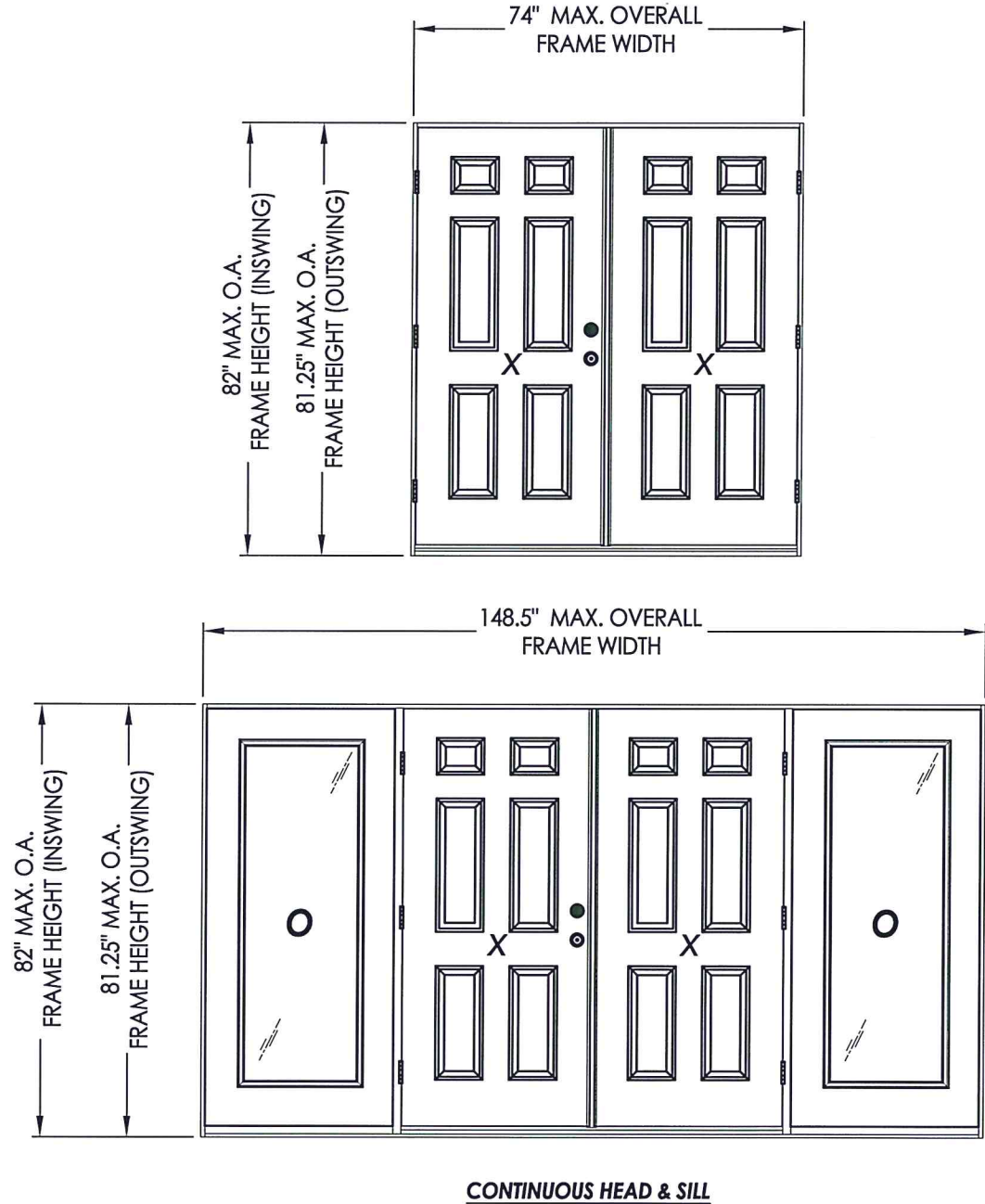


**FIBERGLASS OPAQUE
DOUBLE DOOR
w/ or w/out SIDELITES
INSWING/OUTSWING
"IMPACT"**



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.

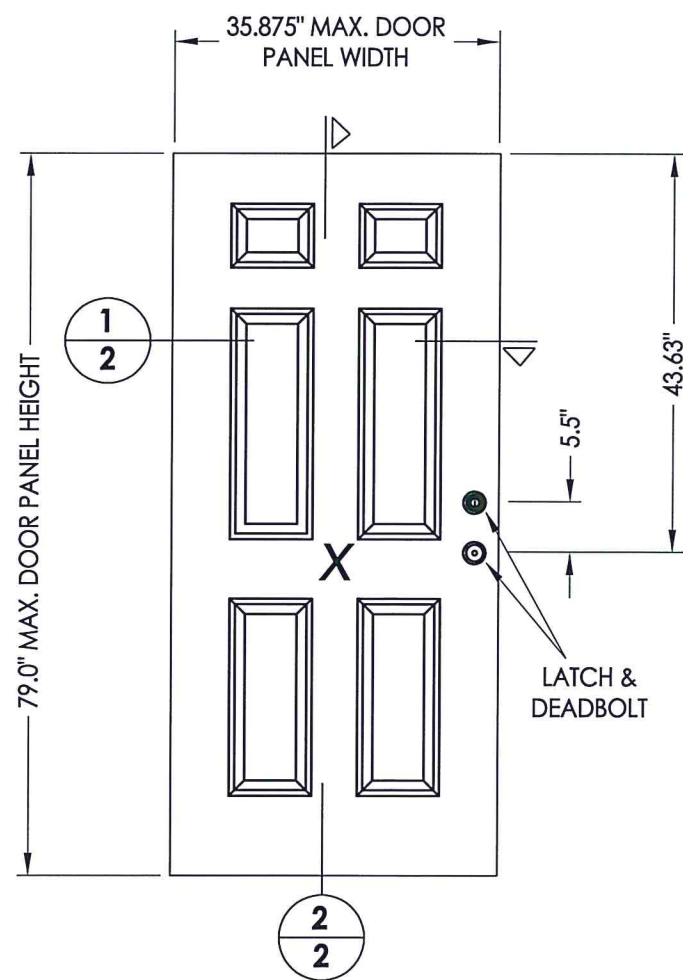
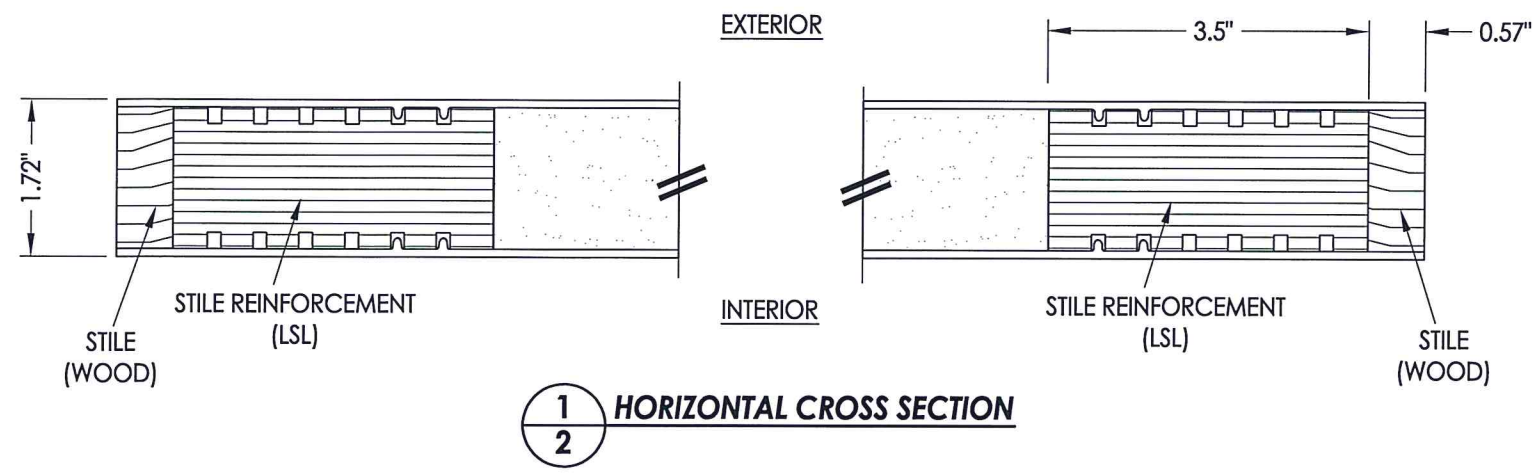
TABLE OF CONTENTS	
SHEET#	DESCRIPTION
1	Typical Elevations, Design Pressures & General Notes
2	Door Panel Details
3	Sidelite Panel Details
4	Glazing Details
5	Elevations
6	Horizontal & Vertical Cross Sections (2X Framing)
7	Horizontal & Vertical Cross Sections (1X Buck)
8	Vertical Cross Sections (Thresholds)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

CONFIGURATION	DESIGN PRESSURE (PSF) INSWING		DESIGN PRESSURE (PSF) OUTSWING	
	POSITIVE	NEGATIVE	POSITIVE	NEGATIVE
XX, OXXO	+50.0	-55.0	+50.0	-50.0

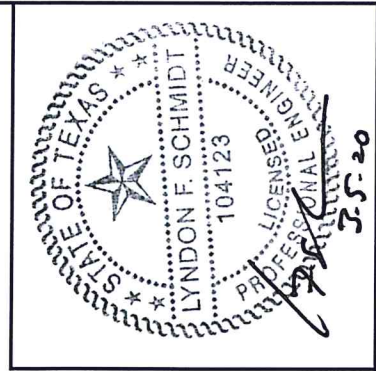
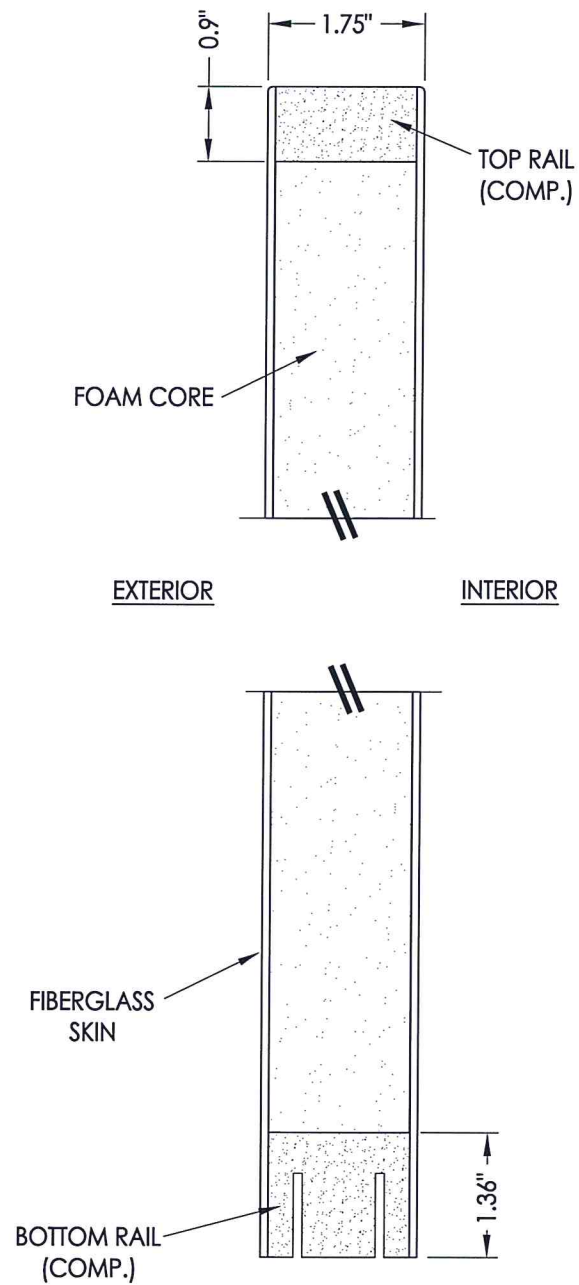
Professional Engineer Seal: LYNDON F. SCHMIDT, 104123, STATE OF TEXAS. Documents Prepared By: Lyndon F. Schmidt, P.E., TEXAS P.E. #104123. Date: 7-5-20.

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:	TYPICAL ELEVATION, DESIGN PRESSURES & GENERAL NOTES	
NO.	DATE	BY
1	3/05/20	LFS
UPDATE TO 2018 IBC/IRC CODE		
REVISIONS		
DATE:	8/30/18	
SCALE:	N.T.S.	
DWG. BY:	JK	
CHK. BY:	LFS	
DRAWING NO.:	TX-4884	
SHEET	1 OF 11	



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



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

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

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

PRODUCT: MASTERGRAIN FIBERGLASS DOOR

PART OR ASSEMBLY: DOOR PANEL DETAILS

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

DATE: 8/30/18

SCALE: N.T.S.

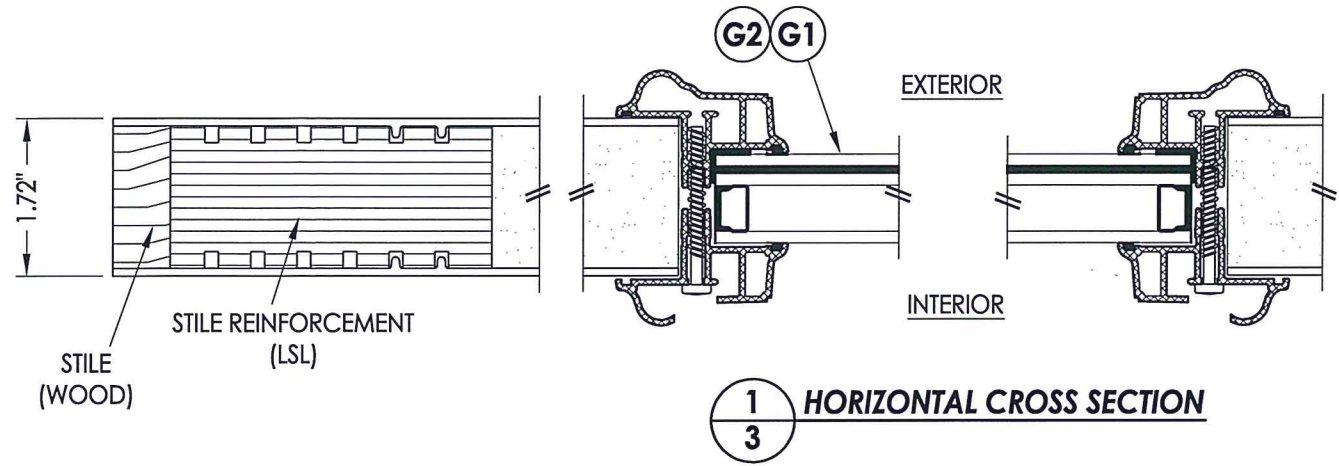
DWG. BY: JK

CHK. BY: LFS

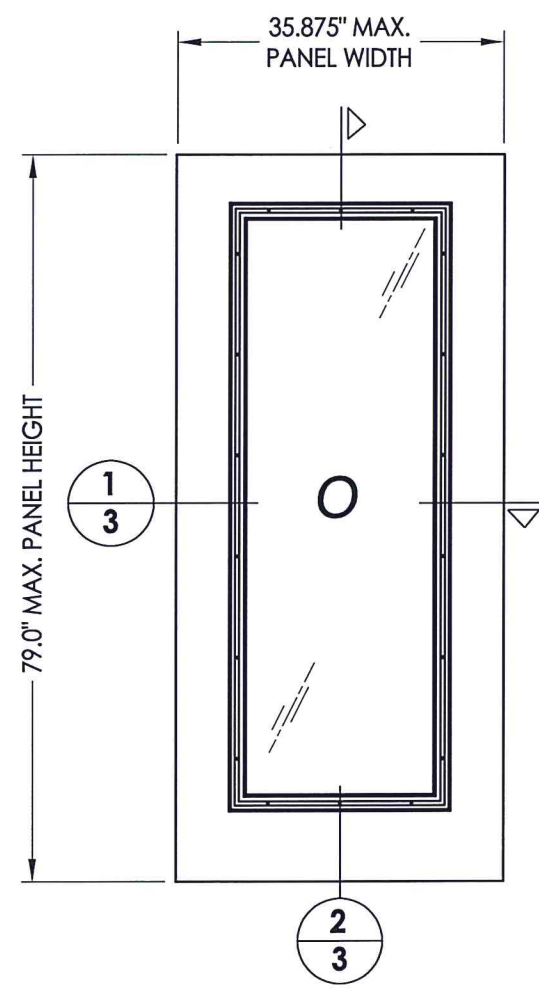
DRAWING NO.: TX-4884

SHEET 2 OF 11

R:\Clients\Mastergrain PERMANENT\B - Texas Dept of Ins\TDI - DR 988 Fiberglass Door - Opaque, Impact (6-8)\Drawings\TX-4882-84.dwg, 3.3

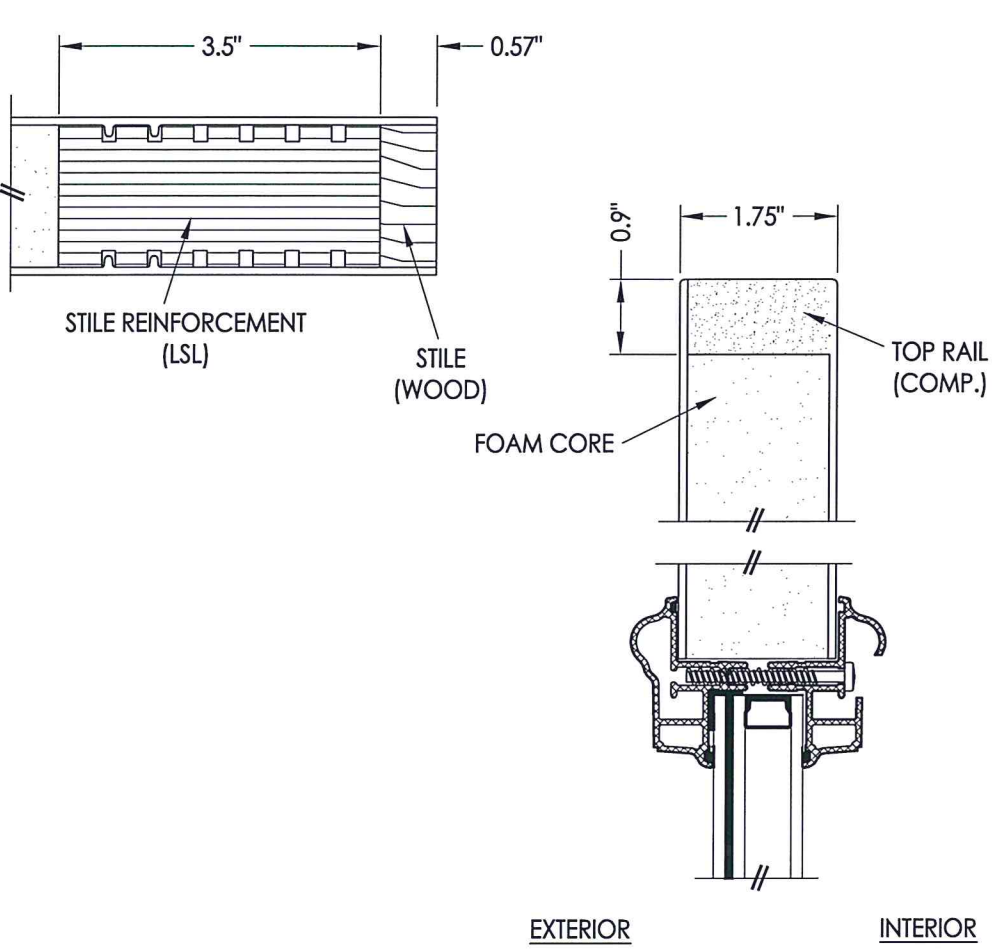


1
3 HORIZONTAL CROSS SECTION

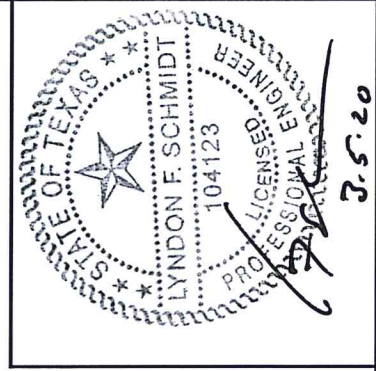


50 SIDELITE PANEL
Mastergrain

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



2
3 VERTICAL CROSS SECTION



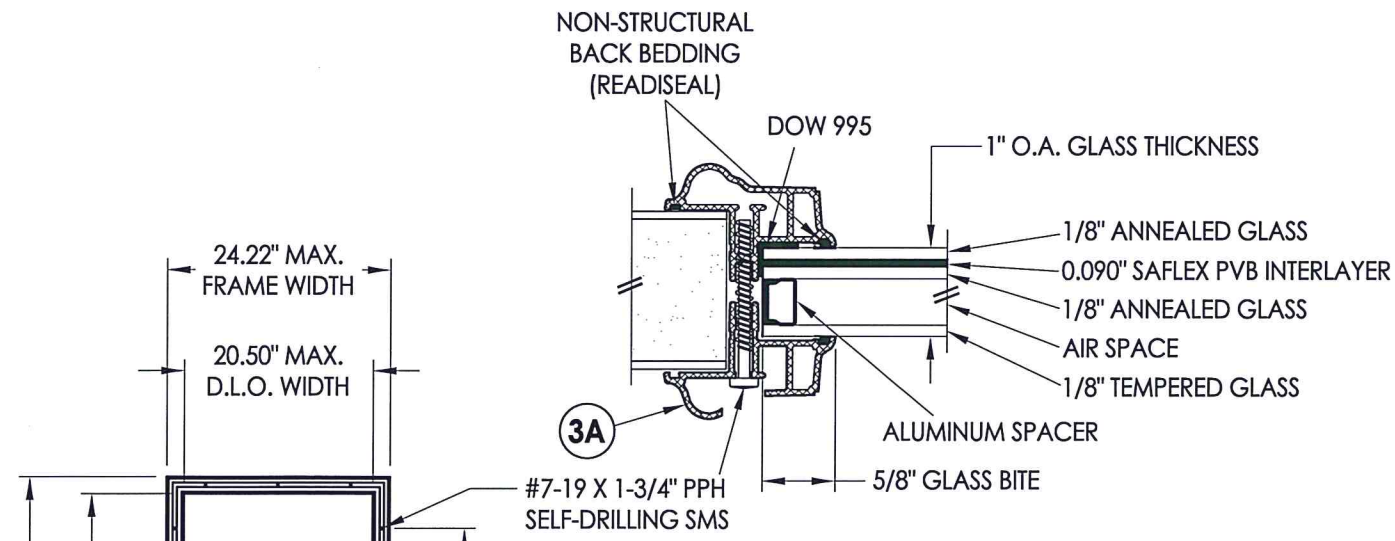
Documents Prepared By: Lyndon F. Schmidt, P.E.
TEXAS P.E. #104123

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

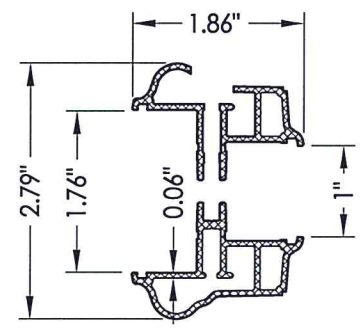
PRODUCT:	MASTERGRAIN FIBERGLASS DOOR
PART OR ASSEMBLY:	DOOR PANEL DETAILS

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

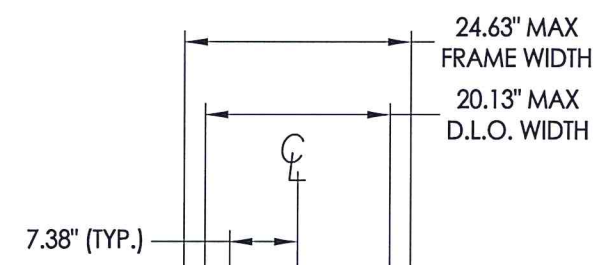
DATE:	8/30/18
SCALE:	N.T.S.
DWG. BY:	JK
CHK. BY:	LFS
DRAWING NO.:	TX-4884
SHEET	3 OF 11



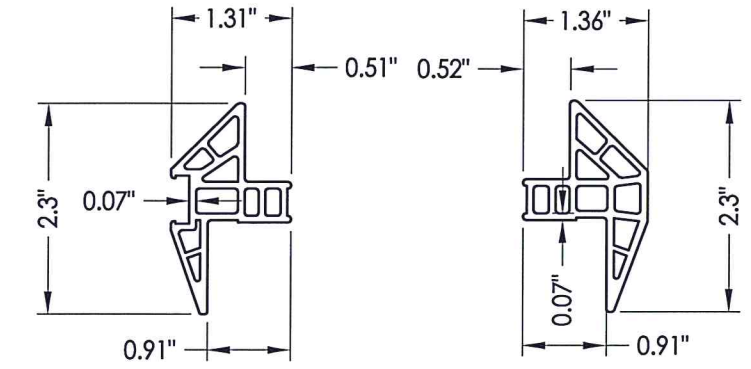
G1 GLAZING DETAIL



3A ODL LITE FRAME Aluminum

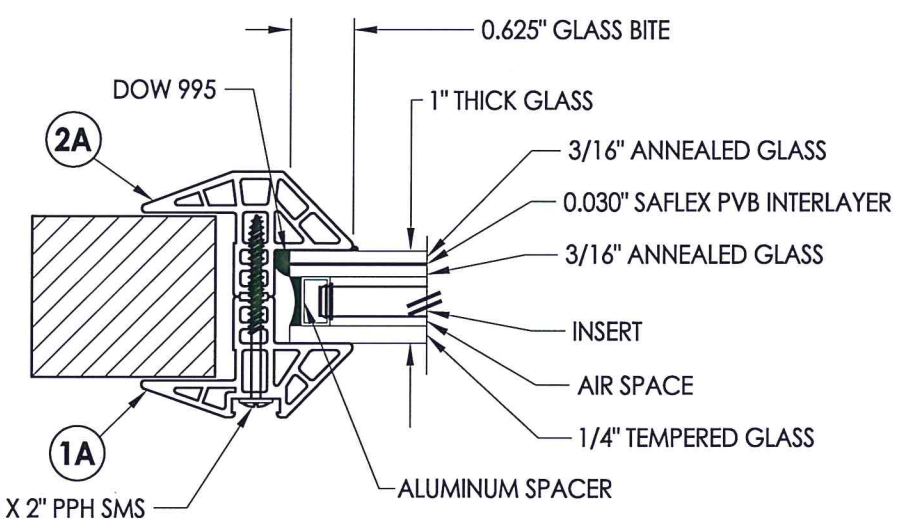
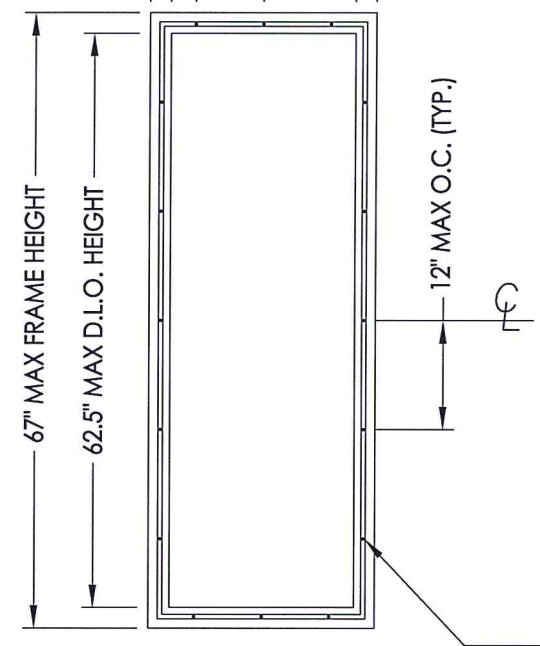


PVC LITE FRAME



1A INTERIOR FRAME

2A EXTERIOR FRAME



G2 GLAZING DETAIL

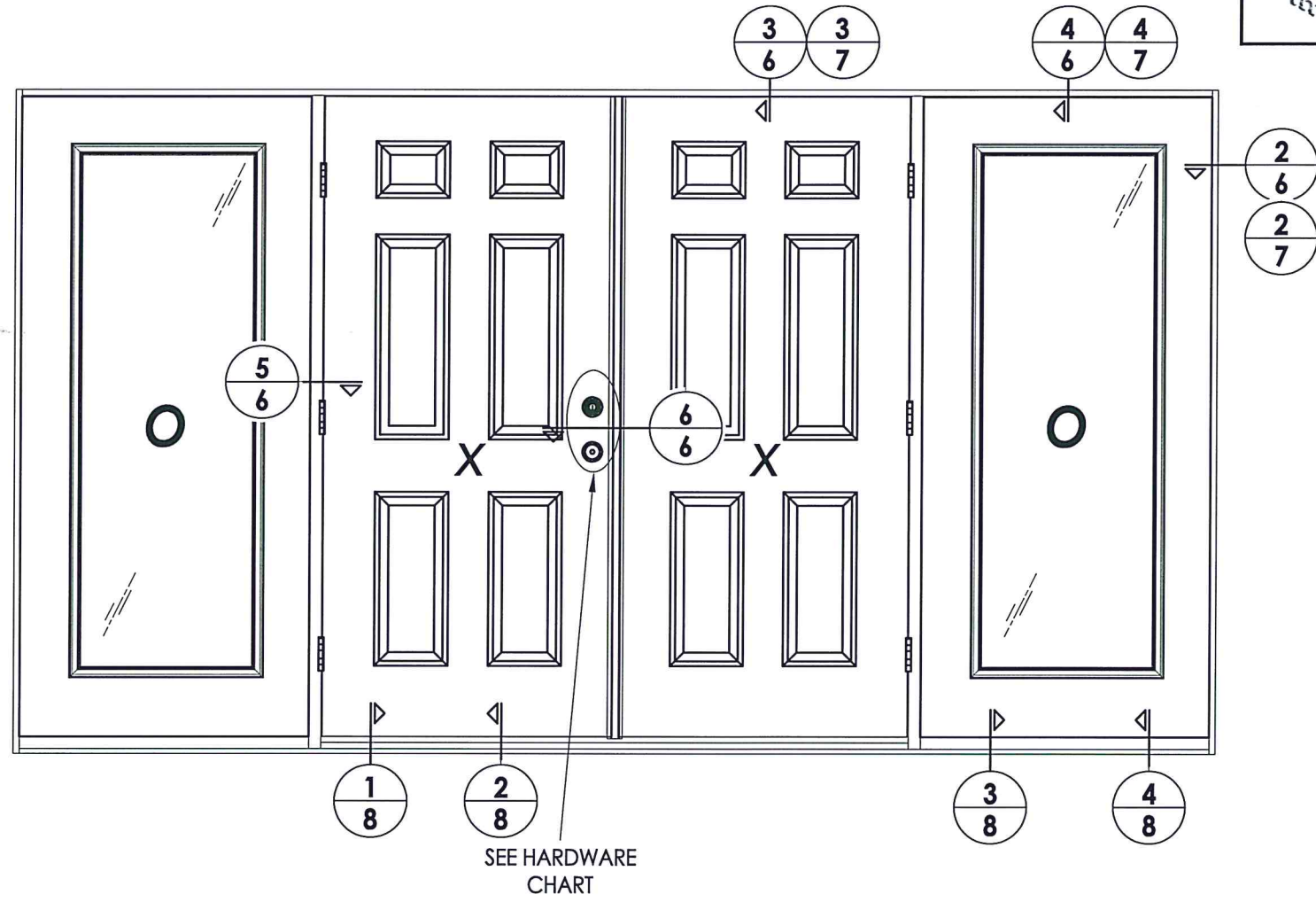
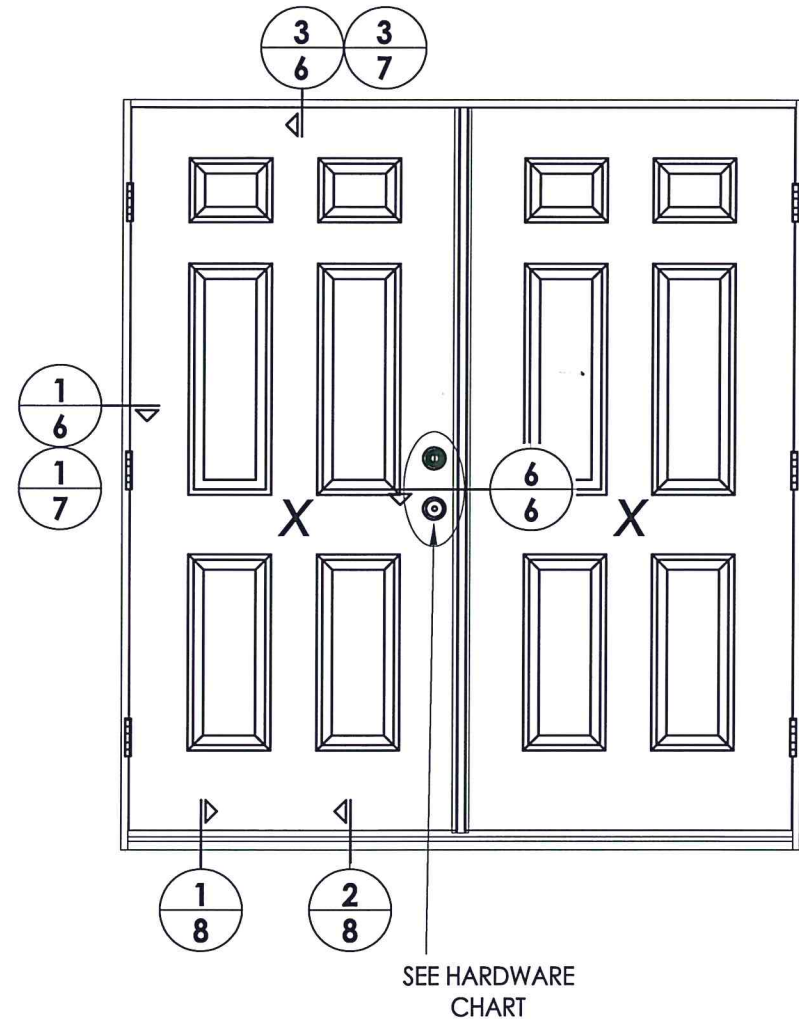


Documents Prepared By: Lyndon F. Schmidt, P.E.
 TEXAS P.E. #104123
R.W. BUILDING CONSULTANTS, INC.
 P.O. Box 230 Valrico FL 33595
 Phone No.: 813.659.9197
 TEXAS BOARD OF PROFESSIONAL ENGINEERS
 CERTIFICATE OF REGISTRATION # F-11852

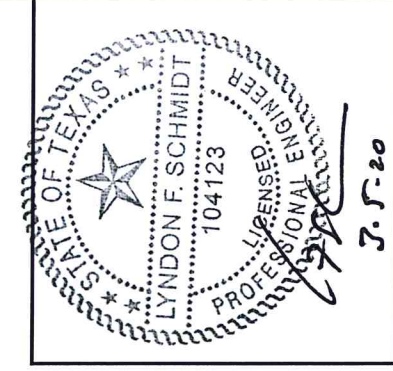
PRODUCT:	MASTERGRAIN FIBERGLASS DOOR
PART OR ASSEMBLY:	GLAZING DETAILS

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

DATE:	8/30/18
SCALE:	N.T.S.
DWG. BY:	JK
CHK. BY:	LFS
DRAWING NO.:	TX-4884
SHEET	4 OF 11



HARDWARE TABLE	
MANUFACTURER	MODEL
PAMEX	KNOB: FLU600 DEADBOLT: FD261
KWIKSET	KNOB: SIGNATURE SERIES DEADBOLT: SIGNATURE SERIES (980)
SCHLAGE	KNOB: F51 DEADBOLT: B60N



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

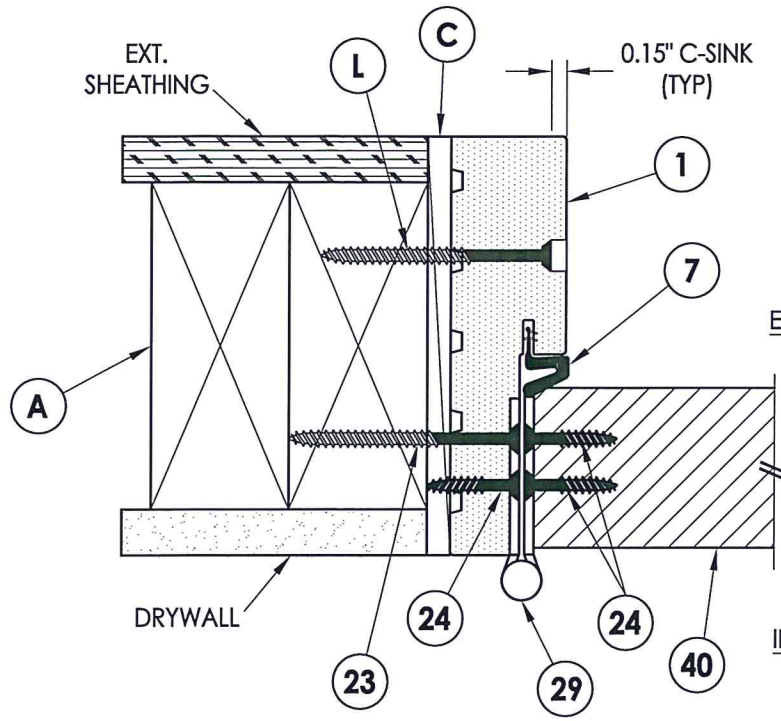
PRODUCT: MASTERGRAIN FIBERGLASS DOOR

PART OR ASSEMBLY: ELEVATIONS

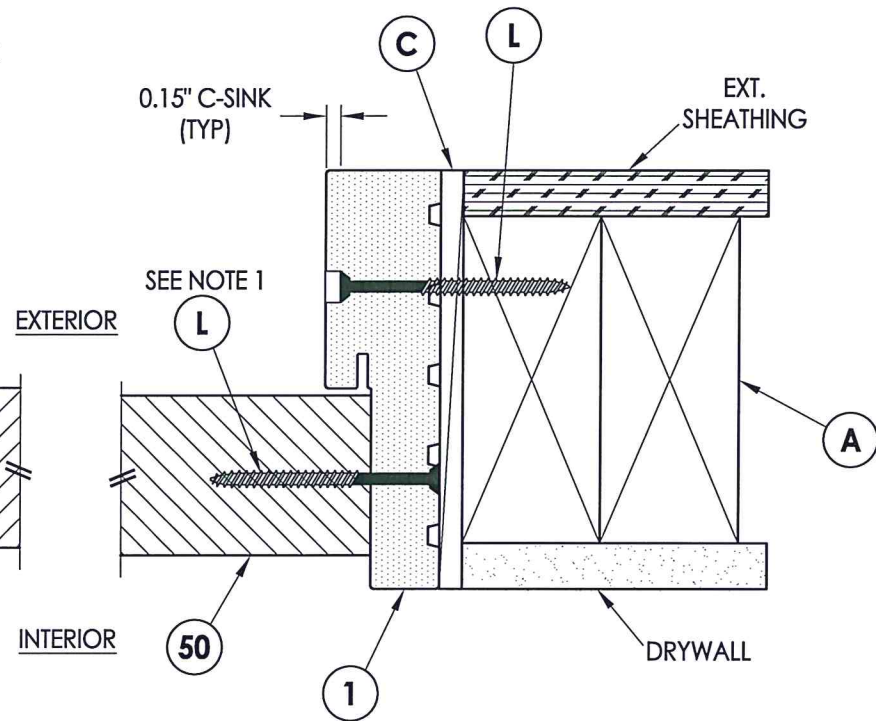
NO.	DATE	DESCRIPTION	BY
1	3/05/20	UPDATE TO 2018 IBC/IRC CODE	LFS

DATE: 8/30/18
 SCALE: N.T.S.
 DWG. BY: JK
 CHK. BY: LFS
 DRAWING NO.: TX-4884
 SHEET 5 OF 11

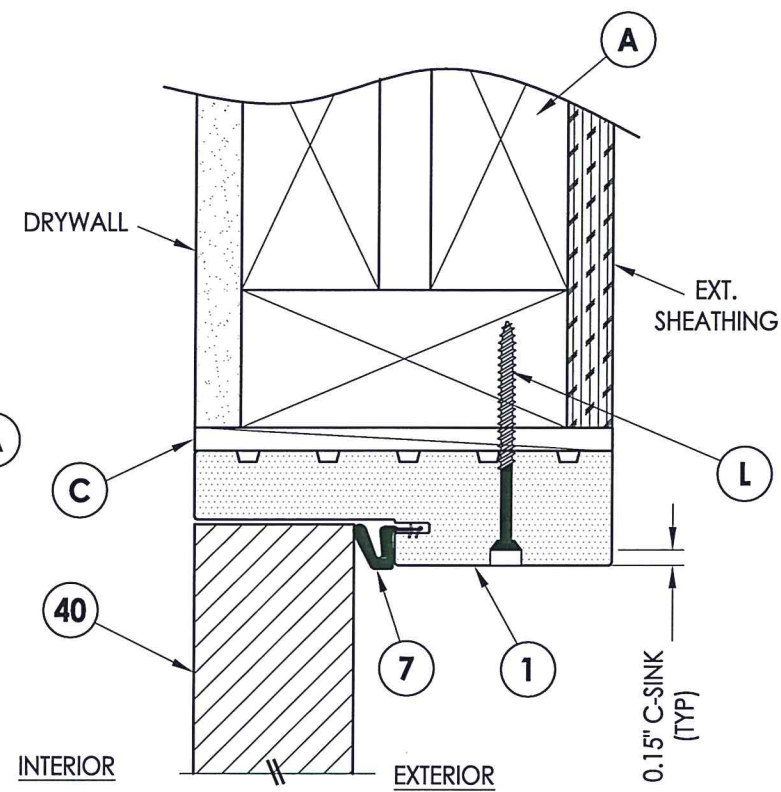
R:\Clients\Mastergrain PERMANENT\B - Texas Dept of Ins\TDI - DR 988 Fiberglass Door - Opaque, Impact (6-8)\Drawings\TX-4882-84.dwg, 6.3



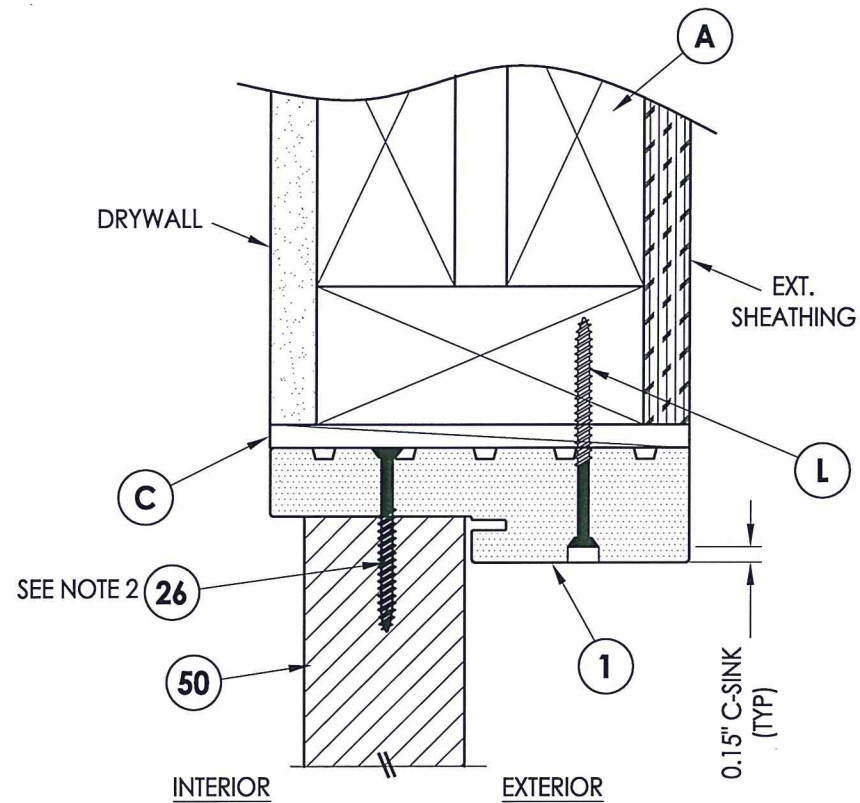
1
6 **HORIZONTAL CROSS SECTION**
Shown w/ 2X Buck
Inswing shown (Outswing similar)



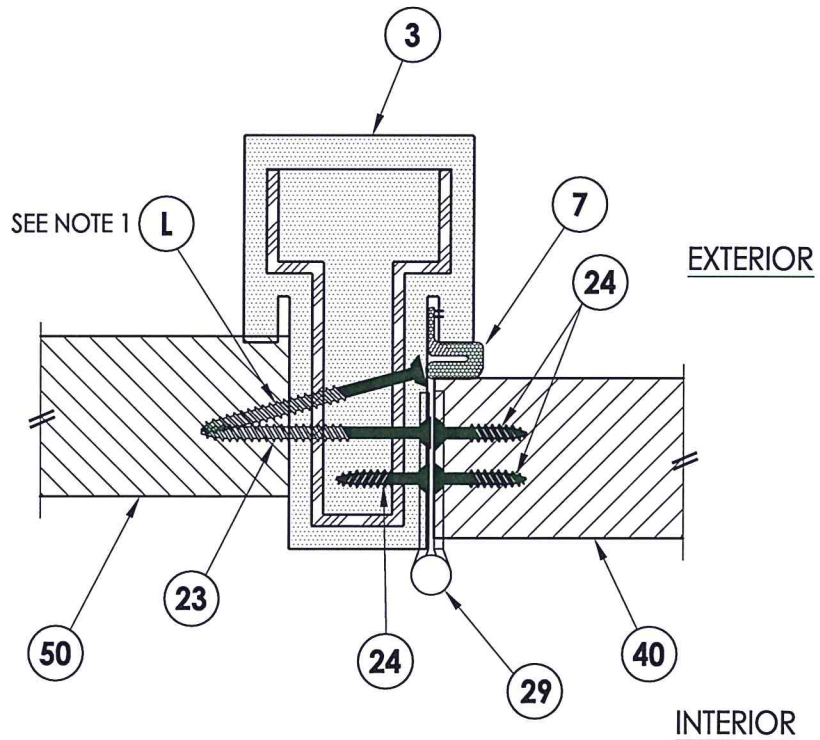
2
6 **HORIZONTAL CROSS SECTION**
Shown w/ 2X Buck
Inswing shown (Outswing similar)



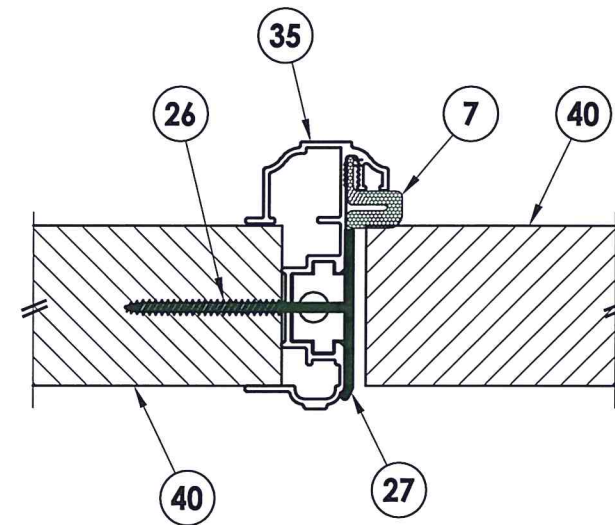
3
6 **VERTICAL CROSS SECTION**
Shown w/ 2X Buck
Inswing shown (Outswing similar)



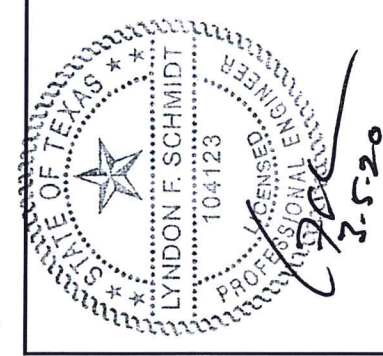
4
6 **VERTICAL CROSS SECTION**
Shown w/ 2X Buck
Inswing shown (Outswing similar)



5
6 **HORIZONTAL CROSS SECTION**
Inswing shown (Outswing similar)



6
6 **HORIZONTAL CROSS SECTION**
Inswing shown (Outswing similar)



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

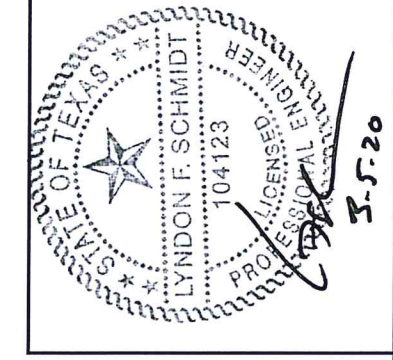
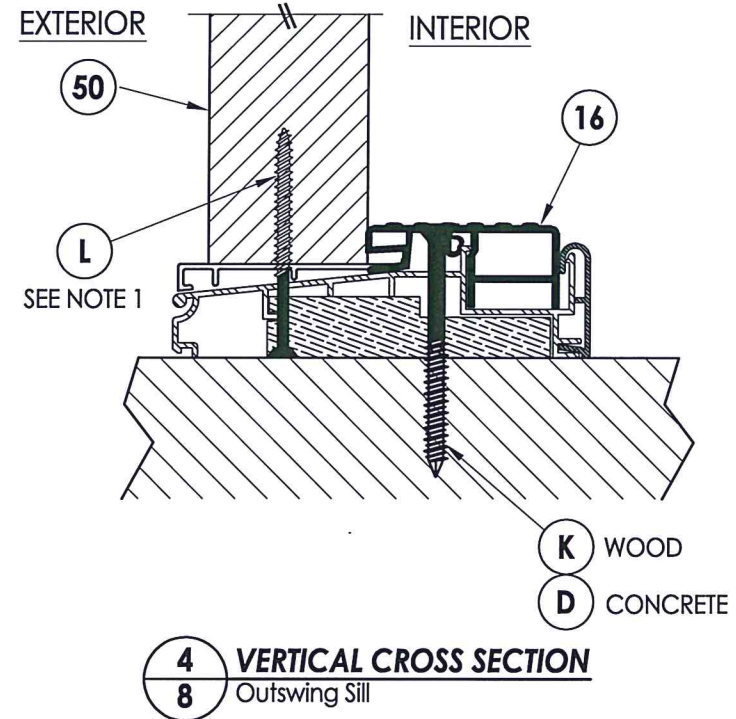
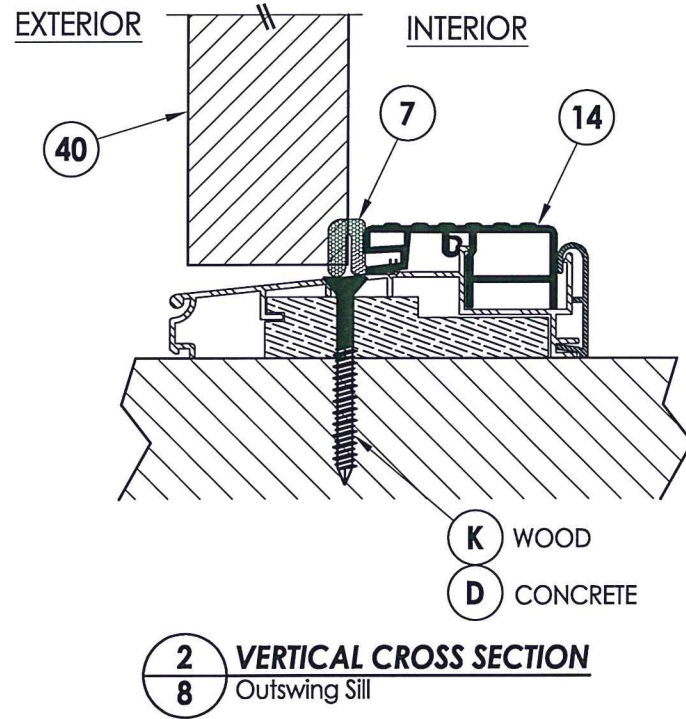
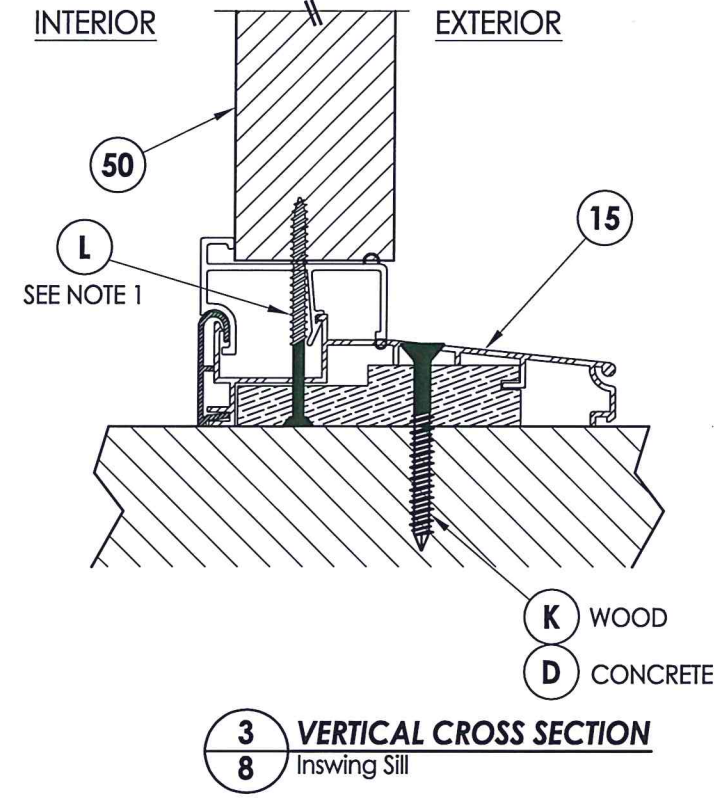
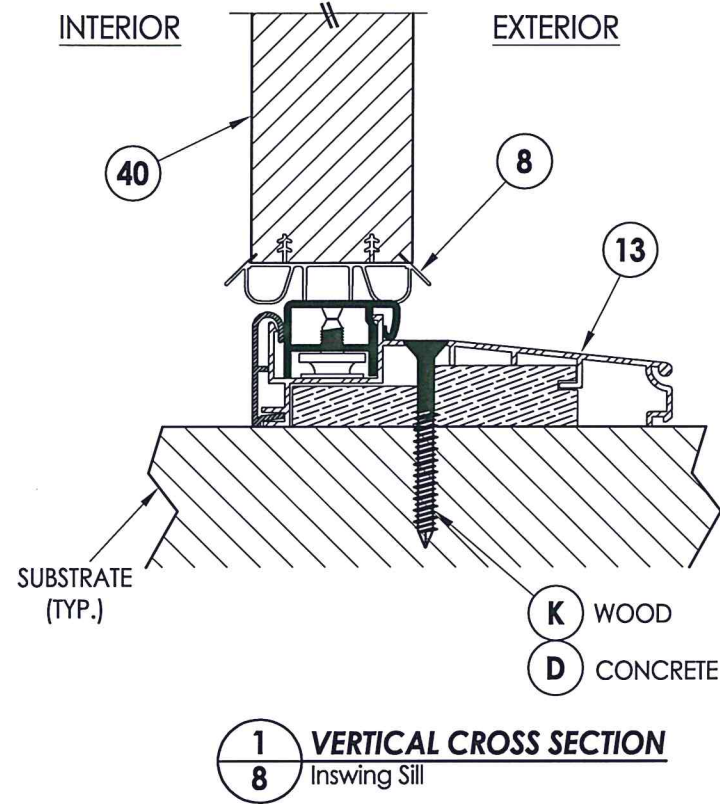
PRODUCT: MASTERGRAIN FIBERGLASS DOOR
PART OR ASSEMBLY: HORIZONTAL & VERTICAL CROSS SECTIONS (2X BUCK)

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

DATE: 8/30/18
SCALE: N.T.S.
DWG. BY: JK
CHK. BY: LFS
DRAWING NO.: TX-4884
SHEET 6 OF 11

© 2018 R.W. BUILDING CONSULTANTS INC.

NOTE:
1. Item #L located 12" from each end (2 total).

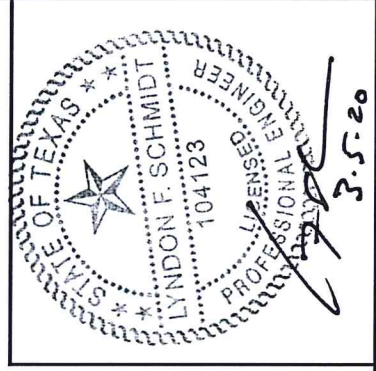


Documents Prepared By: Lyndon F. Schmidt, P.E.
TEXAS P.E. #104123

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

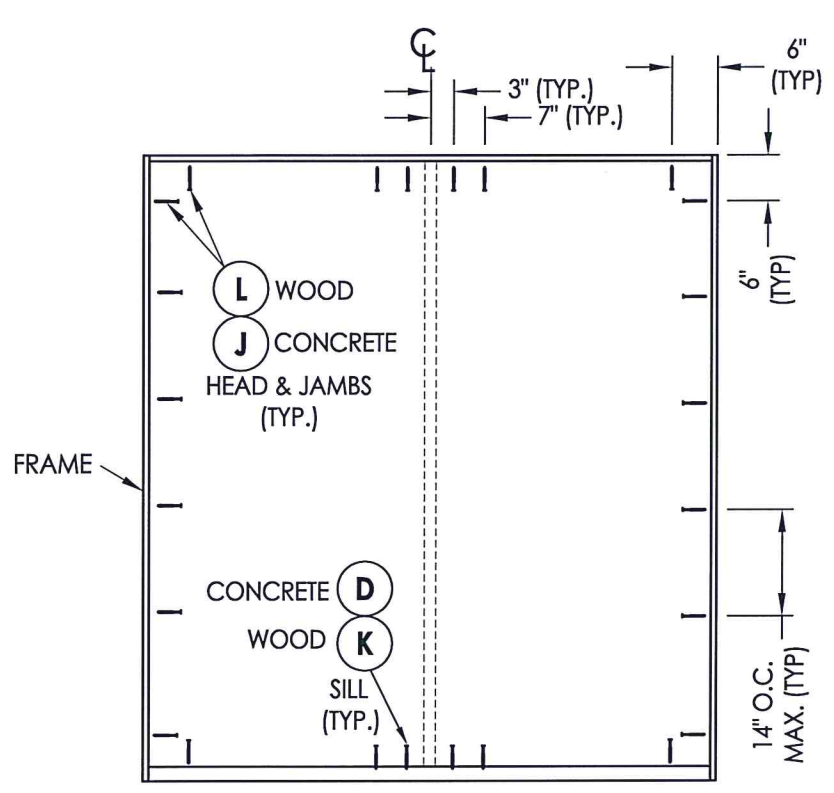
PRODUCT:		MASTERGRAIN FIBERGLASS DOOR	
PART OR ASSEMBLY:		VERTICAL CROSS SECTIONS (THRESHOLDS)	
NO.	DATE	UPDATE TO 2018 IBC/IRC CODE	LFS BY
1	3/05/20		
REVISIONS			
DATE:		8/30/18	
SCALE:		N.T.S.	
DWG. BY:		JK	
CHK. BY:		LFS	
DRAWING NO.:		TX-4884	
SHEET		8 OF 11	



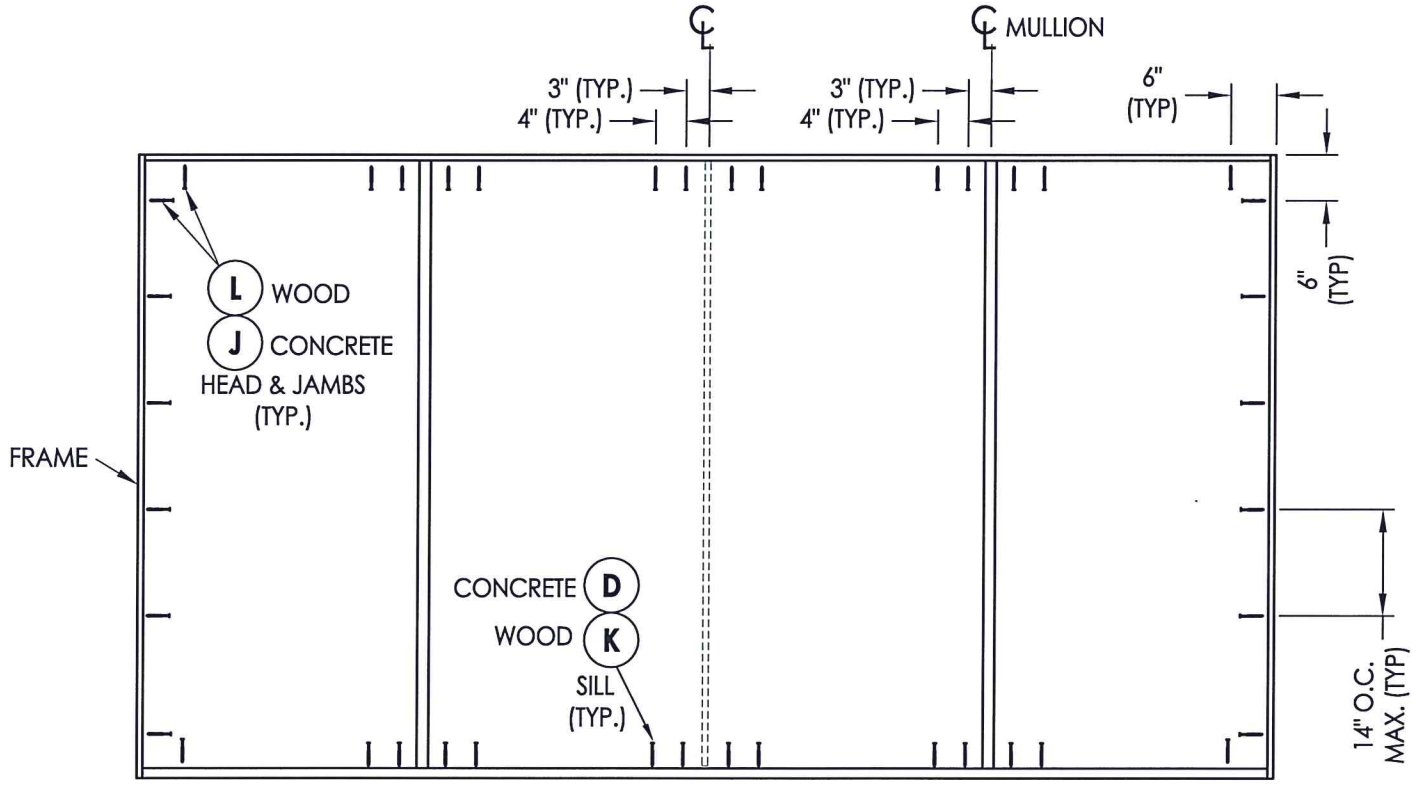
Documents Prepared By: Lyndon F. Schmidt, P.E.
 TEXAS P.E. #104123

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



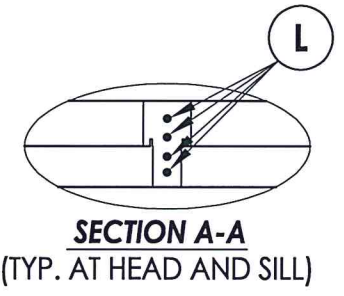
XX



OXXO

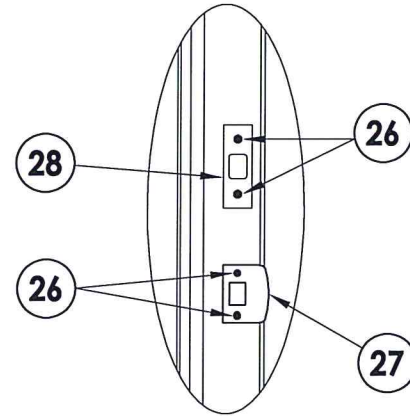
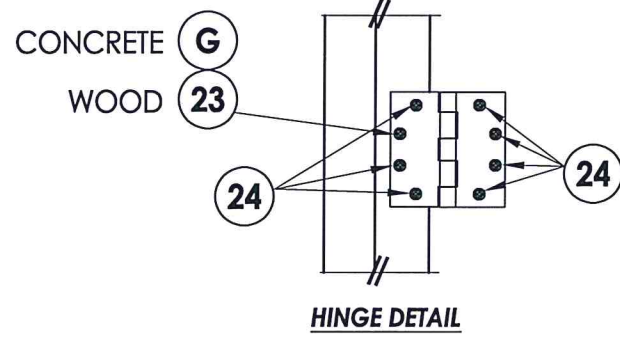
FRAME ANCHORING

NOTE:
 1. ALL FRAME CORNERS SECURED WITH (3) #8 X 2-1/2" FH DEEP THREAD WOOD SCREWS @ HEAD & SILL.

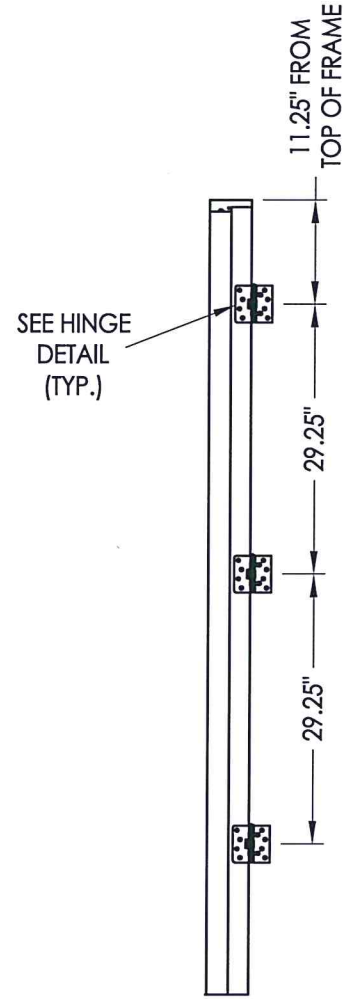


PRODUCT:		MASTERGRAIN FIBERGLASS DOOR	
PART OR ASSEMBLY:		FRAME ANCHORING & HARDWARE DETAILS	
NO.	DATE	UPDATE TO 2018 IBC/IRC CODE	LFS BY
1	3/05/20		
REVISIONS			
DATE: 8/30/18			
SCALE: N.T.S.			
DWG. BY: JK			
CHK. BY: LFS			
DRAWING NO.: TX-4884			
SHEET 9 OF 11			

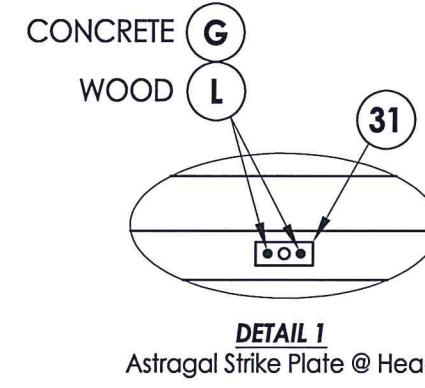
ASTRAGAL



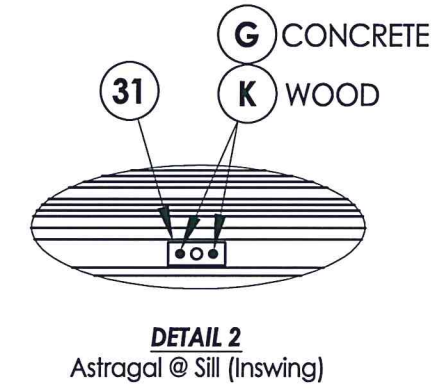
LATCH AND DEADBOLT DETAIL



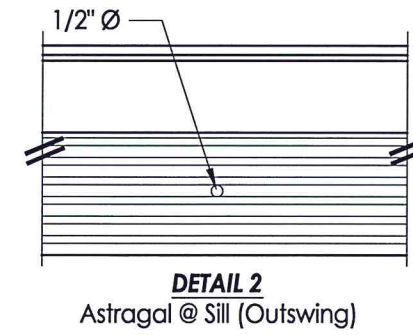
HINGE JAMB



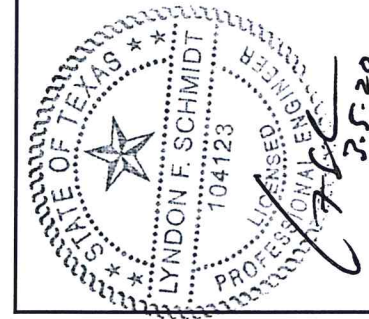
DETAIL 1
Astragal Strike Plate @ Head



DETAIL 2
Astragal @ Sill (Inswing)



DETAIL 2
Astragal @ Sill (Outswing)



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

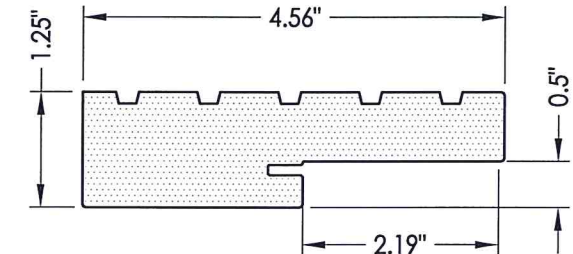
PRODUCT:	MASTERGRAIN FIBERGLASS DOOR
PART OR ASSEMBLY:	HARDWARE DETAILS

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

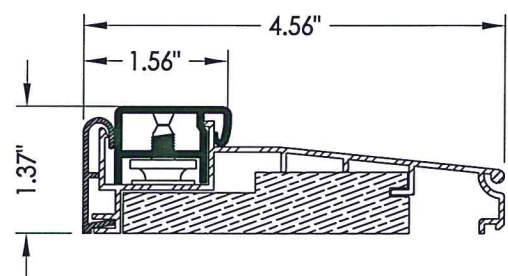
DATE:	8/30/18
SCALE:	N.T.S.
DWG. BY:	JK
CHK. BY:	LFS
DRAWING NO.:	TX-4884
SHEET	10 OF 11

BILL OF MATERIALS

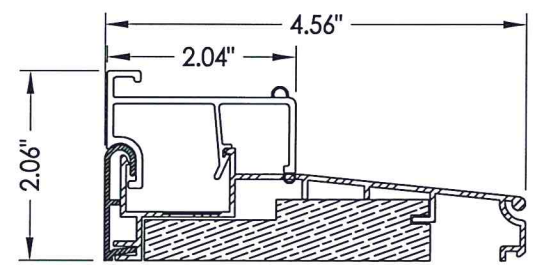
ITEM #	DESCRIPTION	MATERIAL
A	1X BUCK (SG >= 0.42)	WOOD
B	2X BUCK (SG >= 0.42)	WOOD
C	1/4" MAX. SHIM SPACE	-
D	1/4" Ø PFH ELCO OR ITW CONCRETE SCREW (1-3/4" MIN. EMBEDMENT)	STEEL
E	MASONRY - 3,000 PSI MIN. CONCRETE CONFORMING TO ACI 301 OR HOLLOW BLOCK CONFORMING TO ASTM C90	CONCRETE
G	3/16" X 3-1/4"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



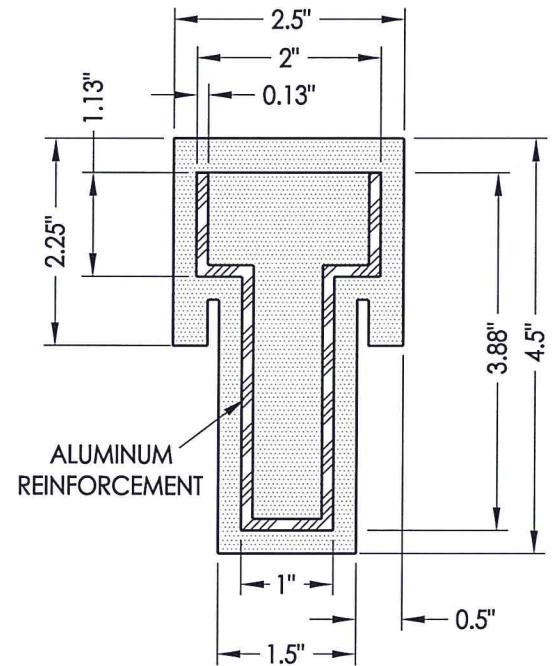
1 COMPOSITE JAMB
WORLDWIDE



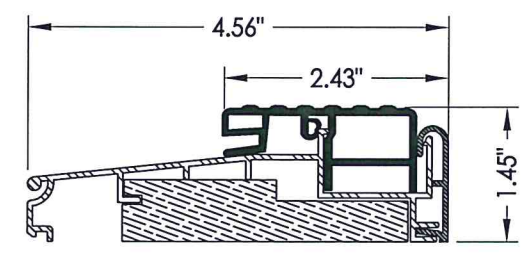
13 INSWING THRESHOLD
WORLDWIDE



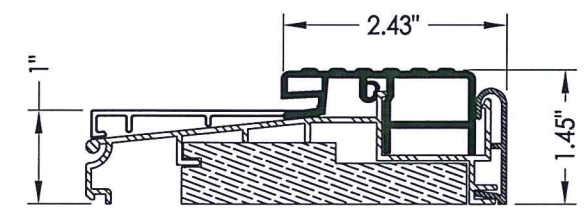
15 INSWING THRESHOLD w/ SIDELITE ADAPTER
WORLDWIDE



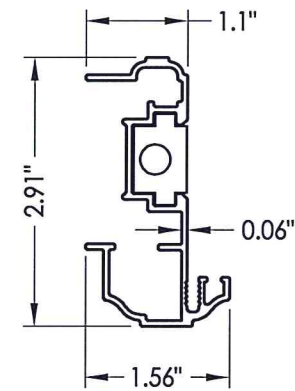
3 COMPOSITE MULLION
WORLDWIDE



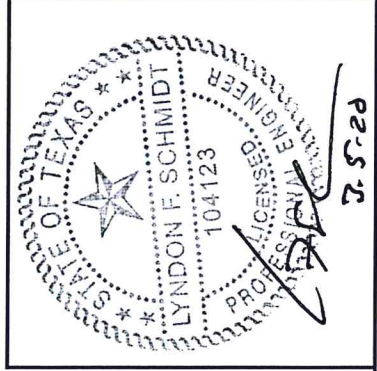
14 OUTSWING THRESHOLD
WORLDWIDE



16 OUTSWING THRESHOLD w/ SIDELITE ADAPTER
WORLDWIDE



35 ASTRAGAL
WORLDWIDE



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

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

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

DATE: 8/30/18
SCALE: N.T.S.
DWG. BY: JK
CHK. BY: LFS
DRAWING NO.: TX-4884

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.