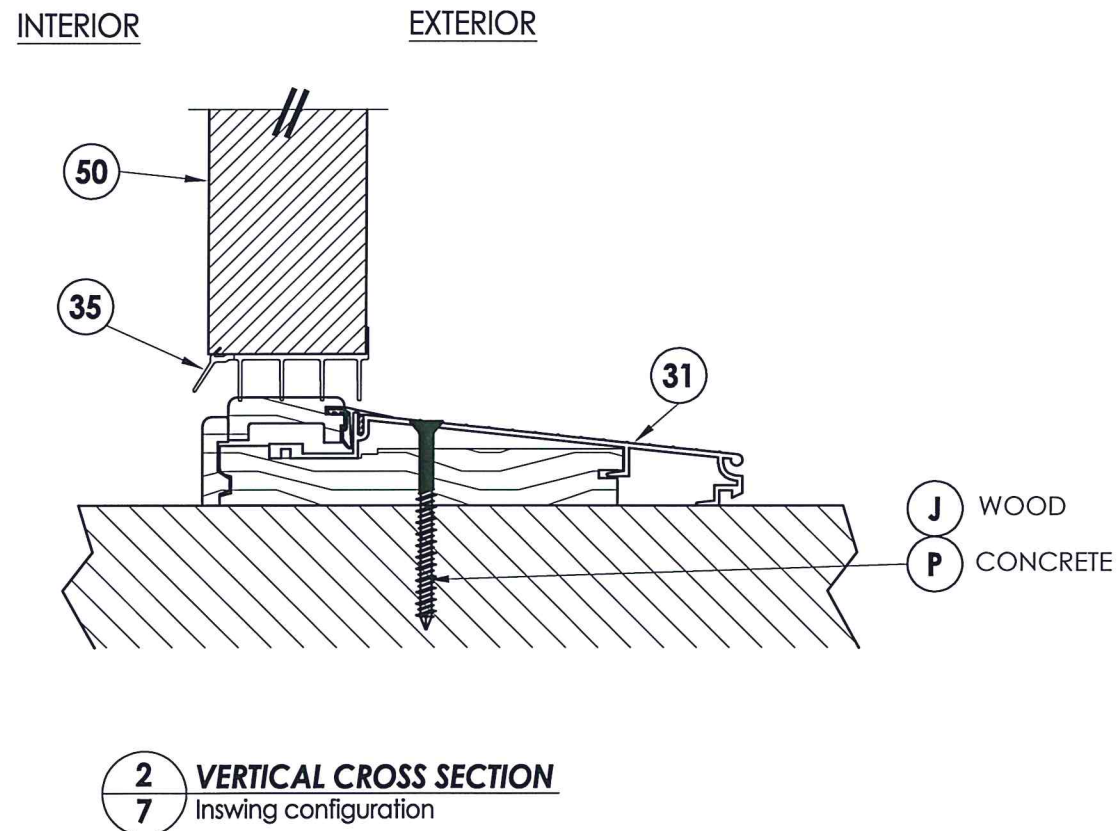
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DWG. BY: JK

CHK. BY: LFS

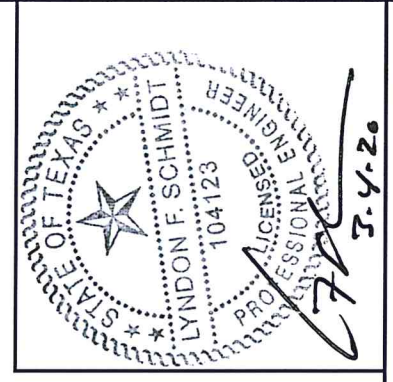
DRAWING NO.: TX-4050

SHEET 6 of 10



**NOTE:**

1. Screws thru head jamb located 3" from each end.
2. Trim secured with 1" Brad Nail @ 6" O.C. (TYP).



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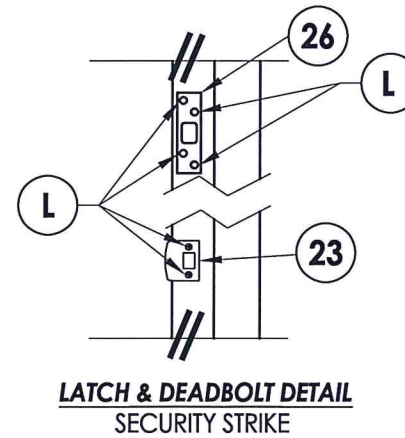
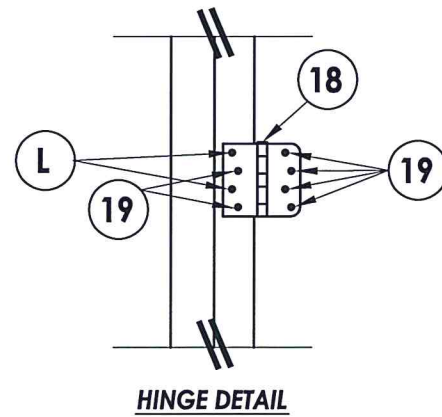
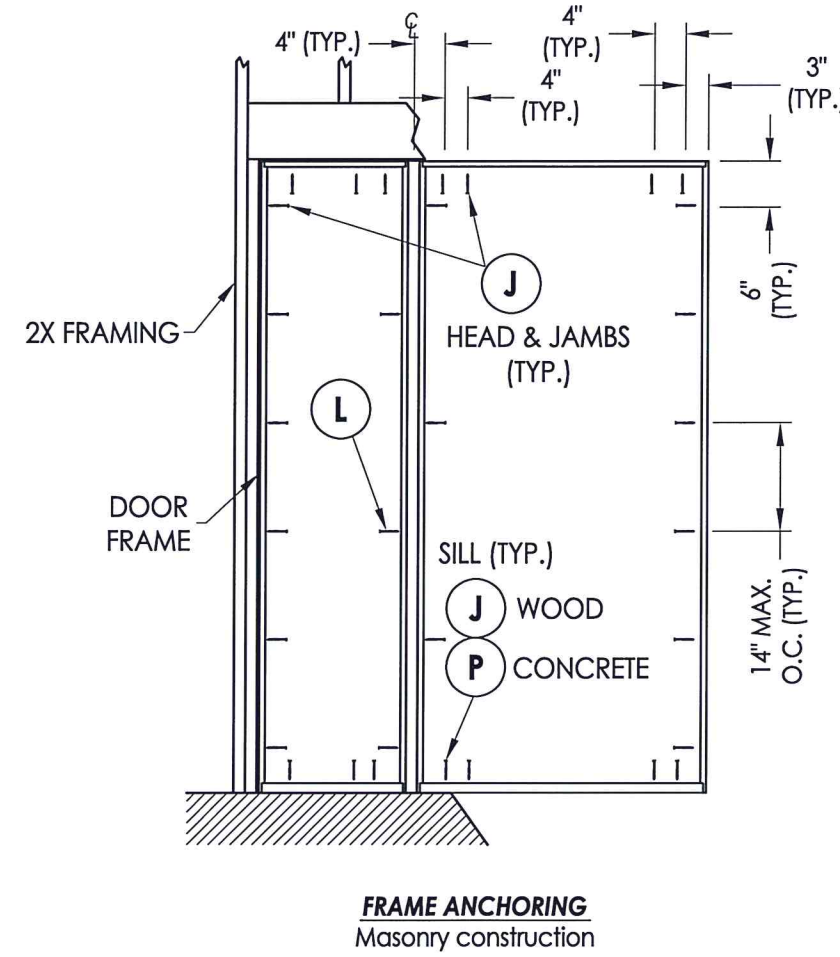
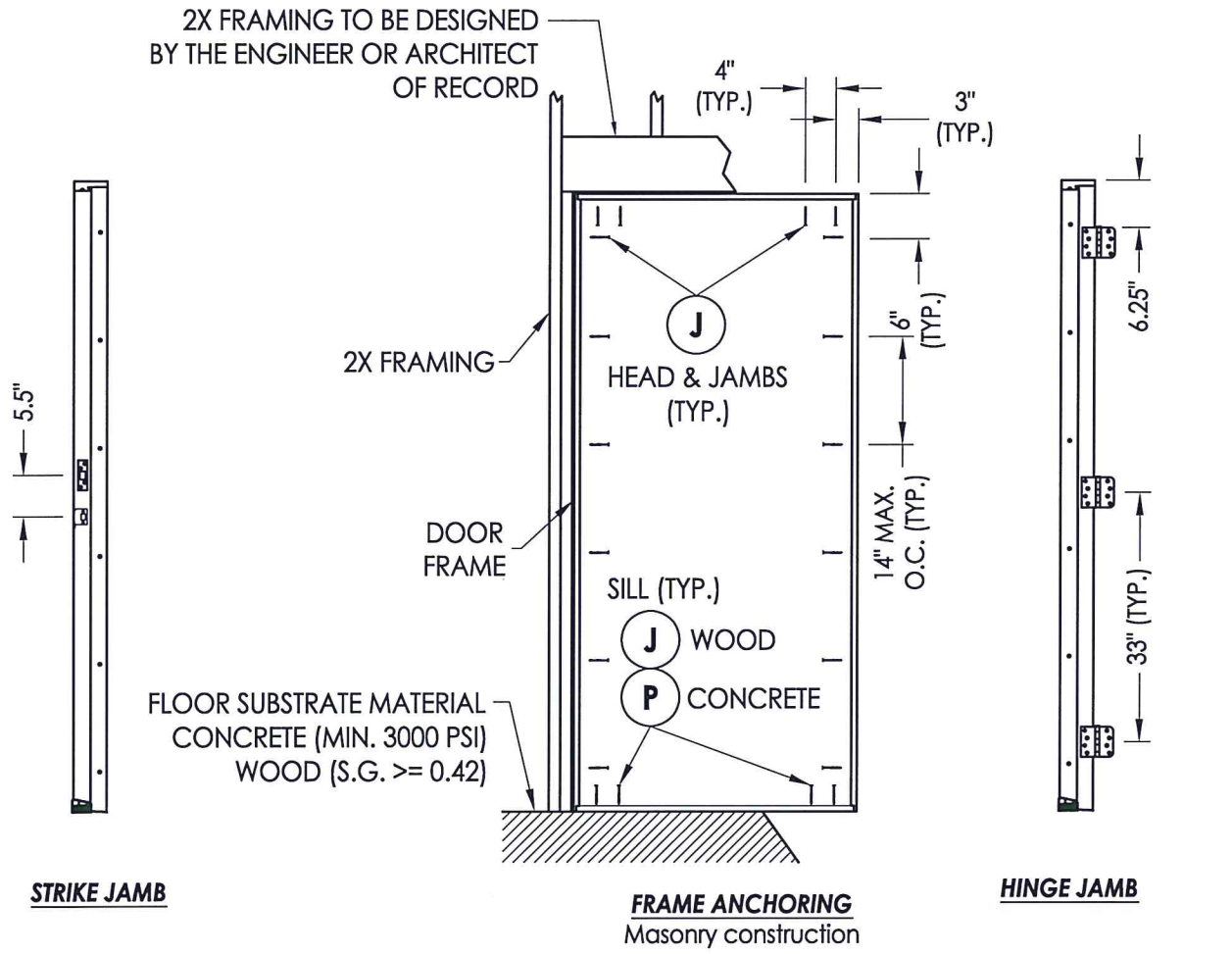
**RW** BUILDING CONSULTANTS, INC.  
P.O. Box 230 Valrico FL, 33595  
Phone No.: 813.659.9197  
TEXAS BOARD OF PROFESSIONAL ENGINEERS  
CERTIFICATE OF REGISTRATION # F-11852

PRODUCT:	MASTERGRAIN FIBERGLASS DOOR
PART OR ASSEMBLY:	VERTICAL CROSS SECTIONS

REVISIONS	
NO.	DATE
1	3/03/20
	UPDATE TO 2018 IBC/IRC CODE
	LFS BY

DATE:	01/04/10
SCALE:	N.T.S.
DWG. BY:	JK
CHK. BY:	LFS
DRAWING NO.:	TX-4050
SHEET	7 OF 10

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TEXAS P.E. #104123

**RW** BUILDING CONSULTANTS, INC.  
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Phone No.: 813.659.9197  
TEXAS BOARD OF PROFESSIONAL ENGINEERS  
CERTIFICATE OF REGISTRATION # F-11852

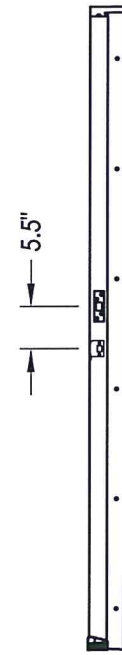
PRODUCT: MASTERGRAIN FIBERGLASS DOOR  
PART OR ASSEMBLY: FRAME ANCHORING

NO.	DATE	DESCRIPTION	BY
1	3/03/20	UPDATE TO 2018 IBC/IRC CODE	LFS

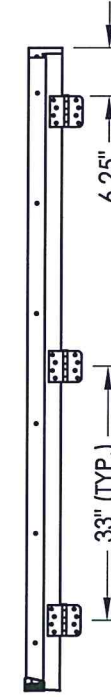
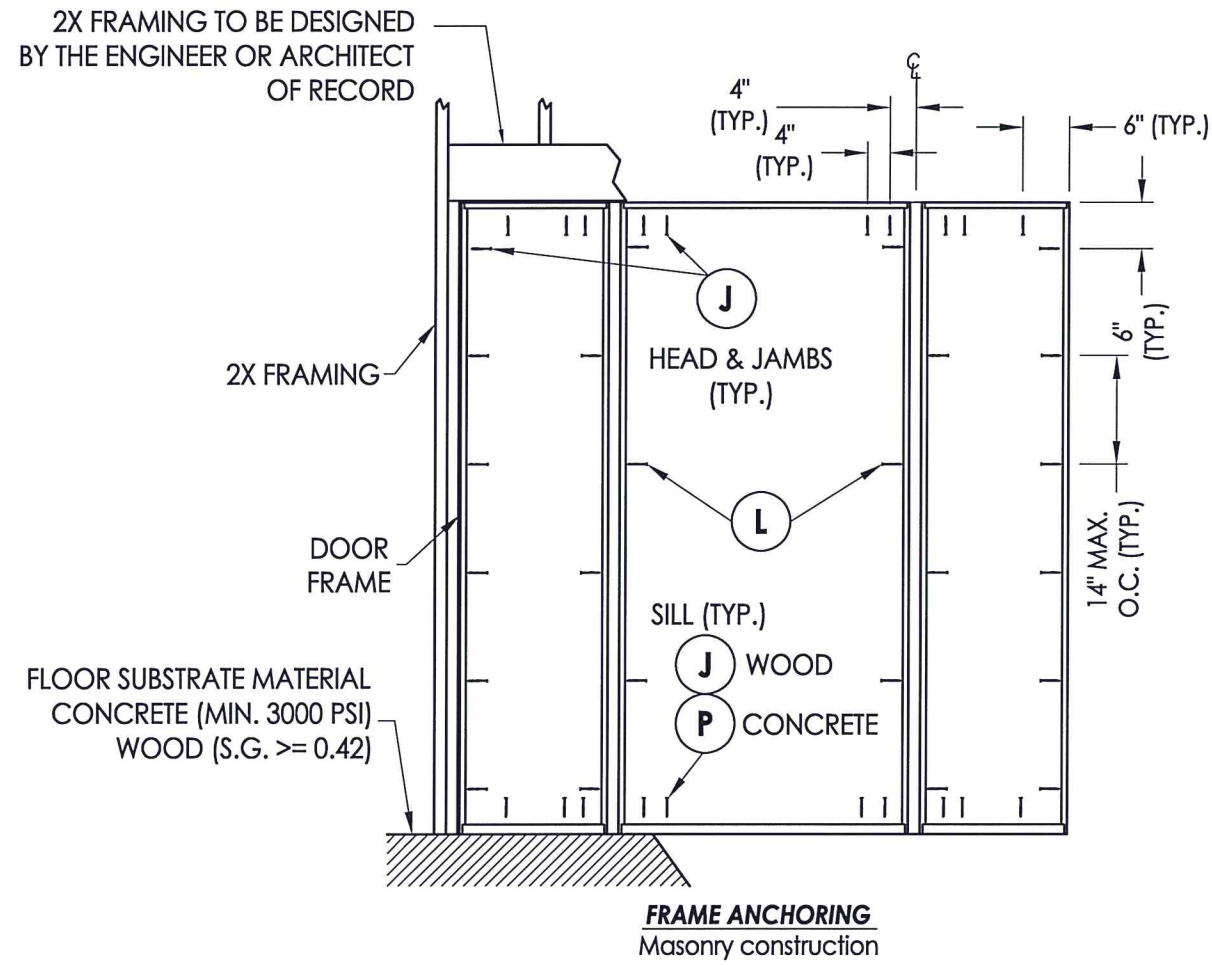
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SCALE: N.T.S.  
DWG. BY: JK  
CHK. BY: LFS  
DRAWING NO.: TX-4050  
SHEET 8 OF 10

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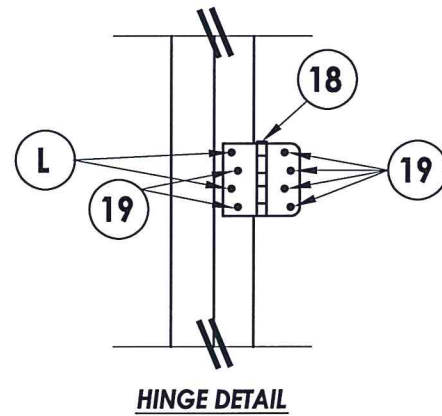




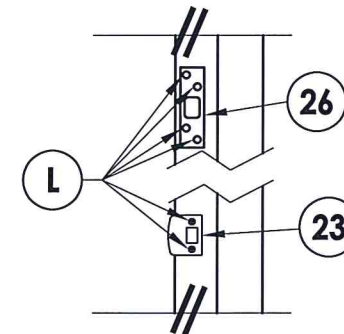
**STRIKE JAMB**



**HINGE JAMB**



**HINGE DETAIL**



**LATCH & DEADBOLT DETAIL**  
SECURITY STRIKE



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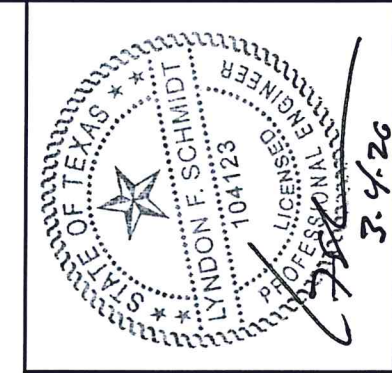
PRODUCT:		MASTERGRAIN FIBERGLASS DOOR	
PART OR ASSEMBLY:		FRAME ANCHORING	
NO.	DATE	UPDATE TO 2018 IBC/IRC CODE	REVISIONS
1	3/03/20		LFS
			BY
DATE: 01/04/10			
SCALE: N.T.S.			
DWG. BY: JK			
CHK. BY: LFS			
DRAWING NO.: TX-4050			
SHEET 9 OF 10			

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**BILL OF MATERIALS**

ITEM #	DESCRIPTION	MATERIAL
B	2X FRAMING SG >= 0.42	WOOD
C	1/4" MAX. SHIM SPACE	-
J	#10 X 3" PFH WS	STEEL
K	#9 X 2-1/2" PFH WS	STEEL
L	#10 X 2-1/2" PFH WOOD SCREW	STEEL
P	3/16" ELCO OR ITW PFH CONCRETE SCREW	STEEL
1	FEMALE LITE FRAME - MASTERGRAIN	POLYPROPYLENE
2	MALE LITE FRAME - MASTERGRAIN	POLYPROPYLENE
3	#8 X 1-3/4" PANHEAD SMS (LIGHT FRAME SCREW)	STEEL
4	ALUMINUM SPACER SYSTEM	ALUMINUM
5	SILICONE WEATHER SEAL MG #2500	SILICONE
6	2X MULLION SG > = 0.55	WOOD
7	WEATHER STRIP	FOAM
8	#10 X 1-1/2" PFH	STEEL
16	SIDE JAMB SG > = 0.42	WOOD
17	HEAD JAMB SG > = 0.42	WOOD
18	4" X 4" HINGE MIN 0.1" THICK	STEEL
19	#10 X 3/4" PFH WS	STEEL
20	1" BRAD NAIL	STEEL
21	KWIKSET DEADBOLT -SERIES 690 CP	STEEL
21A	COPPER CREEK DB2410 SC #8003 DEADBOLT	STEEL
22	KWIKSET LOCK -SERIES 690 CP PASSAGE	STEEL
22A	COPPER CREEK BK2040 SC# 8379 PASSAGE	STEEL

23	LATCH STRIKE PLATE	STEEL
24	DEADBOLT STRIKE PLATE	STEEL
25	#8 X 2-1/2" PFH WOOD SCREW	STEEL
26	SECURITY STRIKE PLATE	STEEL
30	DOOR BOTTOM SWEEP	VINYL
31	INSWING THRESHOLD	ALUM/COMP.
32	ADA THRESHOLD	ALUM.
33	OUTSWING THRESHOLD	ALUM./WOOD
34	SIDELITE THRESHOLD	ALUM./COMP.
35	SIDELITE SWEEP	VINYL
40	DOOR PANEL - SEE DOOR PANEL DETAIL SHEET FOR CONSTRUCTION DETAILS	-
41	HINGE AND LATCH REINFORCMENT	WOOD
42	HINGE AND LATCH STILE - SG >= 0.42	WOOD
44	TOP RAIL	COMP.
45	BOTTOM RAIL	COMP.
47	POLYEURETHANE FOAM	POLYEURETHANE
49	FIBERGLASS SKIN 0.08" MIN. THICKNESS	FIBERGLASS
50	SIDELITE PANEL - SEE SIDELITE PANEL DETAIL SHEET FOR CONSTRUCTION DETAILS	-
52	SIDELITE STILE - SG >= 0.42	WOOD
53	SIDELITE BOTTOM RAIL SG > = 0.42	WOOD
54	SIDELITE TOP RAIL SG > = 0.42	WOOD
55	SIDELITE TRIM	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

NO.	DATE	DESCRIPTION	LFS	BY
1	3/03/20	UPDATE TO 2018 IBC/IRC CODE		

REVISIONS

DATE: 01/04/10  
SCALE: N.T.S.  
DWG. BY: JK  
CHK. BY: LFS  
DRAWING NO.: TX-4050  
SHEET 10 of 10

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"	1-3/4"	1-1/2"	4"
ELCO ULTRACON®	1/4"	1-3/4"	1"	4"

