



Opaque Steel Door

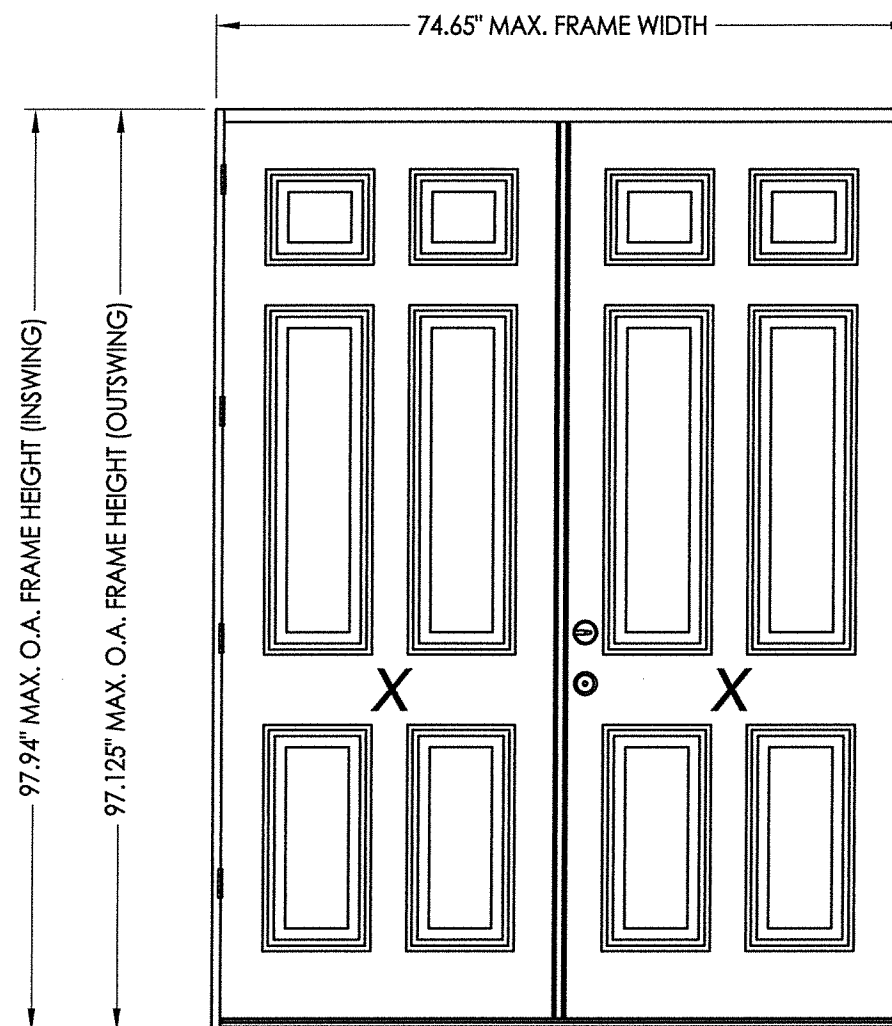
"NON-IMPACT"
IN SWING / OUT SWING

EVALUATED FOR USE IN THE STATE OF TEXAS

The Opaque 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:

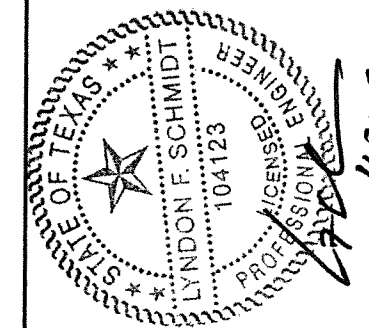
1. Anchors shall be as listed and spaced as shown in the details. Anchor embedment to base material shall be beyond wall dressing or stucco.
2. When used in areas requiring wind-borne debris protection this product is required to be protected with an impact resistant covering that complies with Section 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	Astragal details
3	Door panel details
4	Horizontal & vertical cross sections
5	Vertical cross sections
6	Frame anchoring



MODEL	DESIGN PRESSURE (PSF)	
	POSITIVE	NEGATIVE
IN SWING	+40.0	-45.0
OUT SWING	+45.0	-45.0

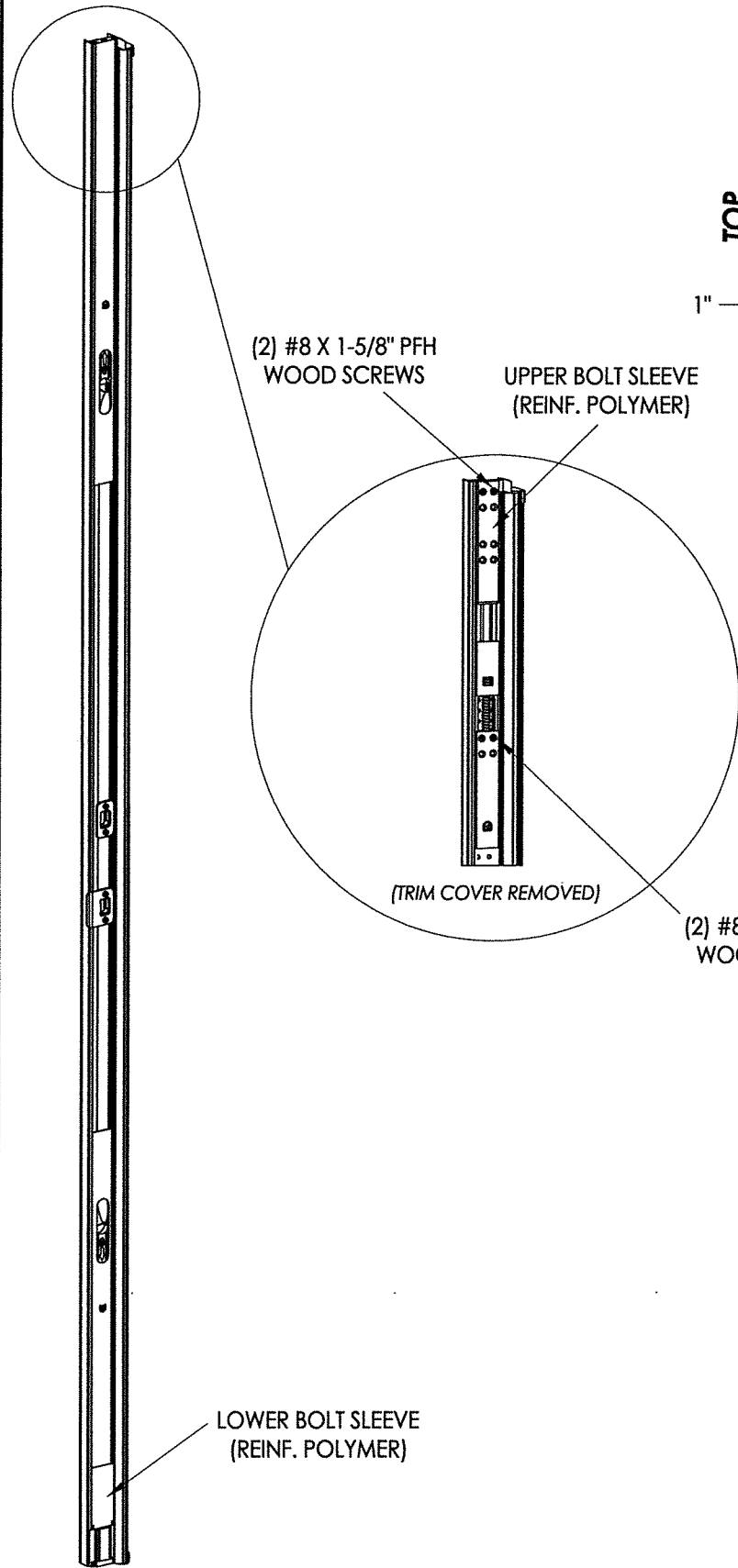
SEE SHEET 5 FOR THRESHOLD DESIGN PRESSURE LIMITATIONS



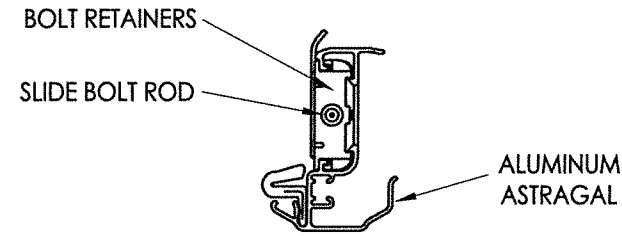
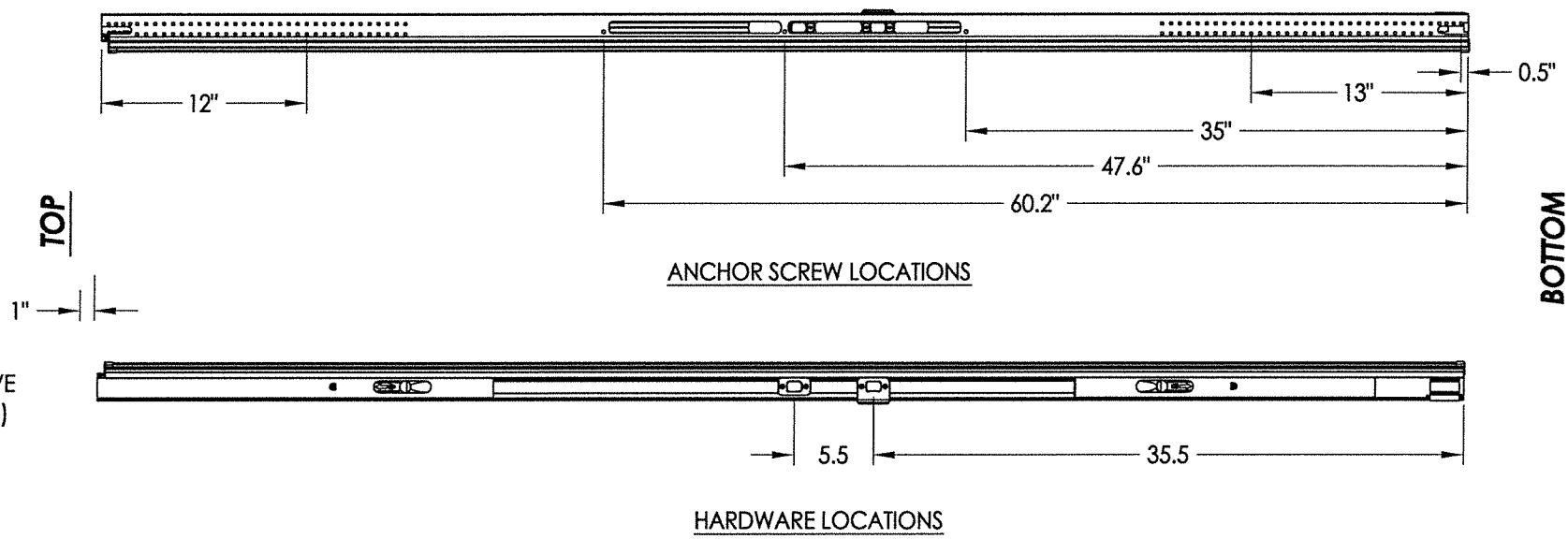
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CERTIFICATE OF REGISTRATION # F-11852

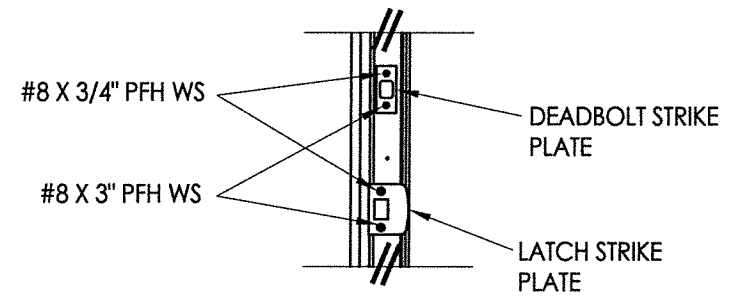
PRODUCT:	ENDURA		
PART OR ASSEMBLY:	TYPICAL ELEVATION, DESIGN PRESSURES & GENERAL NOTES		
NO.	DATE	BY	REVISIONS
1	11/20/19	LFS	ADD "FusionFrame" OPTION & UPDATE TO 2018 IBC/IRC CODE
DATE: 11/05/18			
SCALE: N.T.S.			
DWG. BY: JK			
CHK. BY: LFS			
DRAWING NO.: TX-4897			
SHEET 1 OF 6			



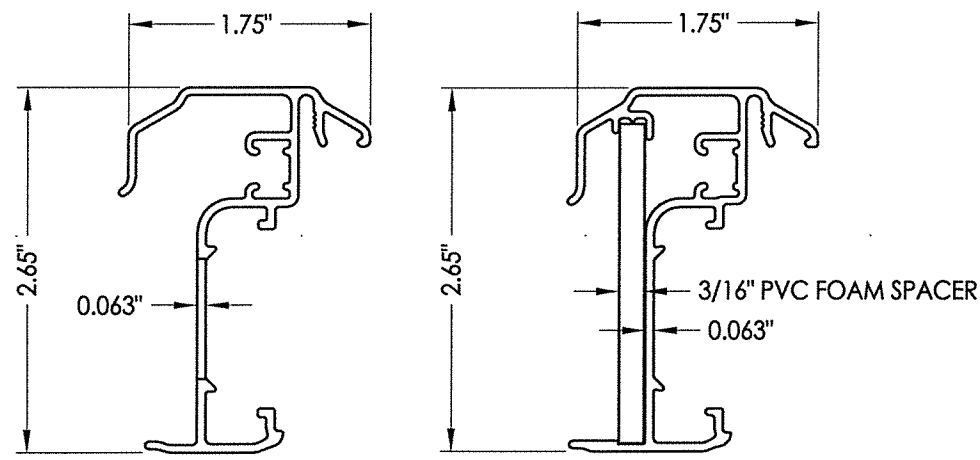
ULTIMATE/ULTIMATE COMPATIBLE HURRICANE ASTRAGAL



ALUMINUM ASTRAGAL ASSEMBLY



LATCH & DEADBOLT DETAIL

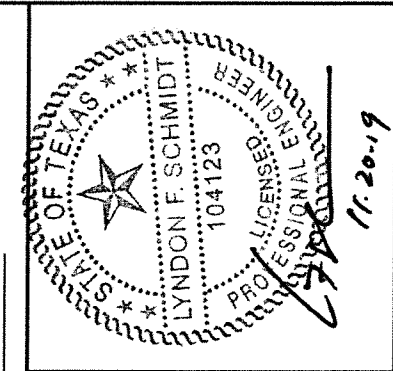
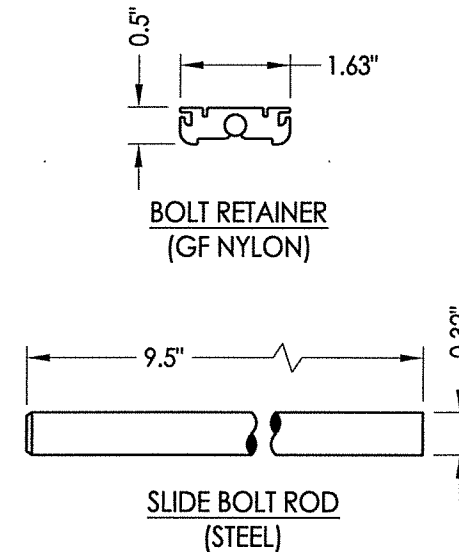


ULTIMATE HURRICANE ASTRAGAL

ULTIMATE COMPATIBLE* HURRICANE ASTRAGAL (OPTIONAL)

ASTRAGAL SECTIONS

*NOTE: INCREASE THE MAXIMUM FRAME WIDTH BY 3/16" TO ACCOMODATE THE OPTIONAL ULTIMATE COMPATIBLE HURRICANE ASTRAGAL WHEN USED.



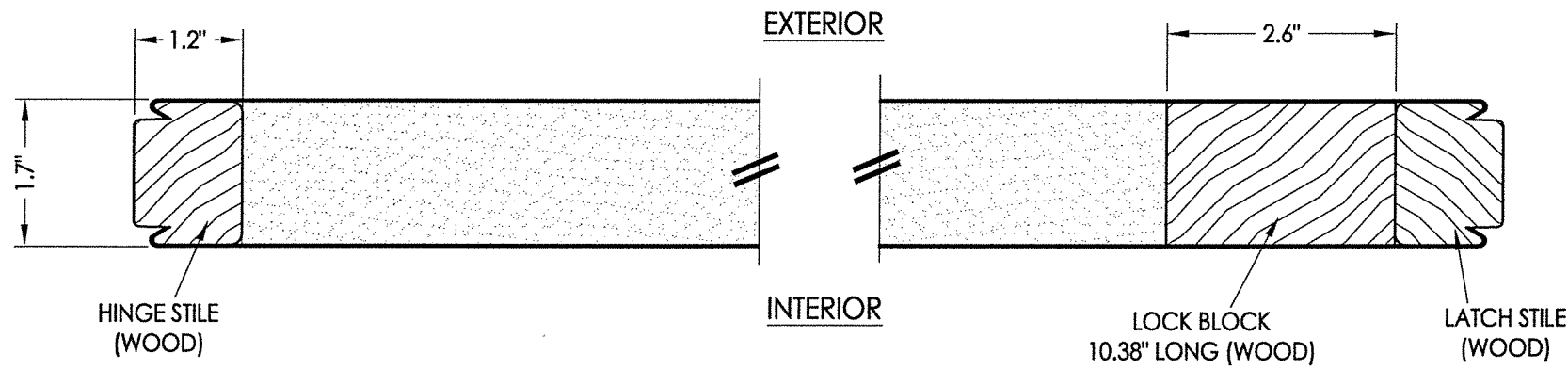
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CERTIFICATE OF REGISTRATION # F-11852

PRODUCT:	ENDURA
PART OR ASSEMBLY:	ASTRAGAL DETAILS

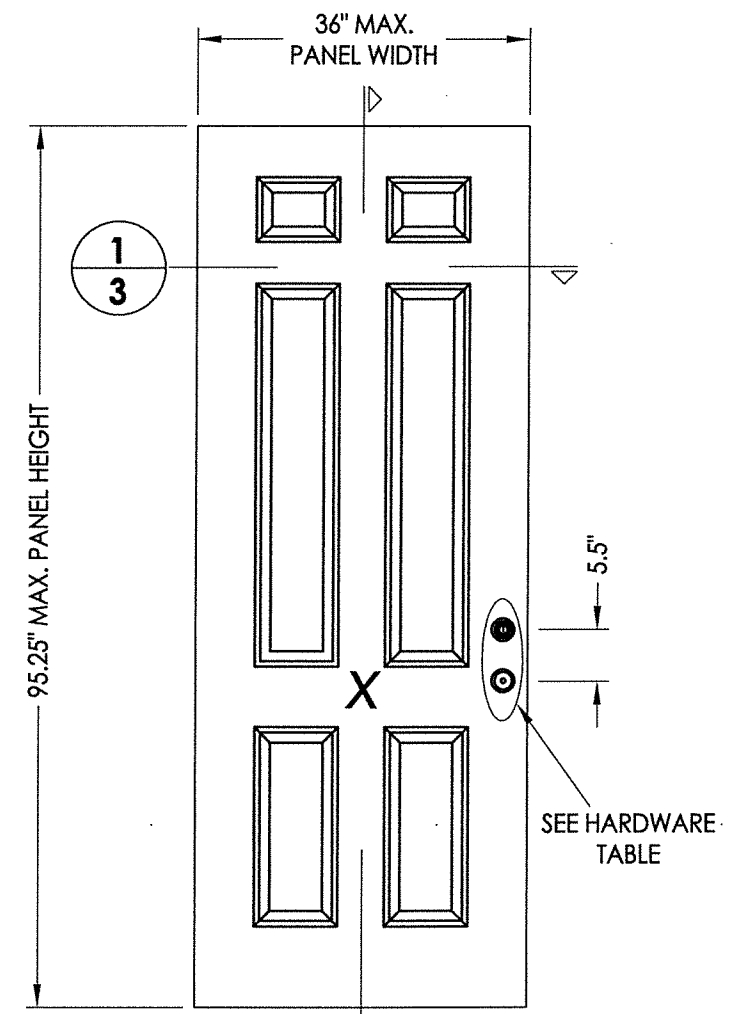
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1	11/20/19	LFS	ADD "FusionFrame" OPTION & UPDATE TO 2018 IBC/IRC CODE

DATE:	11/05/18
SCALE:	N.T.S.
DWG. BY:	JK
CHK. BY:	LFS
DRAWING NO.:	TX-4897
SHEET	2 OF 6

R:\Clients\Endura PERMANENT\B - Texas Dept of Ins\TDI - DR-1012 Opaque Therma-Tru ST door XX (LK, DB) (4896-4897)\C - Drawings\TX-4896-97.dwg, 2-3



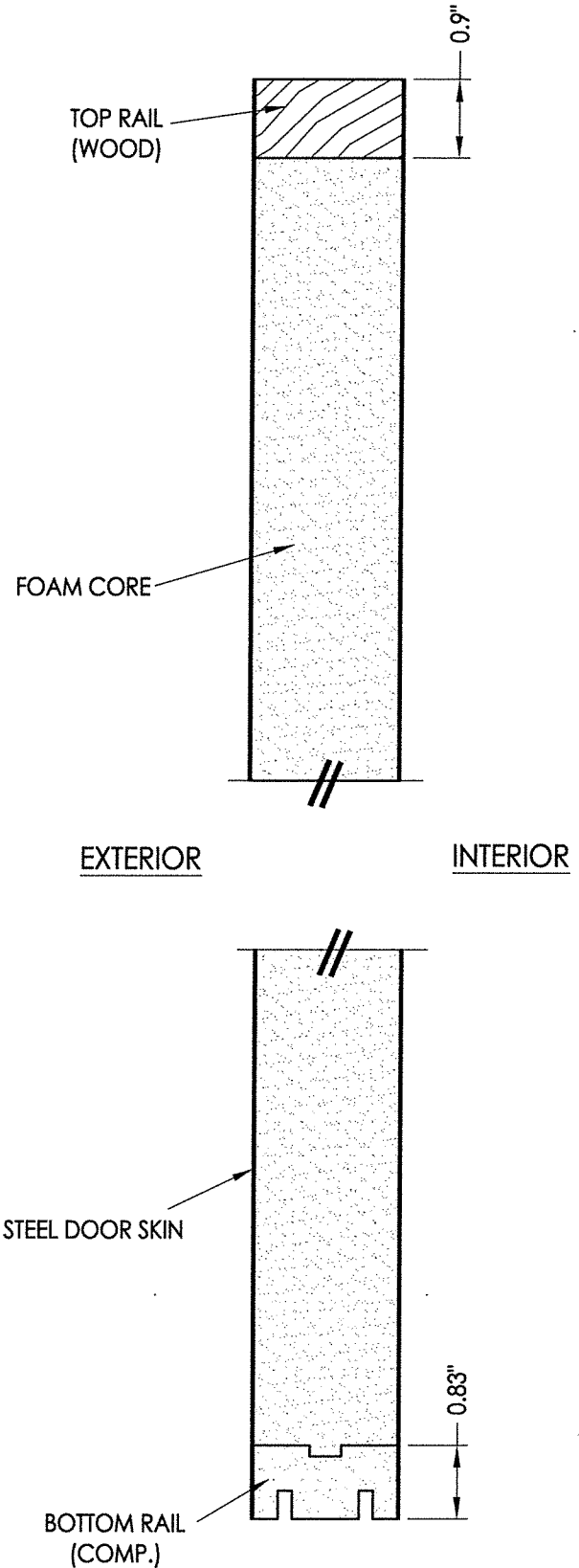
1
3 HORIZONTAL CROSS SECTION



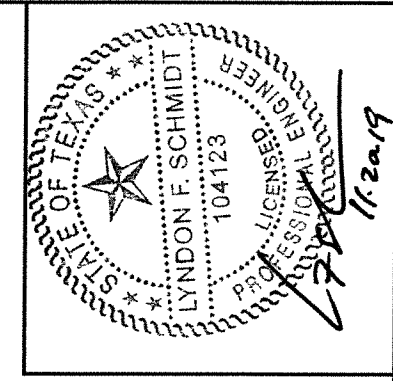
2
3 DOOR PANEL
Therma-Tru
Steel (wood Edge)

DOOR SKIN: 24GA. STEEL (0.022" MIN. THICKNESS)
CORE MATERIAL: POLYURETHANE FOAM (1.9 PCF MIN.)

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



2
3 VERTICAL CROSS SECTION



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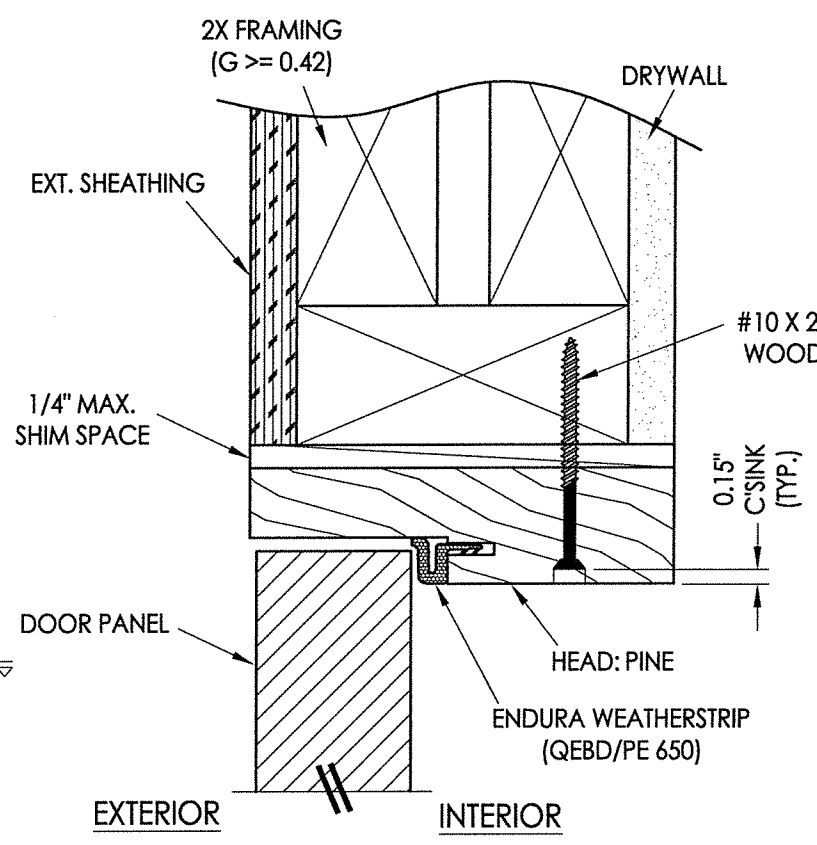
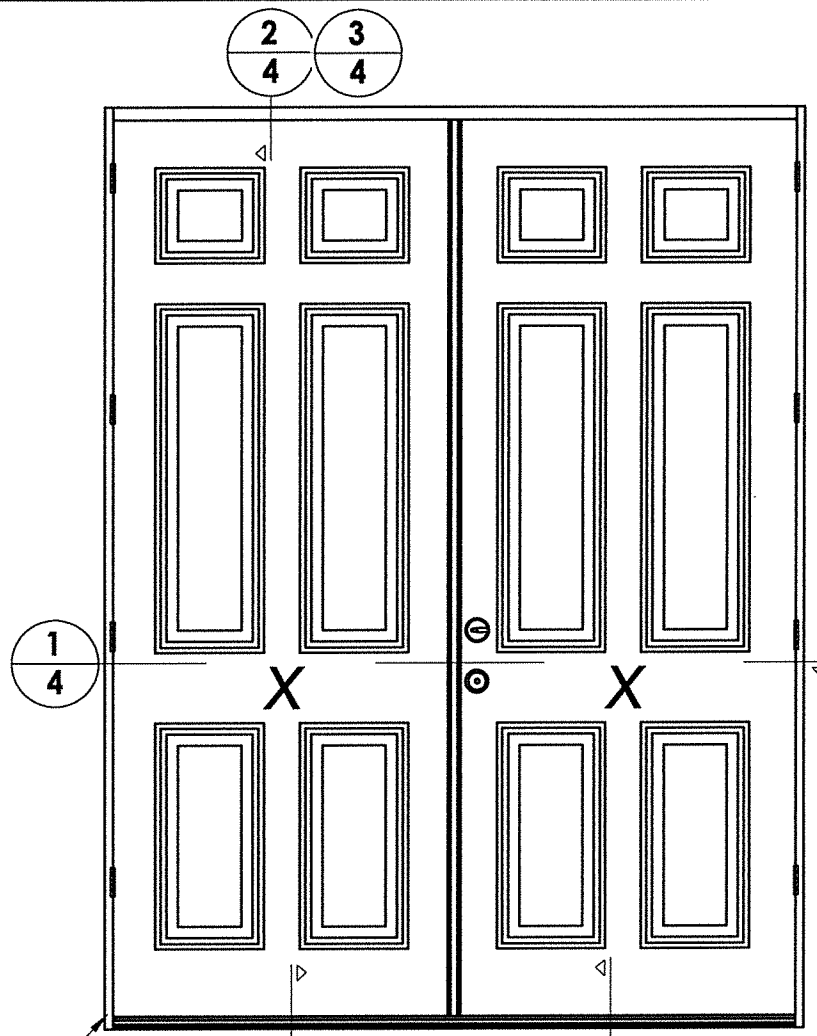
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CERTIFICATE OF REGISTRATION # F-11852

PRODUCT: ENDURA
PART OR ASSEMBLY: DOOR PANEL DETAILS

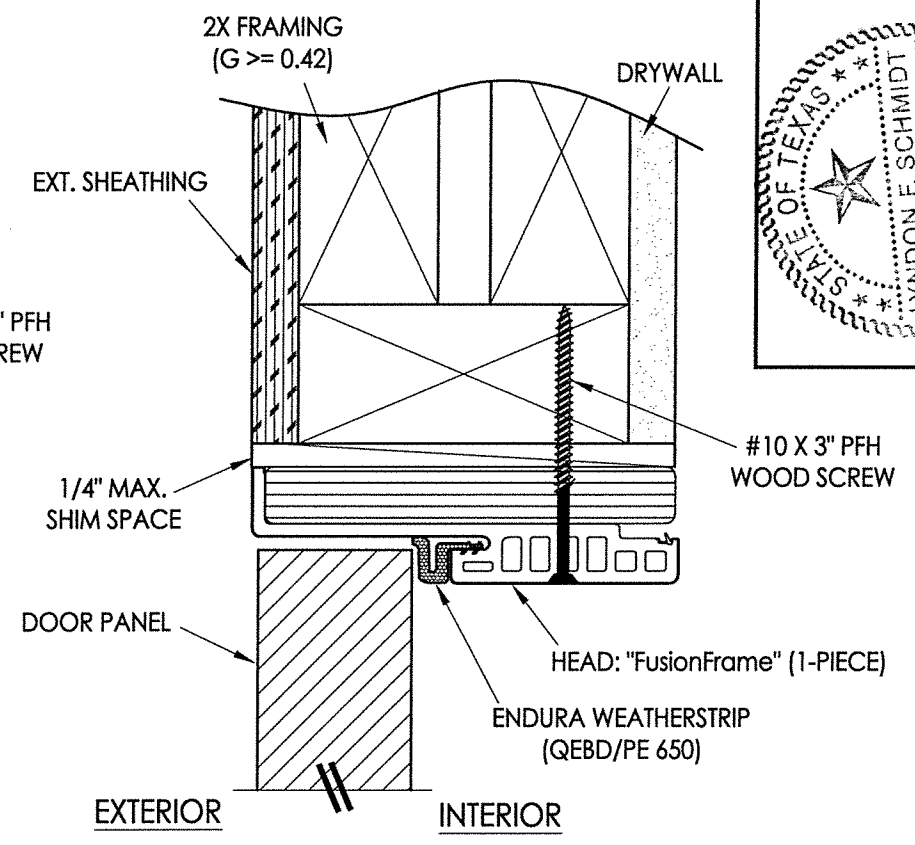
NO.	DATE	BY	REVISIONS
1	11/20/19	LFS	ADD "FusionFrame" OPTION & UPDATE TO 2018 IBC/IRC CODE

DATE: 11/05/18
SCALE: N.T.S.
DWG. BY: JK
CHK. BY: LFS
DRAWING NO.: TX-4897
SHEET 3 OF 6

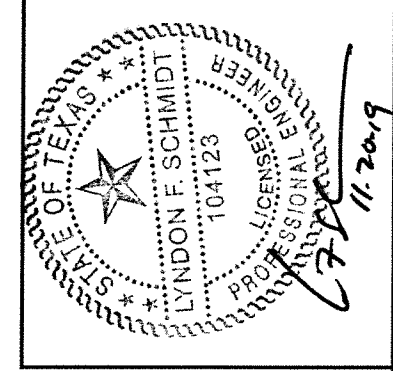
R:\Clients\Endura PERMANENT\B - Texas Dept of Ins\TDI - DR-1012 Opaque Therma-Tru ST door XX (L.K. DB) (4896-4897)\C - Drawings\TX-4896-97.dwg, 2-4



2 VERTICAL CROSS SECTION
4 Outswing shown - inswing also approved



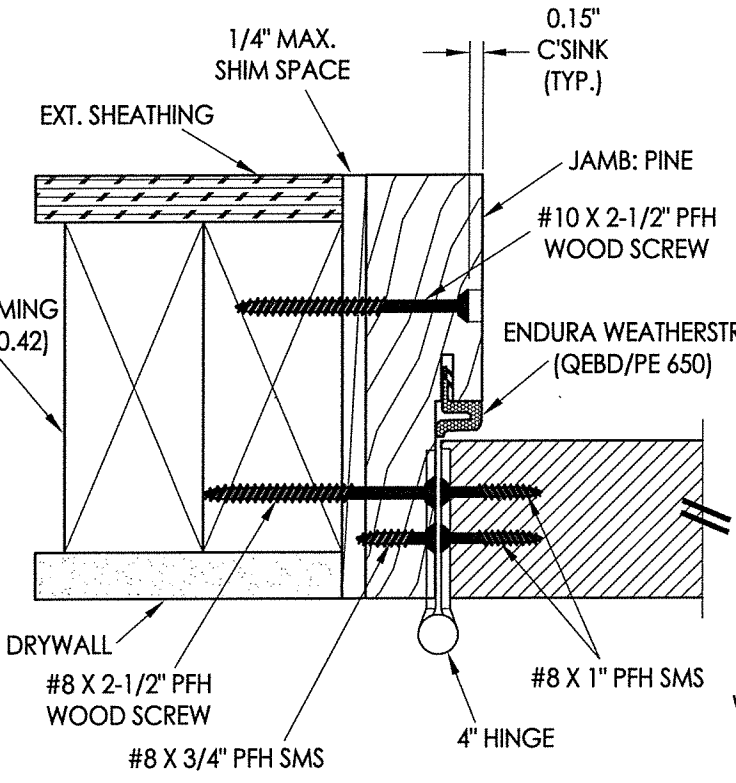
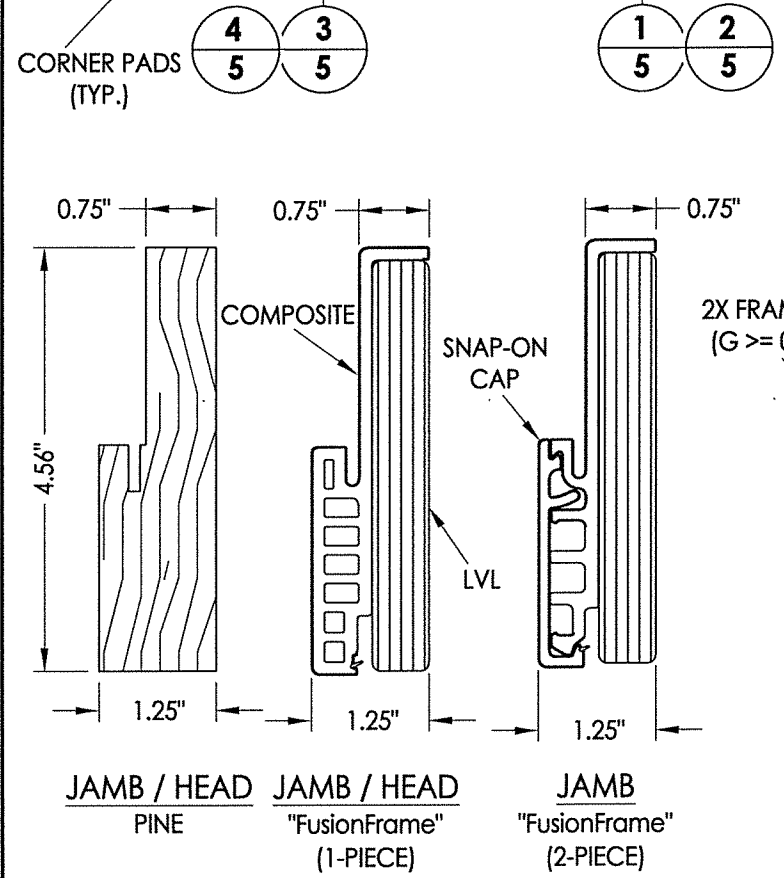
3 VERTICAL CROSS SECTION
4 Outswing shown - inswing also approved



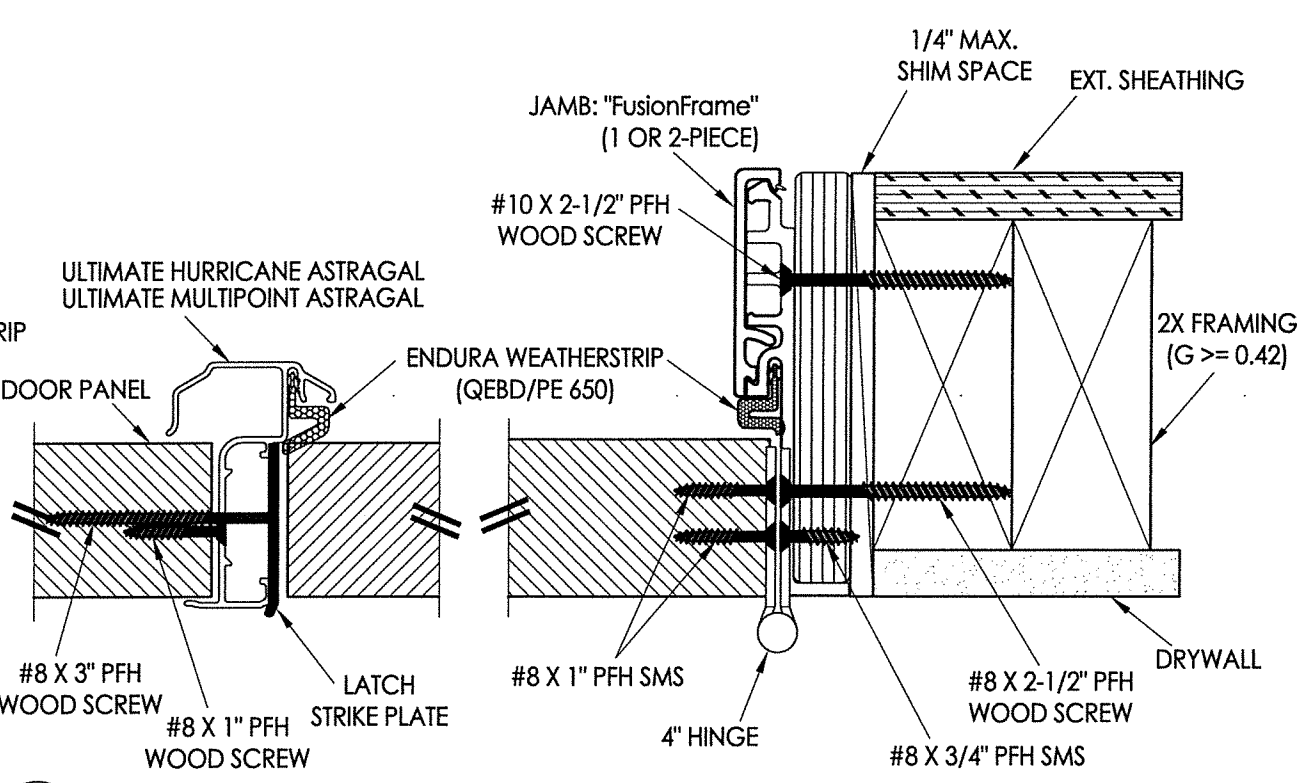
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TEXAS BOARD OF PROFESSIONAL ENGINEERS
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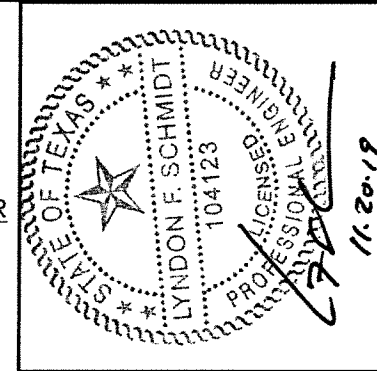
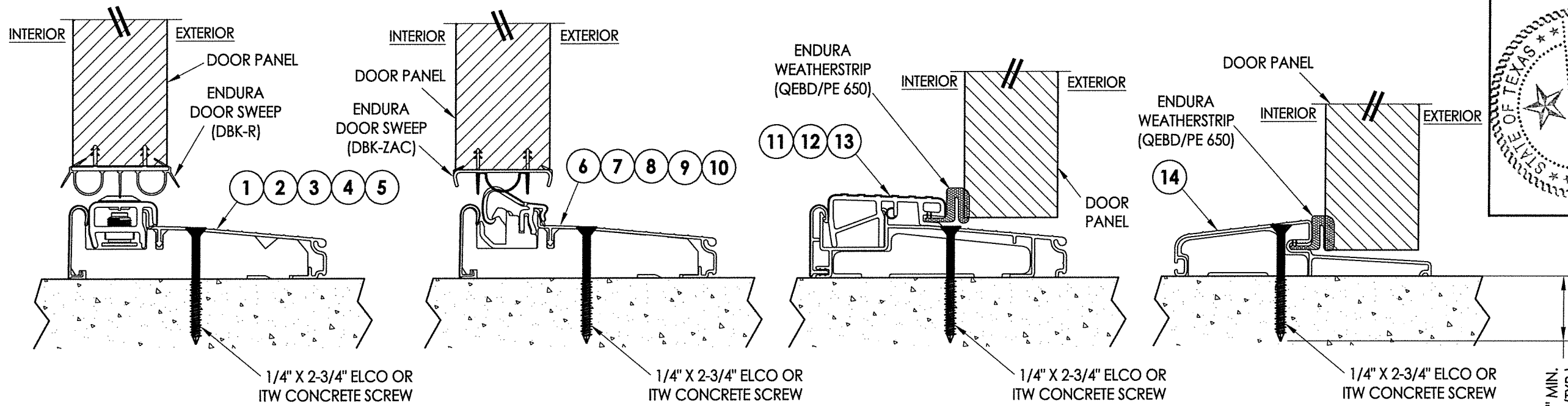
1 HORIZONTAL CROSS SECTION
4 Inswing shown - Outswing also approved



PRODUCT:	ENDURA	
PART OR ASSEMBLY:	HORIZONTAL & VERTICAL CROSS SECTIONS	
NO.	DATE	BY
1	11/20/19	LFS
ADD "FusionFrame" OPTION & UPDATE TO 2018 IBC/IRC CODE		
REVISIONS		
DATE:	11/05/18	
SCALE:	N.T.S.	
DWG. BY:	JK	
CHK. BY:	LFS	
DRAWING NO.:	TX-4897	
SHEET	4	OF 6

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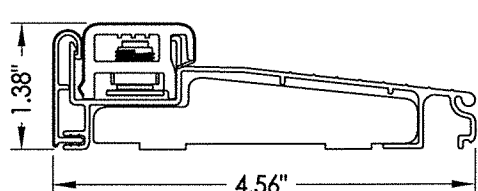
1 VERTICAL CROSS SECTION
5 Inswing Adjustable Threshold

2 VERTICAL CROSS SECTION
5 Inswing Articulating Threshold w/ Pin Capture

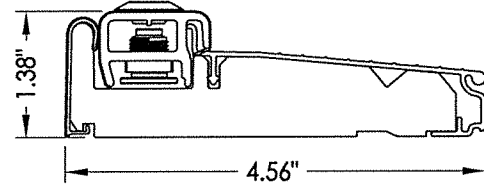
3 VERTICAL CROSS SECTION
5 Outswing Bump Threshold

4 VERTICAL CROSS SECTION
5 Outswing Bump Threshold

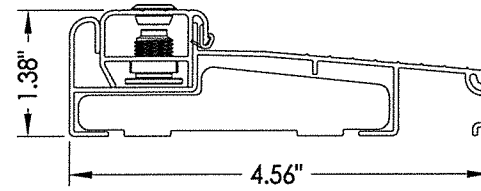
1-1/4" MIN. EMB. (TYP.)



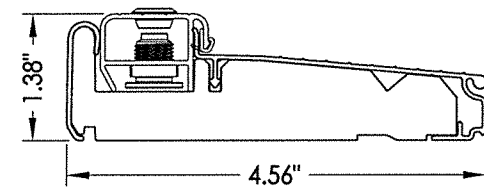
1 INSWING ADJUSTABLE THRESHOLD
ZAIL4565



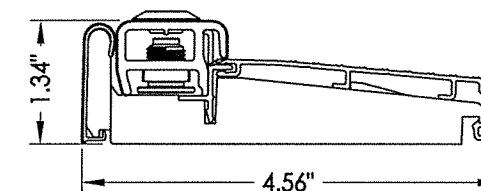
2 INSWING ADJUSTABLE THRESHOLD
ZAI4565FN
MAX. DESIGN PRESSURE = ±40 PSF



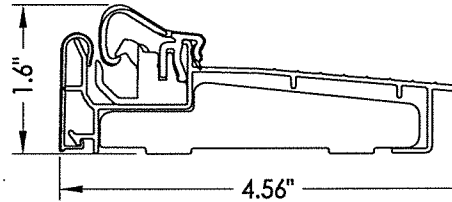
3 INSWING ADJUSTABLE THRESHOLD
ZAILAA4565



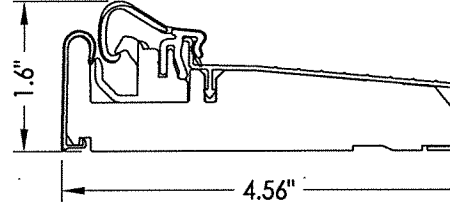
4 INSWING ADJUSTABLE THRESHOLD
ZAIAA4565FN
MAX. DESIGN PRESSURE = ±40 PSF



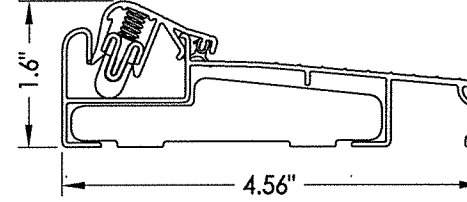
5 INSWING ADJUSTABLE THRESHOLD
ZAI4565RDS
MAX. DESIGN PRESSURE = ±40 PSF



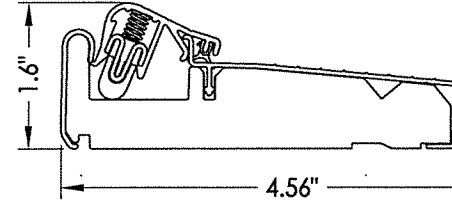
6 INSWING ARTICULATING THRESHOLD
ZACL4565
MAX. DESIGN PRESSURE = ±40 PSF



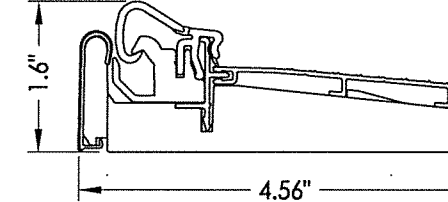
7 INSWING ARTICULATING THRESHOLD
ZAC4565FN
MAX. DESIGN PRESSURE = ±40 PSF



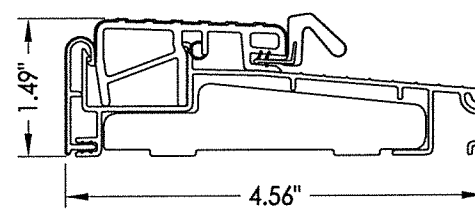
8 INSWING ARTICULATING THRESHOLD
ZACLAA4565
MAX. DESIGN PRESSURE = ±40 PSF



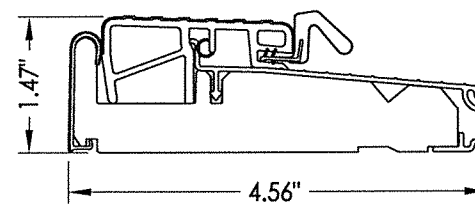
9 INSWING ARTICULATING THRESHOLD
ZACAA4565FN
MAX. DESIGN PRESSURE = ±40 PSF



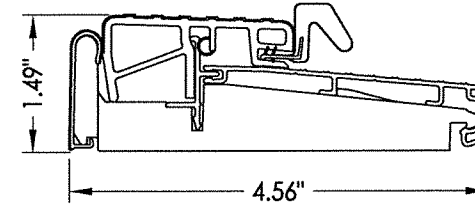
10 INSWING ARTICULATING THRESHOLD
ZAC4565RDS
MAX. DESIGN PRESSURE = ±35 PSF



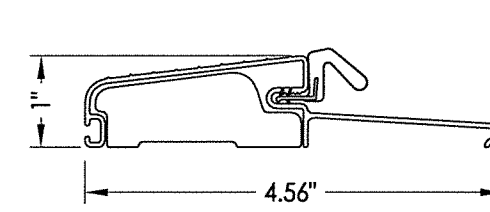
11 OUTSWING THRESHOLD
ZOBL4565



12 OUTSWING THRESHOLD
ZOB4565FN



13 OUTSWING THRESHOLD
ZOB4565RDS



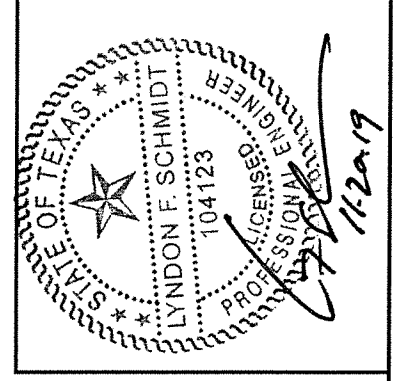
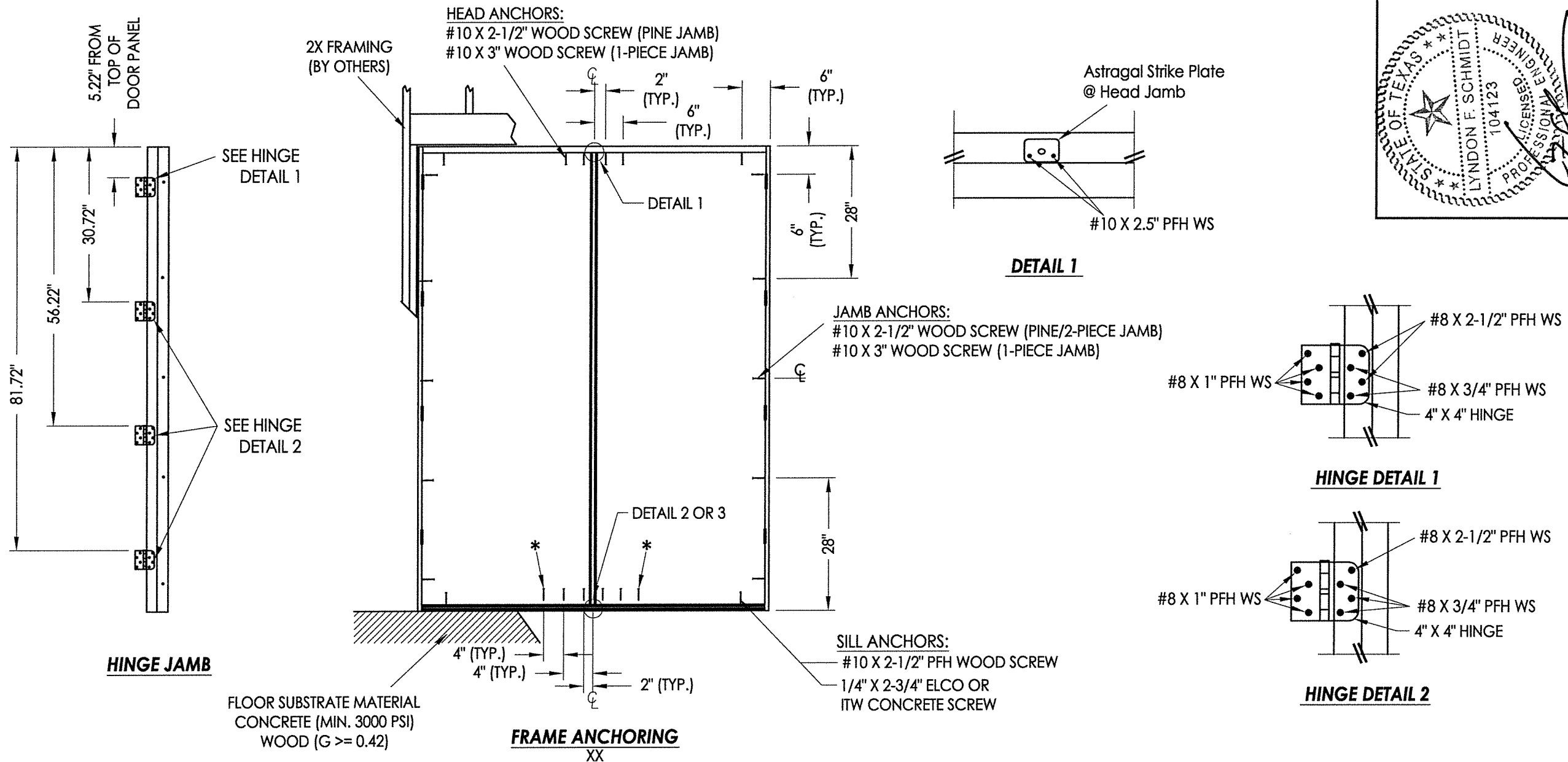
14 OUTSWING THRESHOLD
FOB4566

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CERTIFICATE OF REGISTRATION # F-11852

PRODUCT:	ENDURA	
PART OR ASSEMBLY:	VERTICAL CROSS SECTIONS	
NO.	DATE	BY
1	11/20/19	LFS
ADD "FusionFrame" OPTION & UPDATE TO 2018 IBC/IRC CODE		
REVISIONS		
DATE:	11/05/18	
SCALE:	N.T.S.	
DWG. BY:	JK	
CHK. BY:	LFS	
DRAWING NO.:	TX-4897	
SHEET	5 OF 6	



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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.

CONCRETE ANCHOR NOTES:

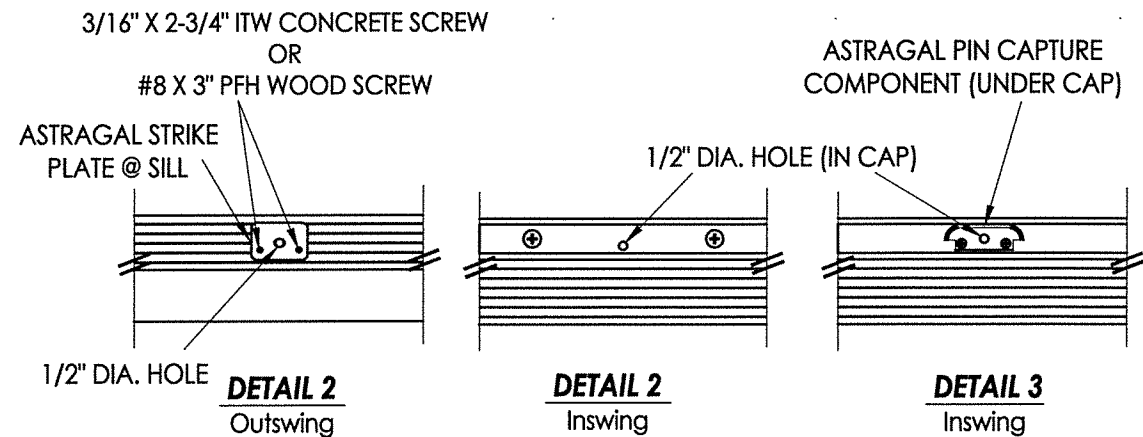
- Concrete anchor locations at the corners may be adjusted to maintain the min. edge distance to mortar joints.
- Concrete anchor locations noted as "MAX. ON CENTER" must be adjusted to maintain the min. edge distance to mortar joints, additional concrete anchors may be required to ensure the "MAX. ON 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®	3/16"	1-3/4"	3"	1-1/2"
ITW TAPCON®	1/4"	1-3/4"	1-1/2"	4"
ELCO ULTRACON®	1/4"	1-3/4"	1"	4"

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.

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



PRODUCT:	ENDURA	
PART OR ASSEMBLY:	FRAME ANCHORING	
NO.	DATE	BY
1	11/20/19	LFS
ADD "FusionFrame" OPTION & UPDATE TO 2018 IBC/IRC CODE		
REVISIONS		
DATE:	11/05/18	
SCALE:	N.T.S.	
DWG. BY:	JK	
CHK. BY:	LFS	
DRAWING NO.:	TX-4897	
SHEET	6 OF 6	