



# Opaque Steel Door

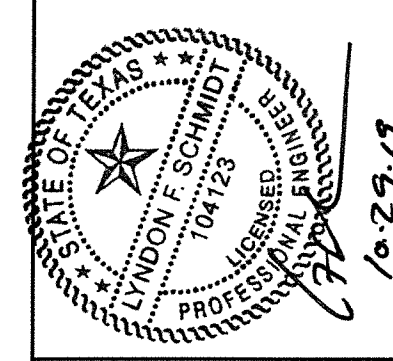
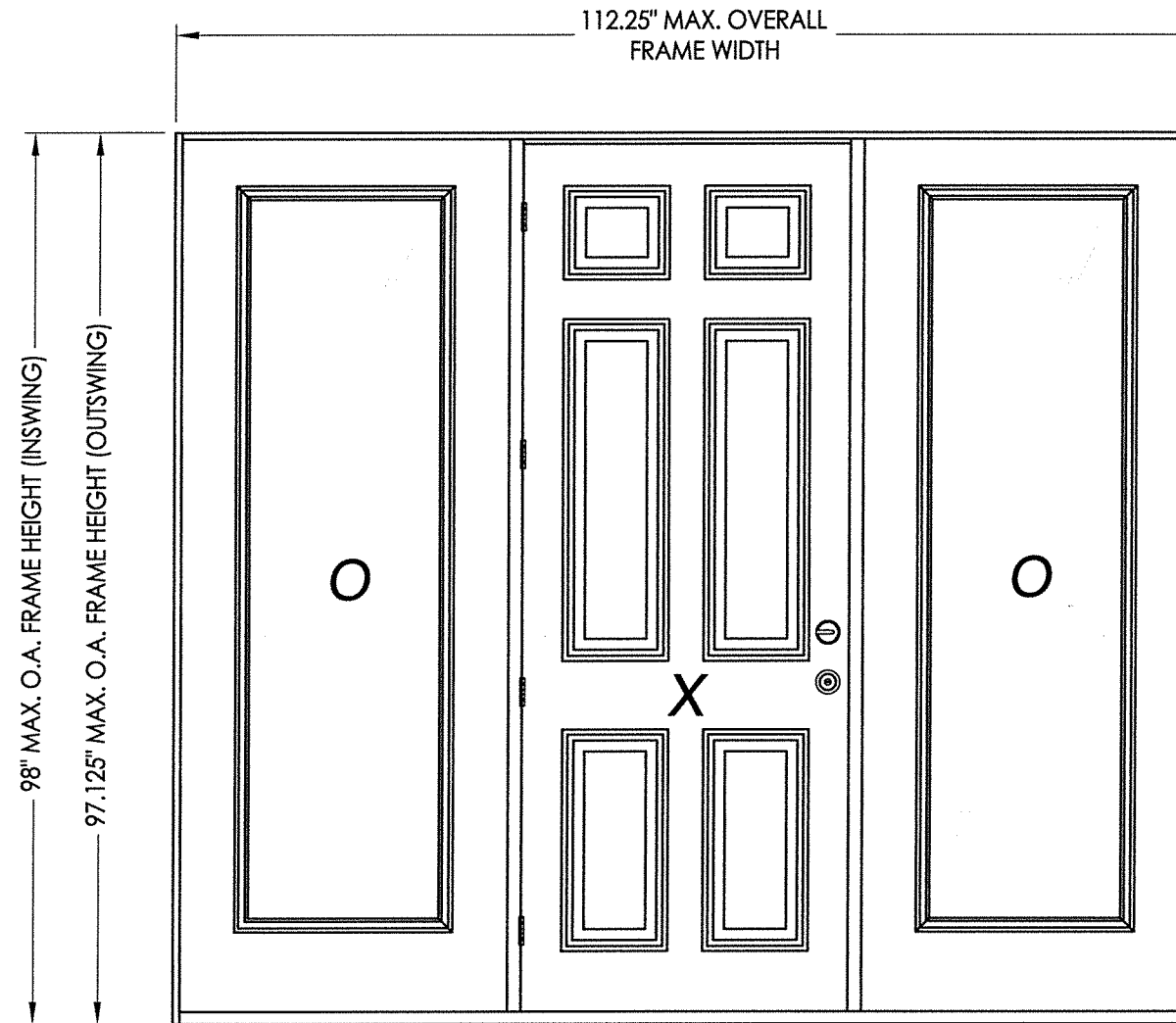
"NON-IMPACT"  
INSWING / OUTSWING

**EVALUATED FOR USE IN THE STATE OF TEXAS**

The Steel 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	Slidelite panel details (lip lite insert glazing)
4	Horizontal cross sections
5	Vertical cross sections
6	Vertical cross sections
7	Frame anchoring



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: ENDURA

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

NO.	DATE	REVISIONS
1	10/28/19	ADD "FusionFrame" OPTION & UPDATE TO 2018 IBC/IRC CODE

DATE: 11/08/16

SCALE: N.T.S.

DWG. BY: JK

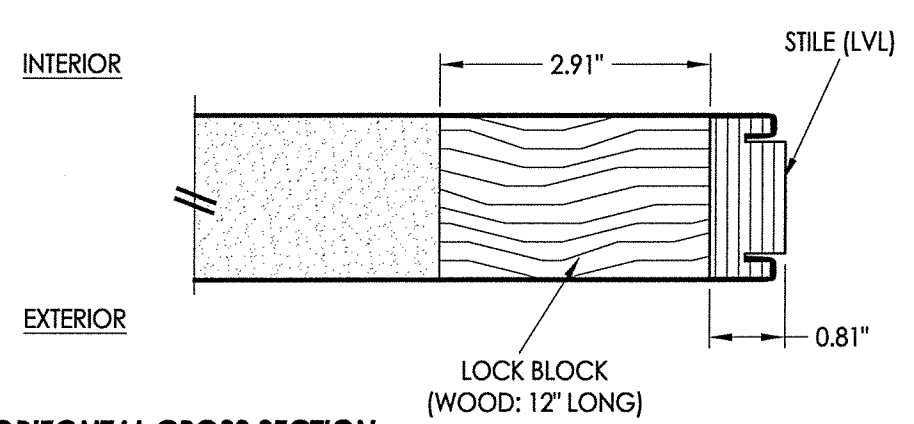
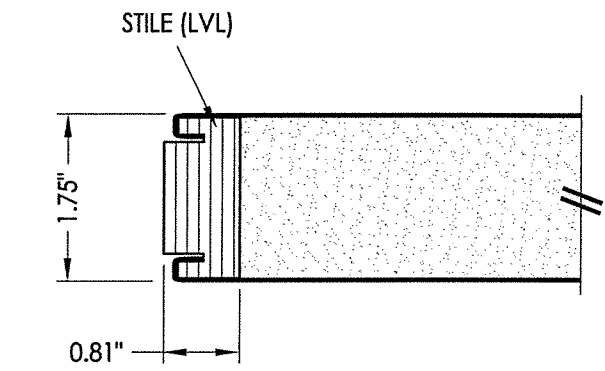
CHK. BY: LFS

DRAWING NO.: TX-4655

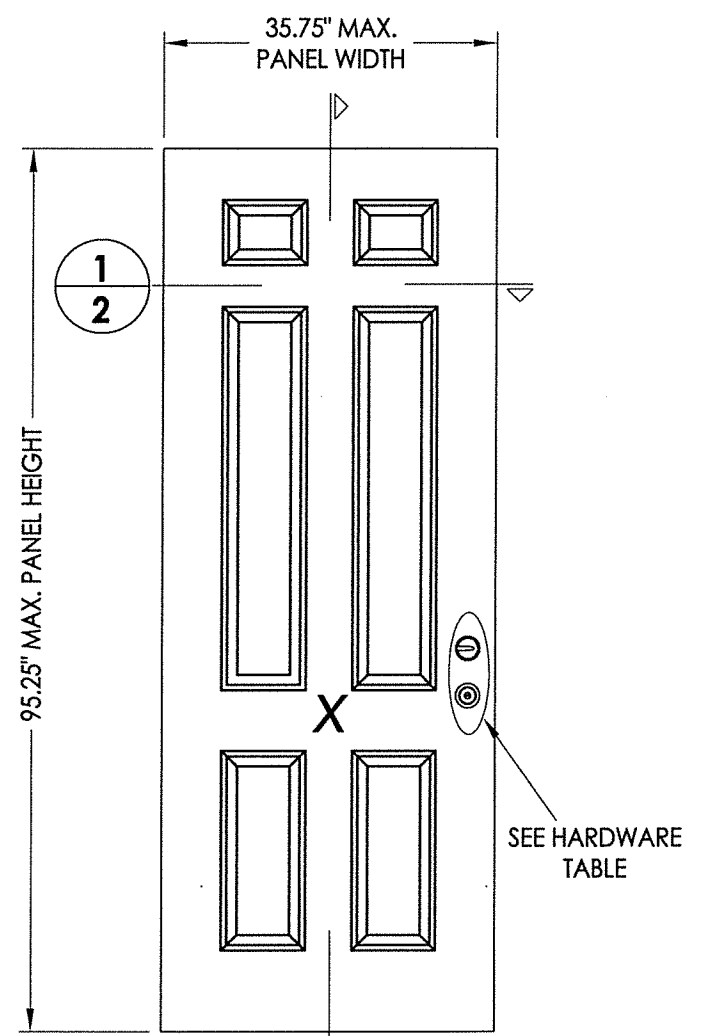
SHEET 1 OF 7

CONFIG.	MODEL	DESIGN PRESSURE (PSF)	
		POSITIVE	NEGATIVE
OXO	INSWING	+40.0	-40.0
OXO	OUTSWING	+45.0	-45.0

R:\Clients\Endura PERMANENT\B - Texas Dept of Ins\TDI - DR-850 Masonite ST Opaque (LK,DB)\C - Drawings\TX-4652.55.dwg, 2.4



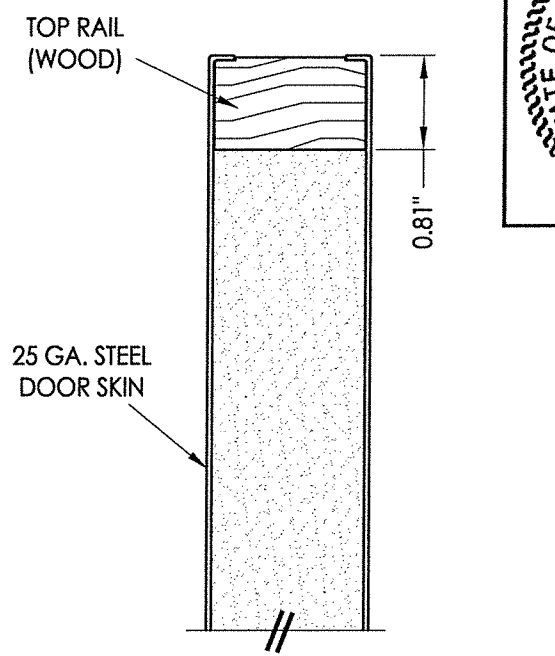
**1**  
**2** **HORIZONTAL CROSS SECTION**



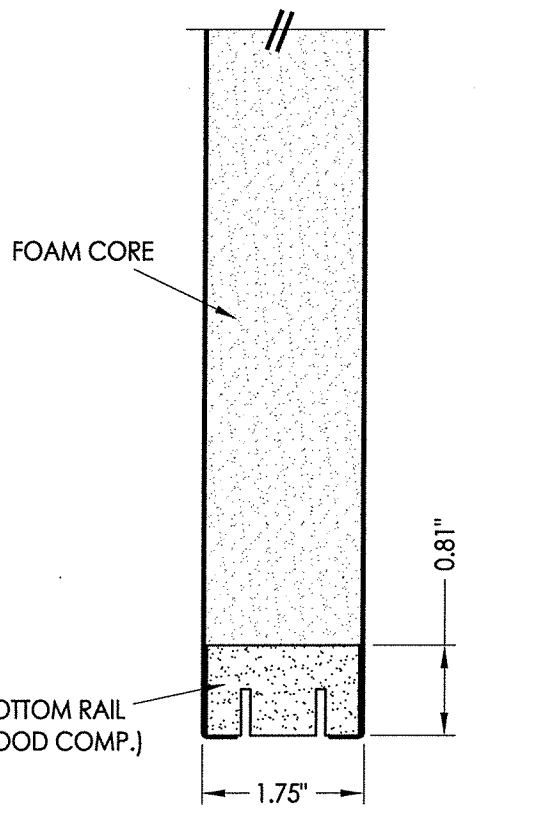
**2**  
**2**  
**40 DOOR PANEL**  
Masonite  
Steel (Wood Edge)

HARDWARE TABLE	
MANUFACTURER	MODEL
KWIKSET	LATCH: KWIKSET SIGNATURE SERIES (991) DEADBOLT: KWIKSET SIGNATURE SERIES (980/985)

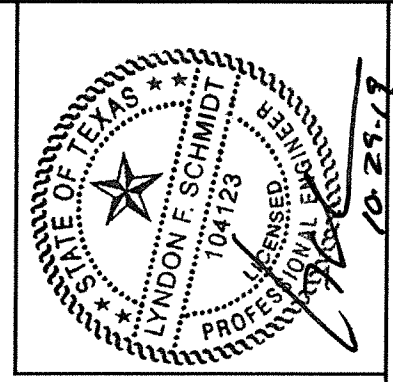
DOOR SKIN: 25 GA. STEEL (0.020" MIN. THICKNESS)  
CORE MATERIAL: POLYURETHANE FOAM (1.9 PCF MIN.)



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



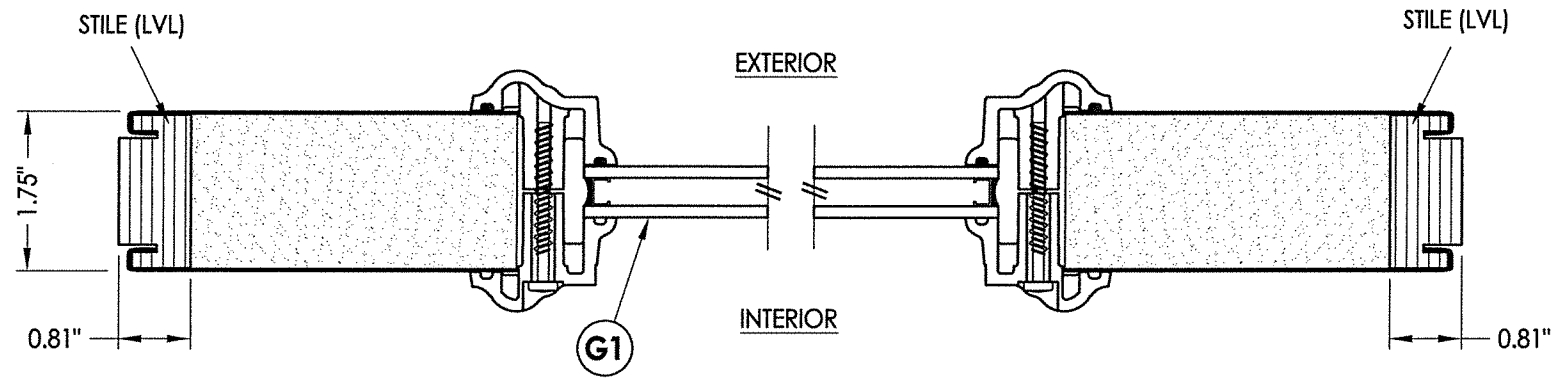
**2**  
**2** **VERTICAL CROSS SECTION**



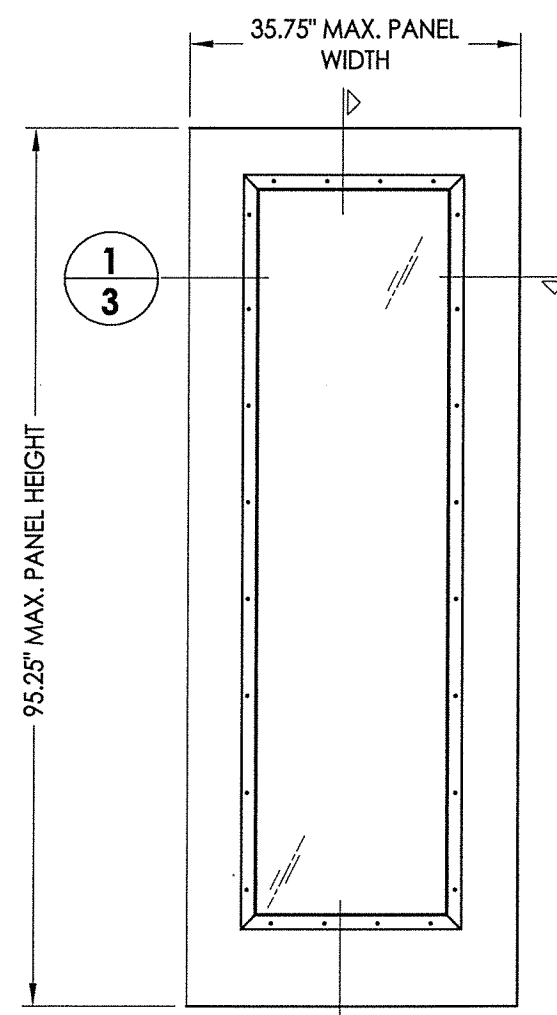
Documents Prepared By: Lyndon F. Schmidt, P.E.  
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CERTIFICATE OF REGISTRATION # F-11852

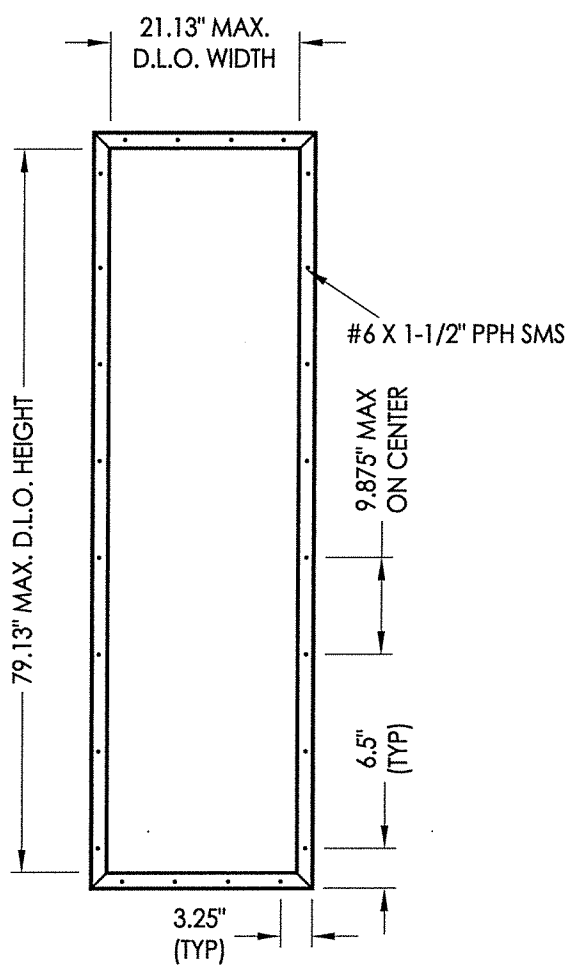
PRODUCT:	ENDURA	
PART OR ASSEMBLY:	DOOR PANEL DETAILS & GLAZING DETAIL	
NO.	DATE	BY
1	10/28/19	LFS
ADD "FusionFrame" OPTION & UPDATE TO 2018 IBC/IRC CODE		
REVISIONS		
DATE:	11/08/16	
SCALE:	N.T.S.	
DWG. BY:	JK	
CHK. BY:	LFS	
DRAWING NO.:	TX-4655	
SHEET	2 OF 7	



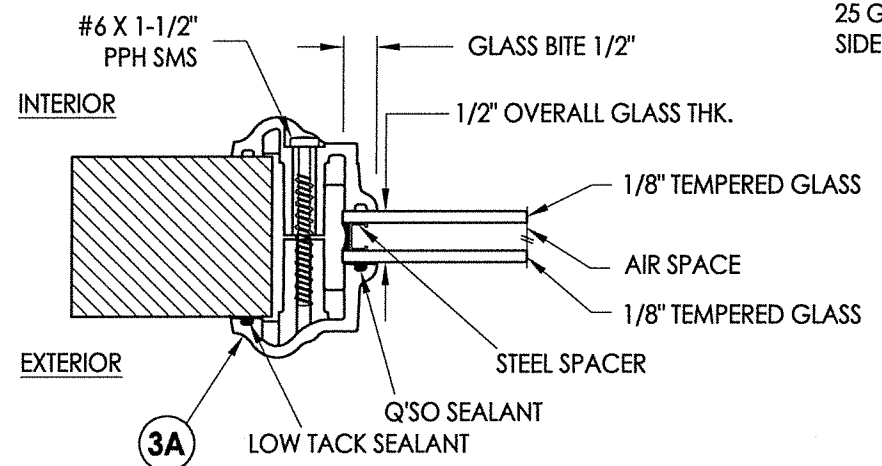
**1**  
**3** HORIZONTAL CROSS SECTION



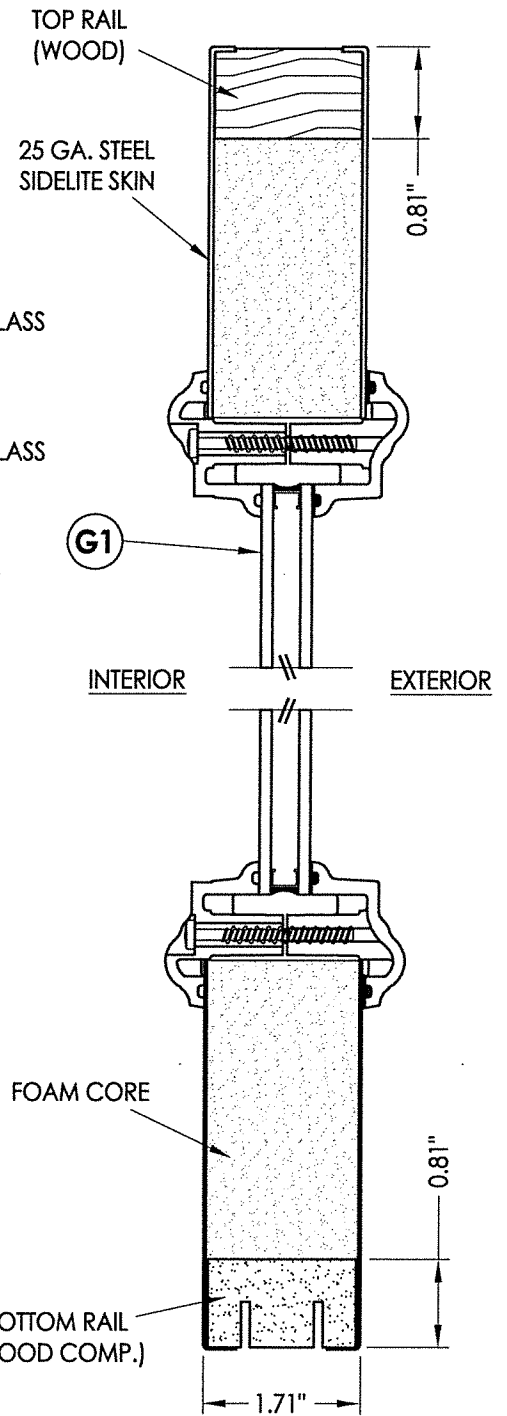
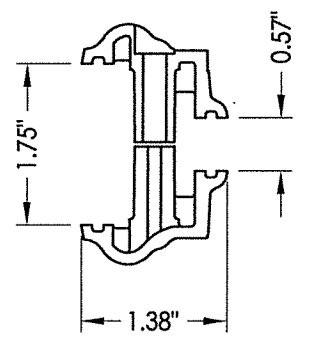
**2**  
**3**  
**50** SIDELITE PANEL  
Masonite  
Steel (Wood Edge)



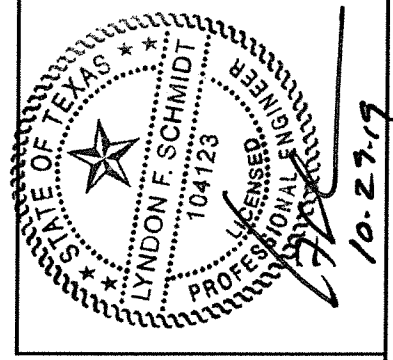
**3A** OD LITE FRAME  
HP Polypropylene



**G1** GLAZING DETAIL



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

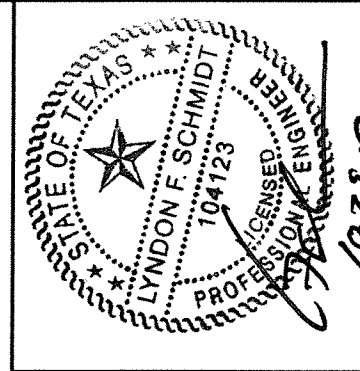


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CERTIFICATE OF REGISTRATION # F-11852

PRODUCT:	ENDURA	
PART OR ASSEMBLY:	SIDELITE PANEL DETAILS (LIP LITE INSERT GLAZING)	
NO.	DATE	BY
1	10/28/19	LFS
ADD "FusionFrame" OPTION & UPDATE TO 2018 IBC/IRC CODE		
REVISIONS		
DATE:	11/08/16	
SCALE:	N.T.S.	
DWG. BY:	JK	
CHK. BY:	LFS	
DRAWING NO.:	TX-4655	
SHEET	3 OF 7	

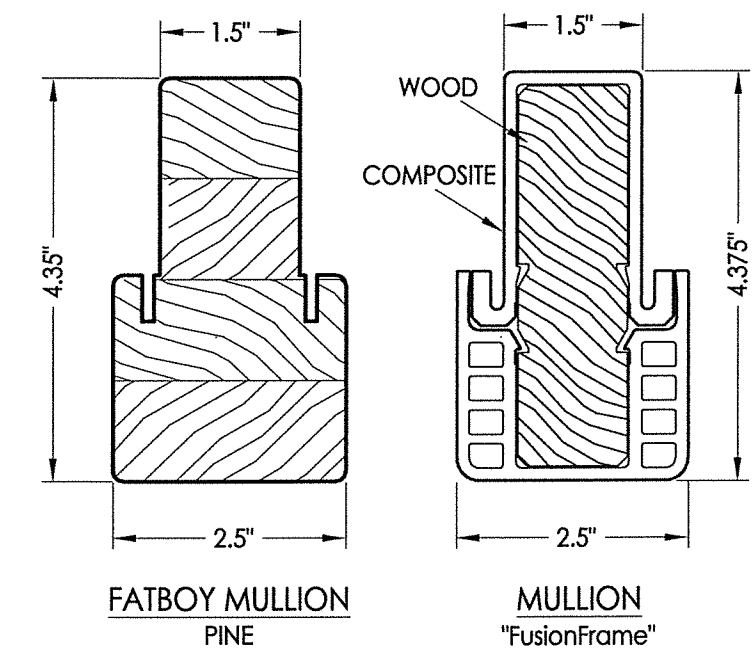
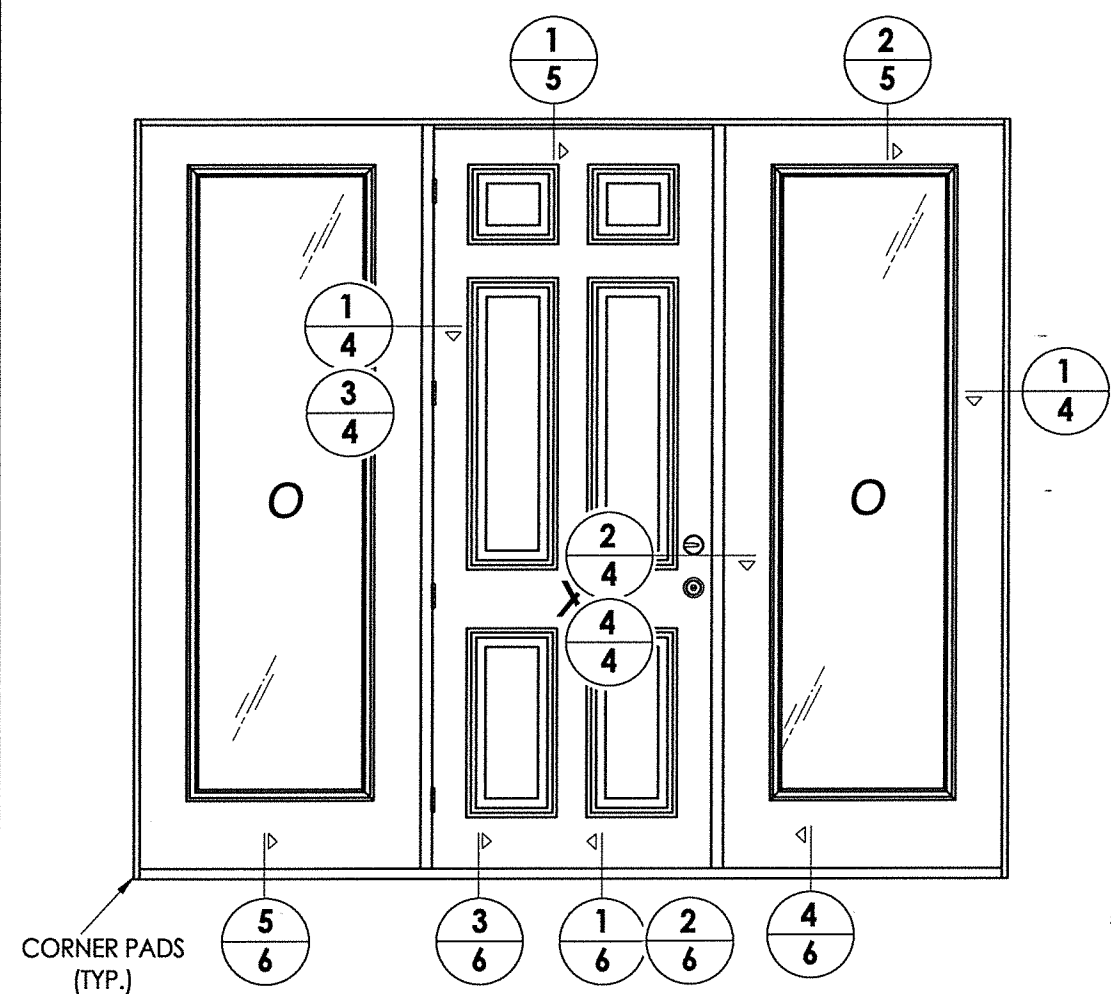
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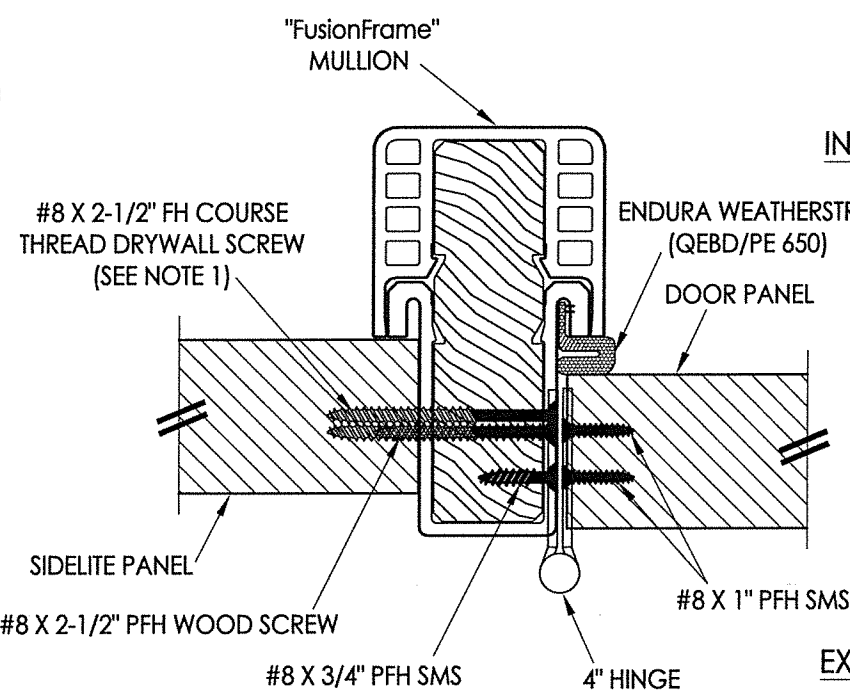
Documents Prepared By: Lyndon F. Schmidt, P.E.  
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Phone No.: 813.659.9197

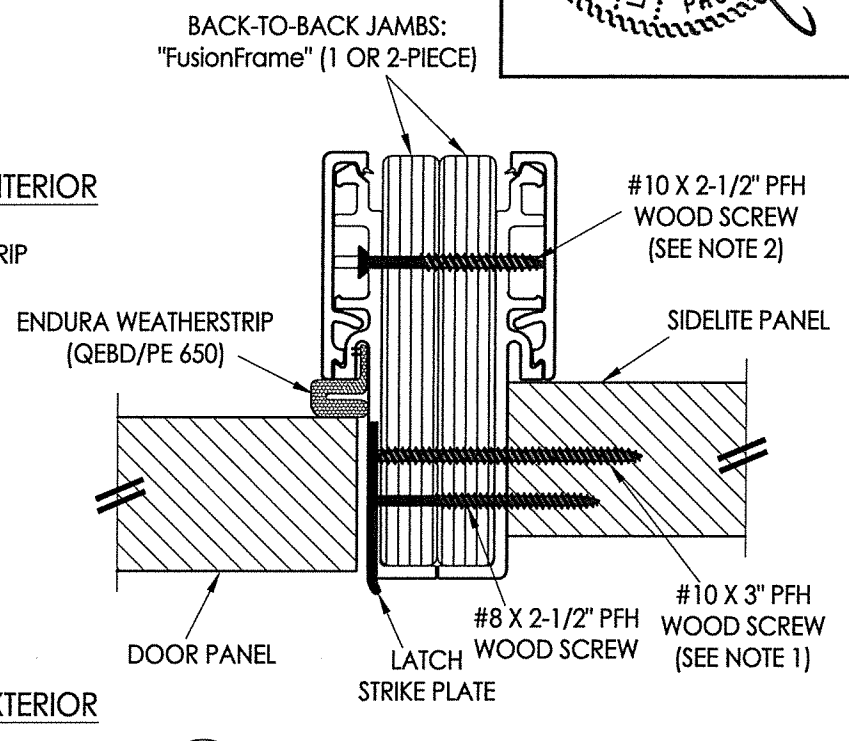
TEXAS BOARD OF PROFESSIONAL ENGINEERS  
CERTIFICATE OF REGISTRATION # F-11852



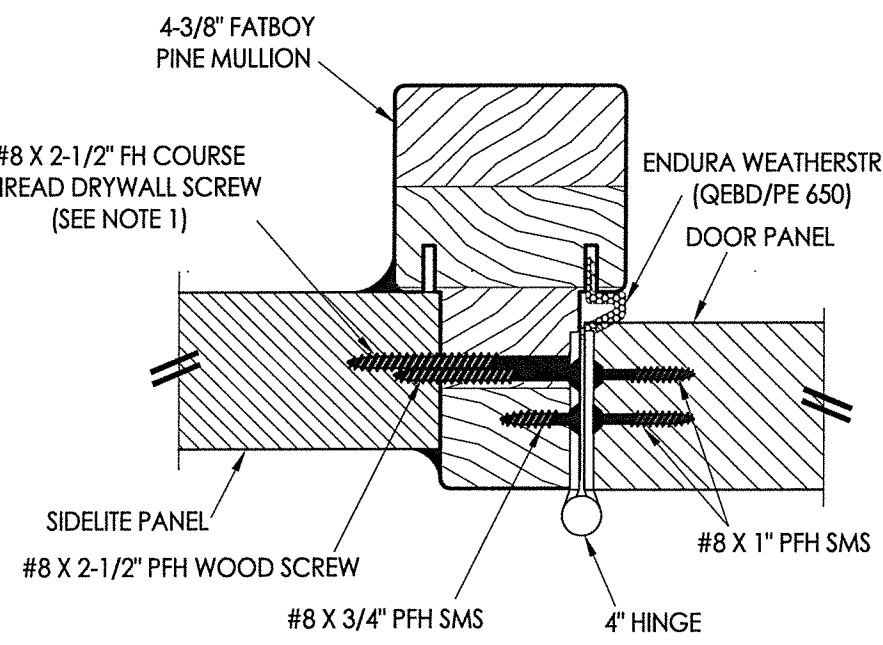
**NOTES:**  
 1. Spacing for sidelite screws: 6.5", 35.5", 57.25" and 85" from head to sill (4 total).  
 2. Spacing for mullion screws: 6" from each end plus 3 more equally spaced (5 total).



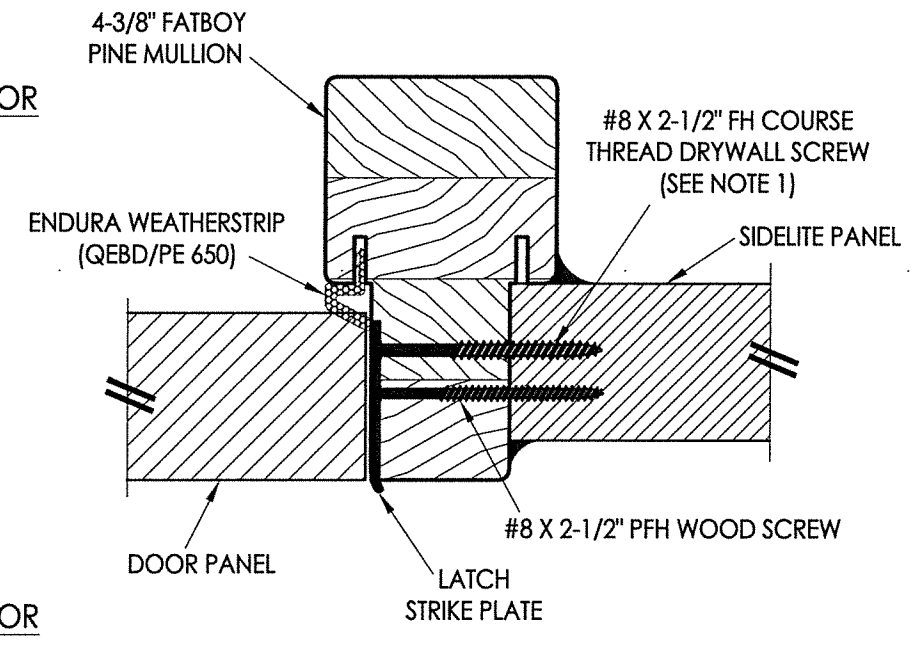
**3 HORIZONTAL CROSS SECTION**  
 4 Outswing shown - Inswing also approved



**4 HORIZONTAL CROSS SECTION**  
 4 Outswing shown - Inswing also approved



**1 HORIZONTAL CROSS SECTION**  
 4 Outswing shown - Inswing also approved

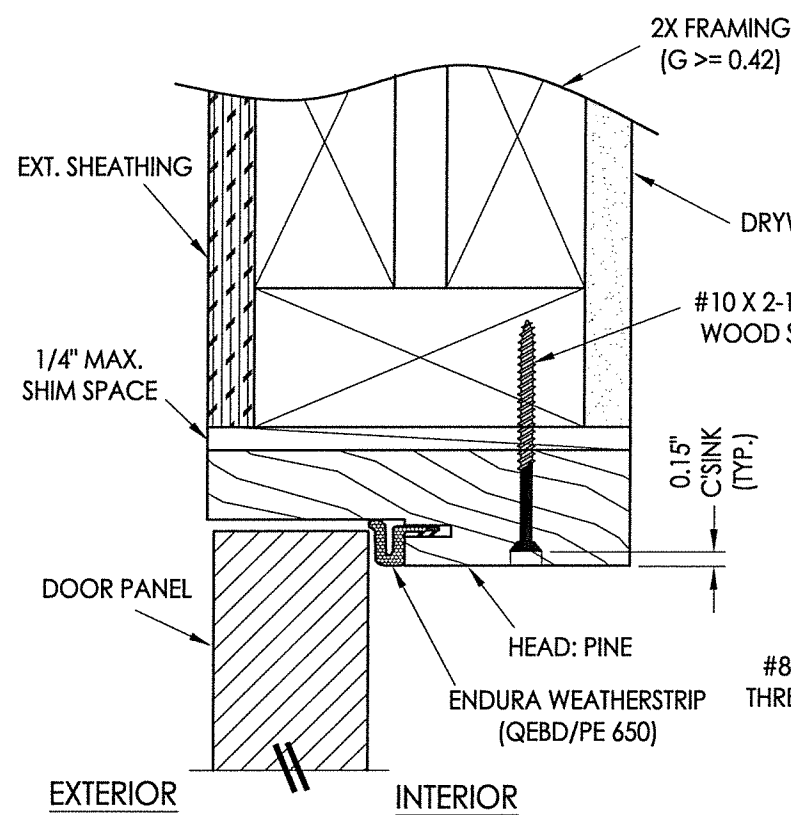


**2 HORIZONTAL CROSS SECTION**  
 4 Outswing shown - Inswing also approved

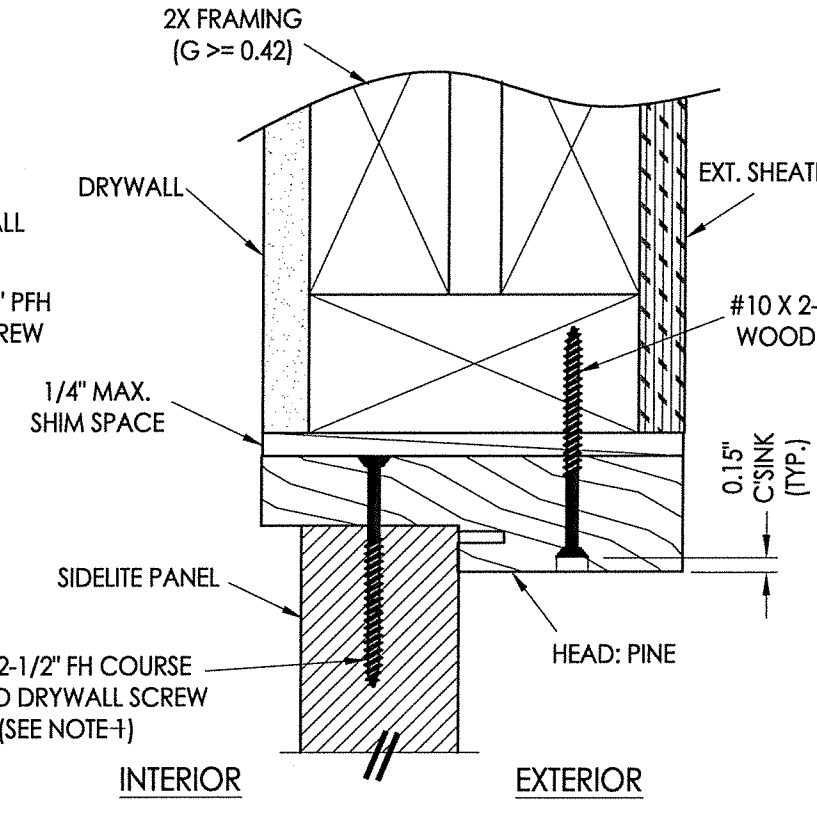
PRODUCT:	ENDURA	
	FIBERGLASS DOOR	
PART OR ASSEMBLY:	HORIZONTAL CROSS SECTIONS	
NO.	DATE	BY
1	10/28/19	LFS
ADD "FusionFrame" OPTION & UPDATE TO 2018 IBC/IRC CODE		
REVISIONS		
DATE:	11/08/16	
SCALE:	N.T.S.	
DWG. BY:	JK	
CHK. BY:	LFS	
DRAWING NO.:	TX-4655	
SHEET	4	OF 7

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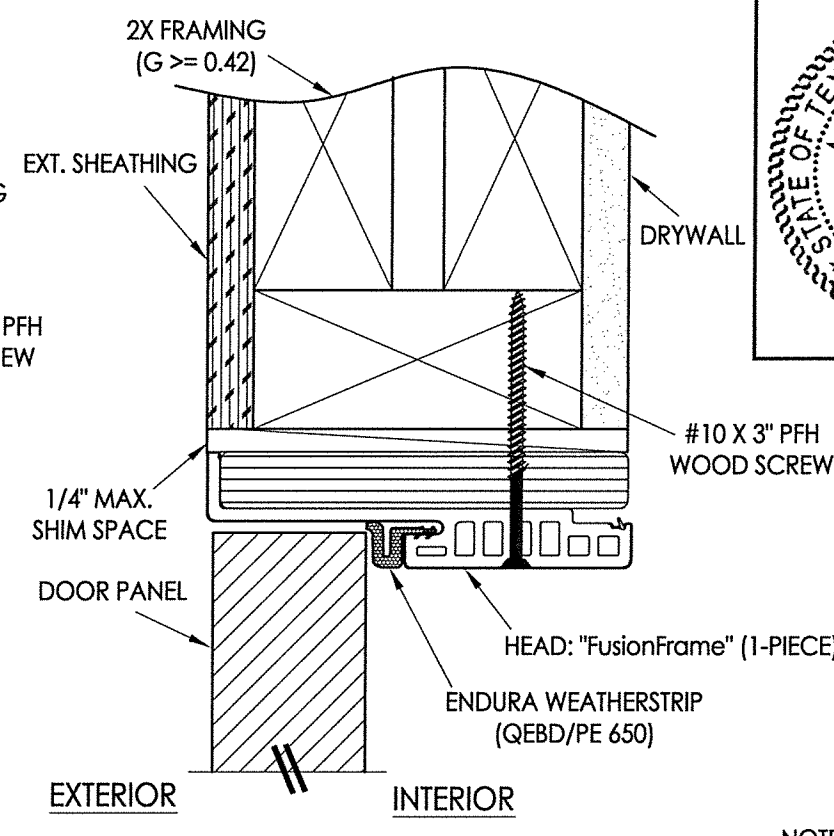
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**1 VERTICAL CROSS SECTION**  
**5** Outswing shown - inswing also approved

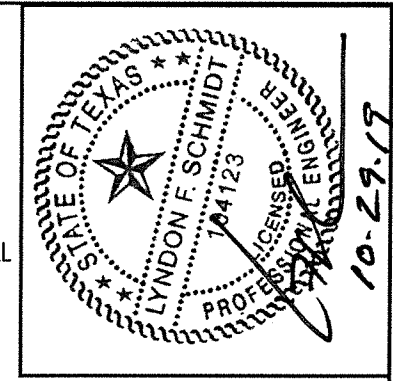


**2 VERTICAL CROSS SECTION**  
**5** Inswing shown - Outswing also approved

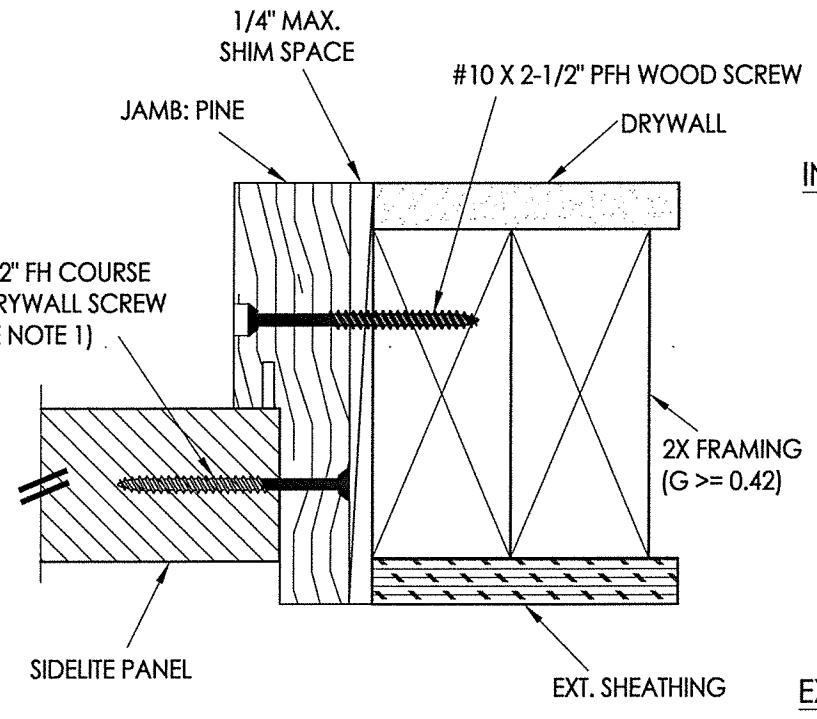
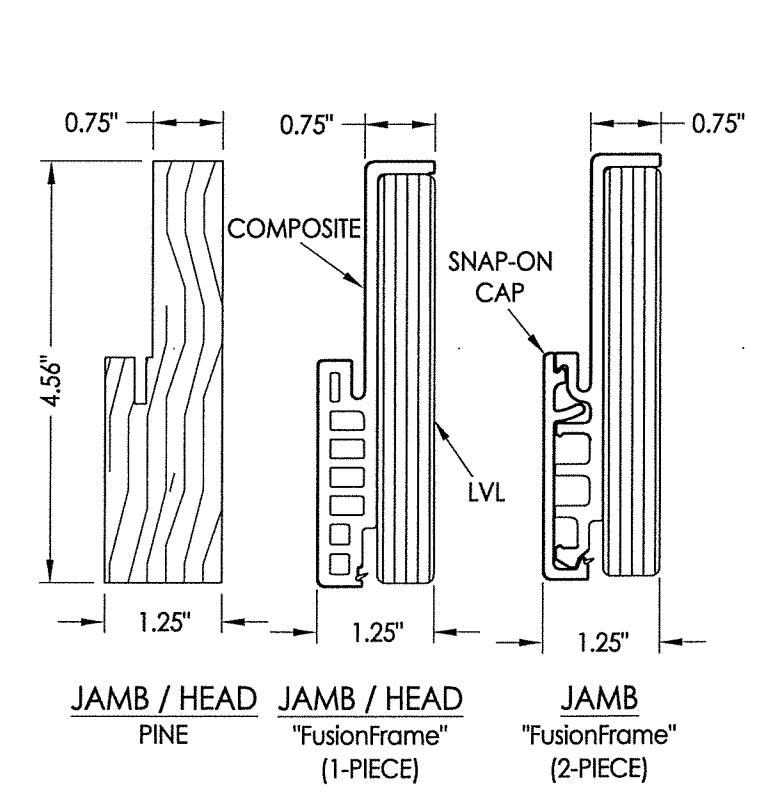


**3 VERTICAL CROSS SECTION**  
**5** Outswing shown - inswing also approved

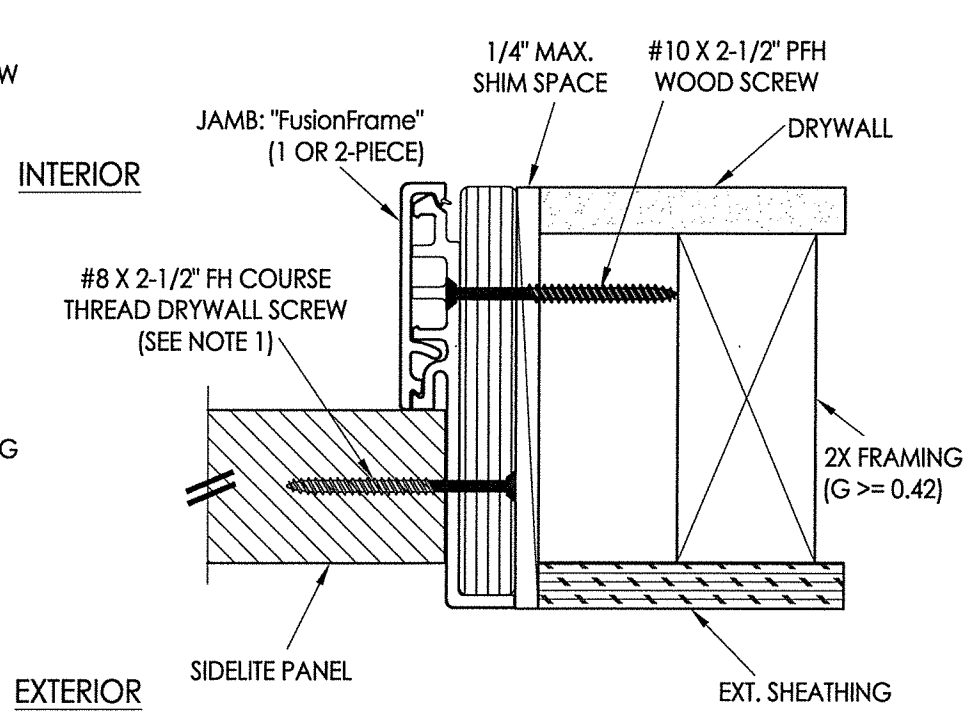
NOTE:  
 1. Spacing for sidelite screws:  
 6" from each end (2 total).



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



**4 HORIZONTAL CROSS SECTION**  
**5** Outswing shown - Inswing also approved

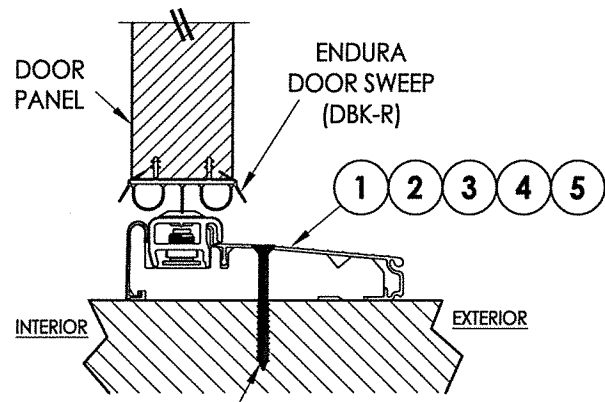


**5 HORIZONTAL CROSS SECTION**  
**5** Outswing shown - Inswing also approved

PRODUCT:	ENDURA	
PART OR ASSEMBLY:	VERTICAL CROSS SECTIONS	
NO.	DATE	BY
1	10/28/19	LFS
ADD "FusionFrame" OPTION & UPDATE TO 2018 IBC/IRC CODE		
REVISIONS		
DATE:	11/08/16	
SCALE:	N.T.S.	
DWG. BY:	JK	
CHK. BY:	LFS	
DRAWING NO.:	TX-4655	
SHEET	5	OF 7

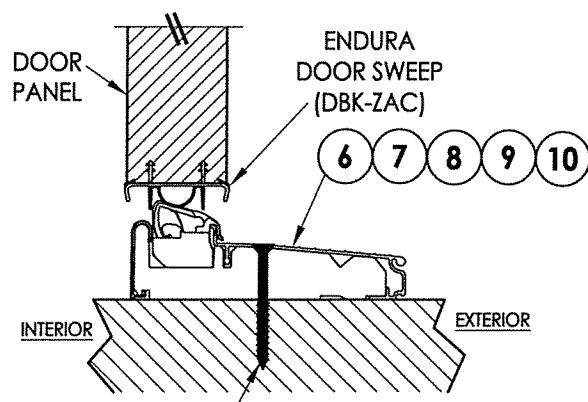
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R:\Clients\Endura PERMANENT\B - Texas Dept of Ins\TDI - DR-850 Masonite ST Opaque (LK,DB)\C - Drawings\TX-4652.55.dwg, 6.4



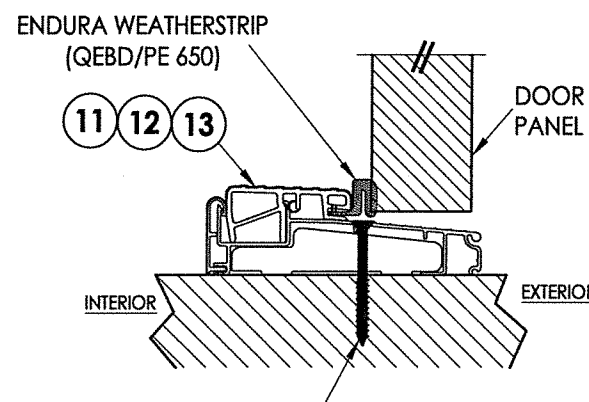
#10 X 2.5" PFH WOOD SCREW OR  
1/4" X 2-3/4" ELCO OR ITW CONCRETE SCREW

**1** VERTICAL CROSS SECTION  
**6** Inswing Adjustable Threshold



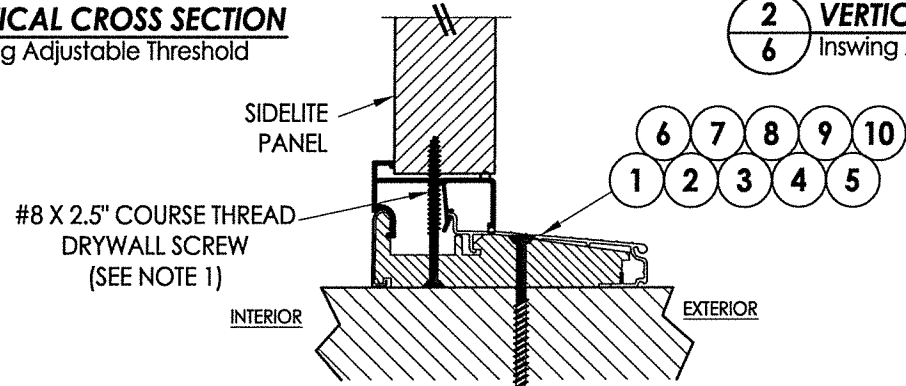
#10 X 2.5" PFH WOOD SCREW OR  
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**2** VERTICAL CROSS SECTION  
**6** Inswing Articulating Threshold



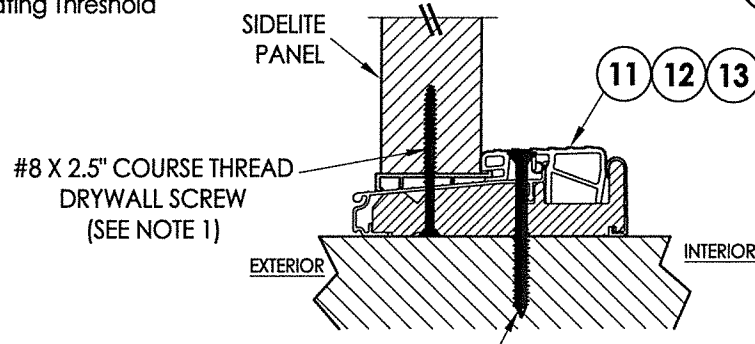
#10 X 2.5" PFH WOOD SCREW OR  
1/4" X 2-3/4" ELCO OR ITW CONCRETE SCREW

**3** VERTICAL CROSS SECTION  
**6** Outswing Bump Threshold



#10 X 2.5" PFH WOOD SCREW OR  
1/4" X 2-3/4" ELCO OR ITW CONCRETE SCREW

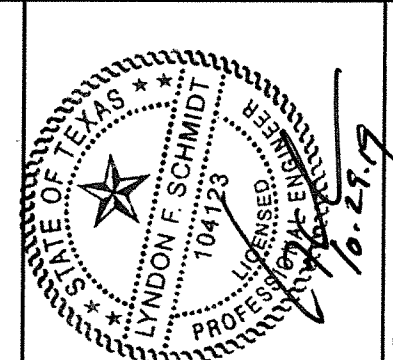
**4** VERTICAL CROSS SECTION  
**6** Inswing configuration



#10 X 2.5" PFH WOOD SCREW OR  
1/4" X 2-3/4" ELCO OR ITW CONCRETE SCREW

**5** VERTICAL CROSS SECTION  
**6** Outswing configuration

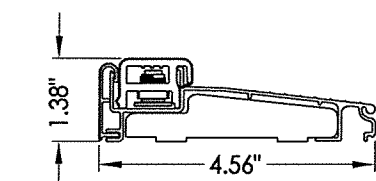
NOTE:  
1. Spacing for sidelite screws:  
6" from each end (2 total).



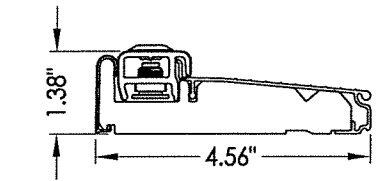
Documents Prepared By: Lyndon F. Schmidt, P.E.  
TEXAS P.E. #104123

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P.O. Box 230 Valrico FL 33595  
Phone No.: 813.659.9197

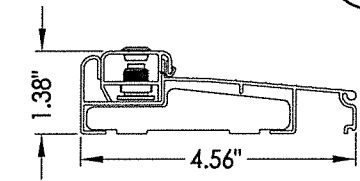
TEXAS BOARD OF PROFESSIONAL ENGINEERS  
CERTIFICATE OF REGISTRATION # F-11852



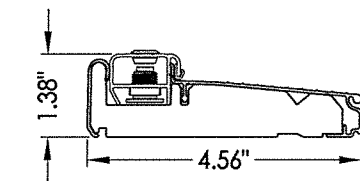
**1** INSWING ADJUSTABLE THRESHOLD  
ZAIL4565



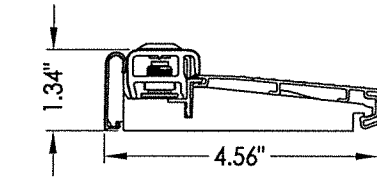
**2** INSWING ADJUSTABLE THRESHOLD  
ZAI4565FN



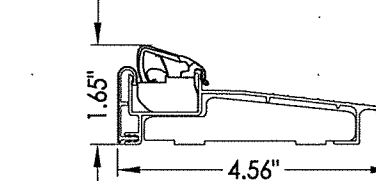
**3** INSWING ADJUSTABLE THRESHOLD  
ZAILAA4565



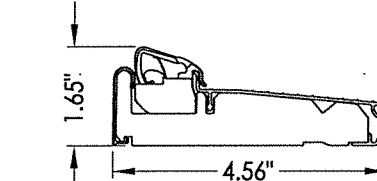
**4** INSWING ADJUSTABLE THRESHOLD  
ZAIAA4565FN



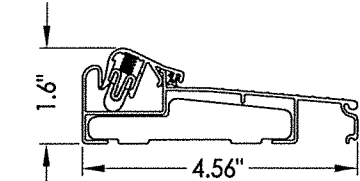
**5** INSWING ADJUSTABLE THRESHOLD  
ZAI4565RDS



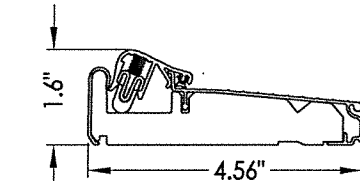
**6** INSWING ARTICULATING THRESHOLD  
ZACL4565



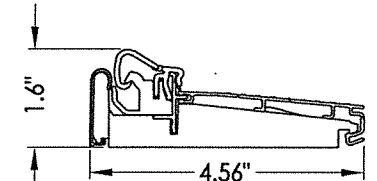
**7** INSWING ARTICULATING THRESHOLD  
ZAC4565FN



**8** INSWING ARTICULATING THRESHOLD  
ZACLAA4565

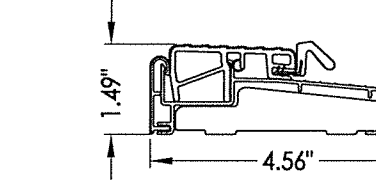


**9** INSWING ARTICULATING THRESHOLD  
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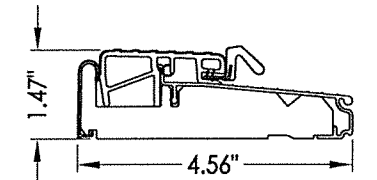


**10** INSWING ARTICULATING THRESHOLD  
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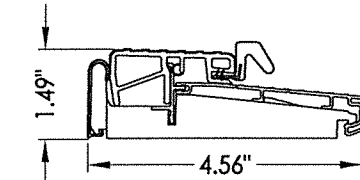
MAX. DESIGN PRESSURE = ±35 PSF



**11** OUTSWING THRESHOLD  
ZOBL4565



**12** OUTSWING THRESHOLD  
ZOB4565FN



**13** OUTSWING THRESHOLD  
ZOB4565RDS

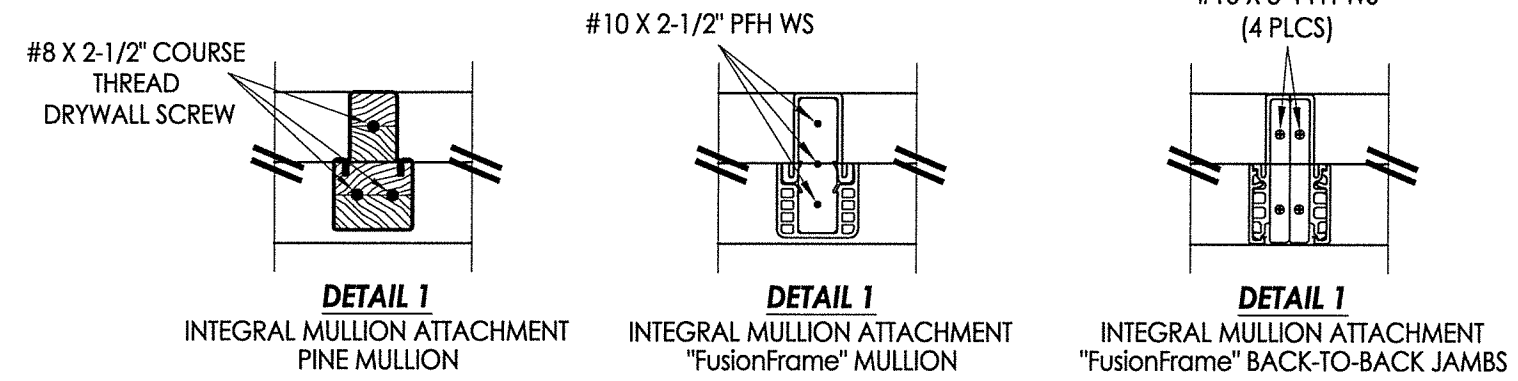
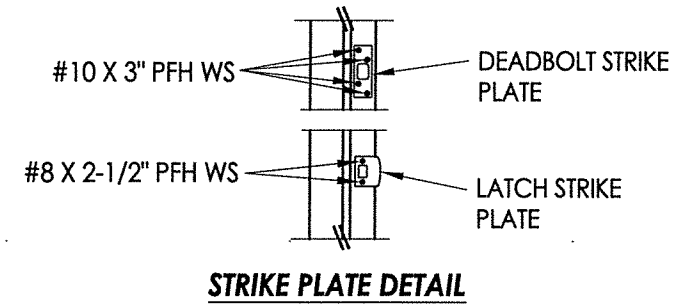
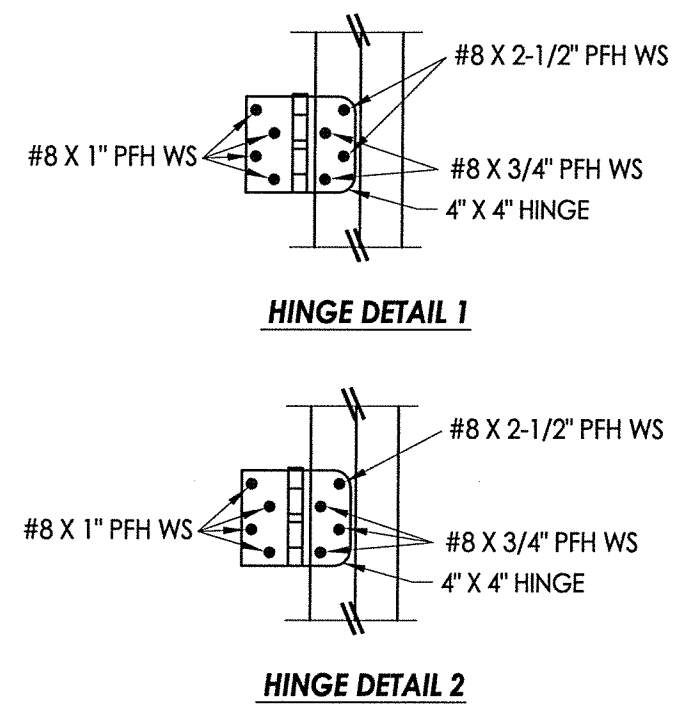
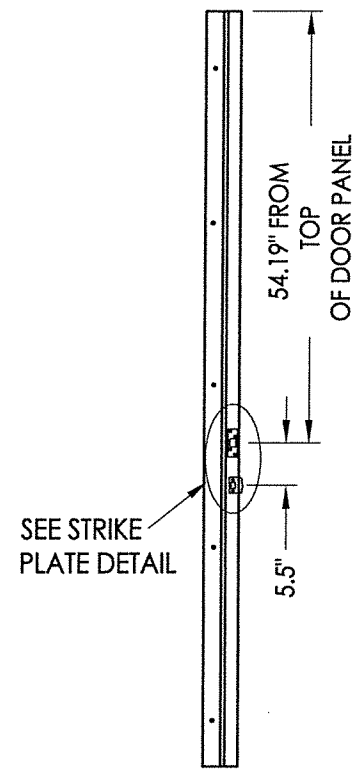
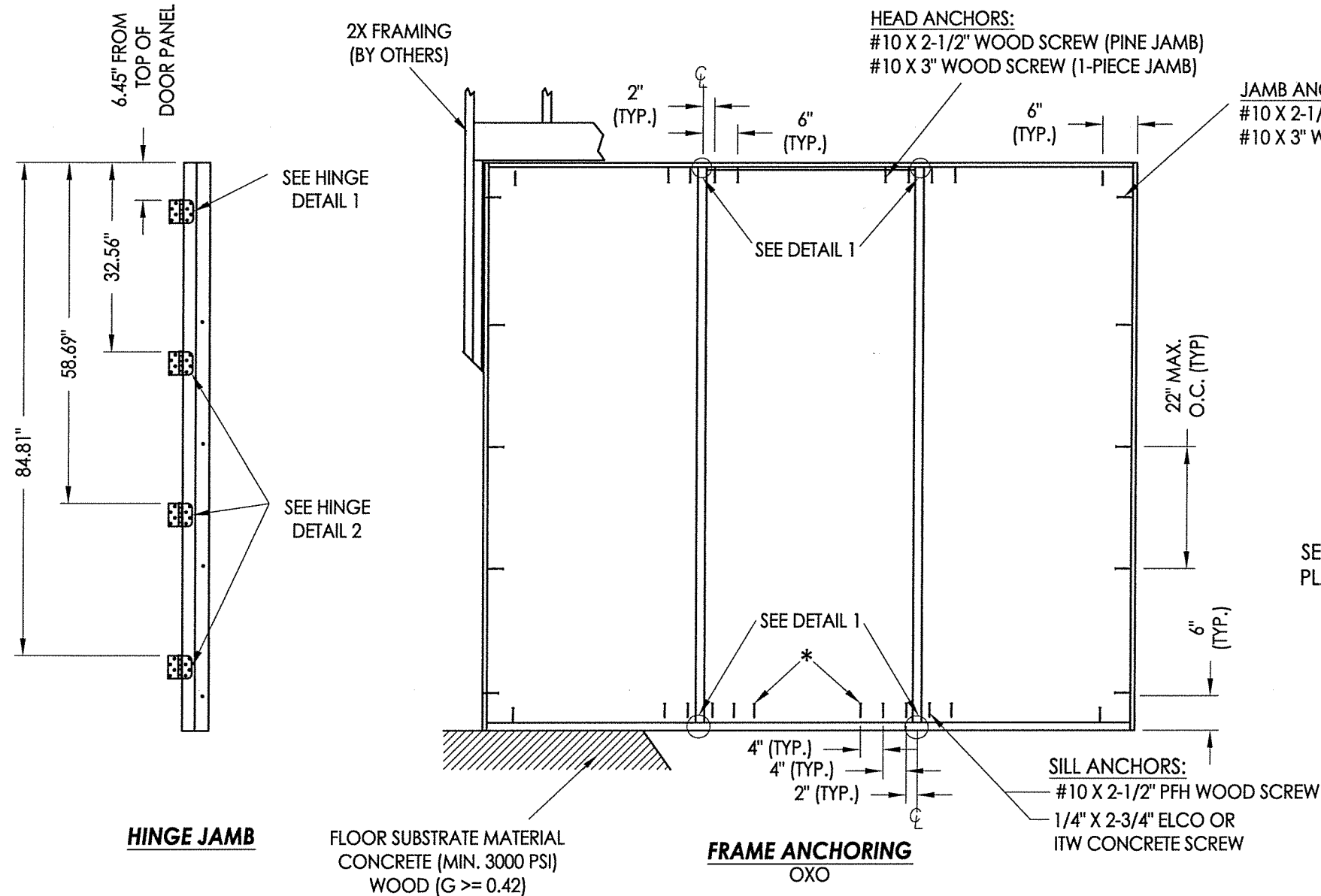
PRODUCT: ENDURA  
FIBERGLASS DOOR  
PART OR ASSEMBLY: LFS  
VERTICAL CROSS SECTIONS

NO.	DATE	BY	REVISIONS
1	10/28/19	LFS	ADD "FusionFrame" OPTION & UPDATE TO 2018 IBC/IRC CODE

DATE: 11/08/16  
SCALE: N.T.S.  
DWG. BY: JK  
CHK. BY: LFS  
DRAWING NO.: TX-4655  
SHEET 6 OF 7

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**JAMB NOTES:**  
 THE PINE OR "FusionFrame" 1-PIECE JAMB MAY BE INSTALLED @ THE HEAD OR SIDE JAMB.  
 THE FusionFrame" 2-PIECE JAMB MAY BE INSTALLED @ THE SIDE JAMBS ONLY.

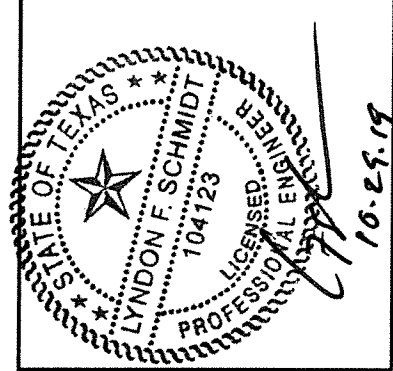
**INTEGRAL MULLION NOTES:**  
 THE FATBOY PINE MULLION, "FusionFrame" MULLION, OR THE "FusionFrame" BACK-TO-BACK JAMB (1-PIECE OR 2-PIECE) MAY ALL BE USED AS THE INTEGRAL MULLION.

**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"

\* NOTE: These additional anchors required for D.P. > 40 PSF.



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TEXAS BOARD OF PROFESSIONAL ENGINEERS  
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PRODUCT: ENDURA

PART OR ASSEMBLY: FRAME ANCHORING

NO.	DATE	BY	REVISIONS
1	10/28/19	LFS	ADD "FusionFrame" OPTION & UPDATE TO 2018 IBC/IRC CODE

DATE: 11/08/16  
 SCALE: N.T.S.  
 DWG. BY: JK  
 CHK. BY: LFS  
 DRAWING NO.: TX-4655  
 SHEET 7 OF 7