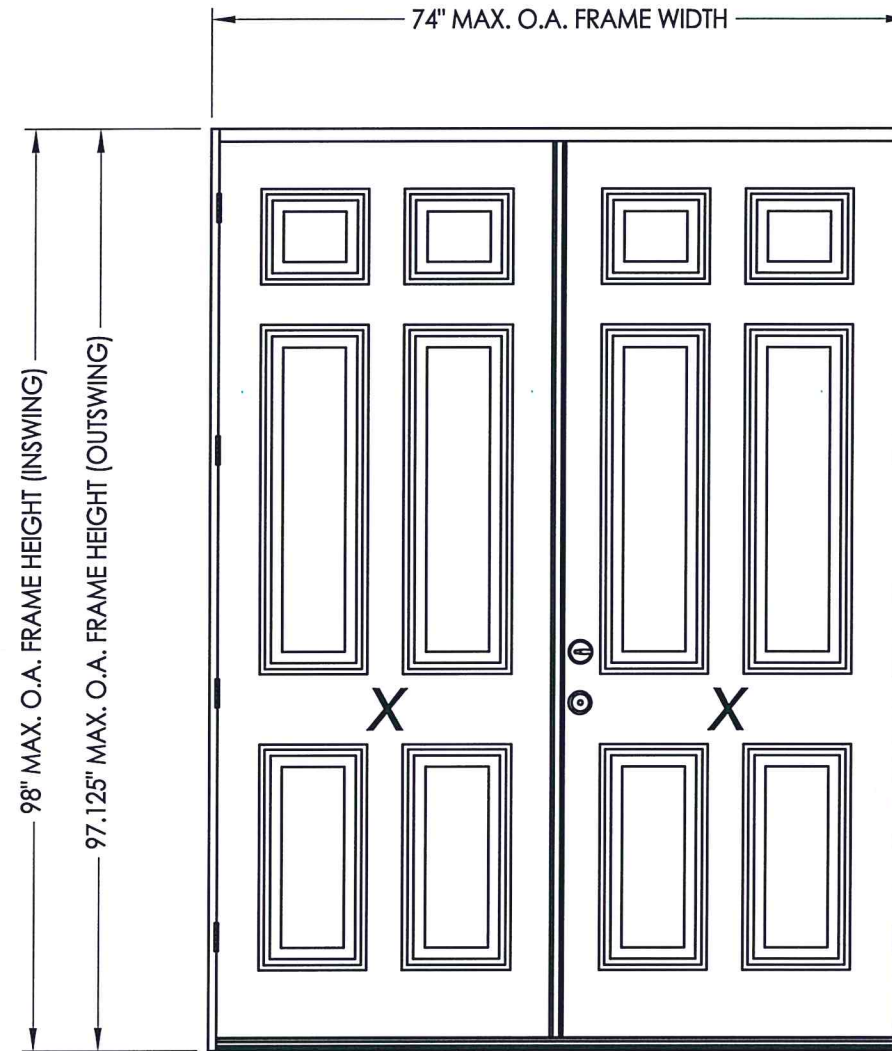


# Opaque Fiberglass Door

"NON-IMPACT"  
IN SWING / OUT SWING



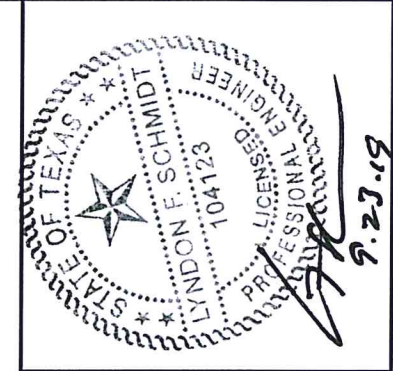
**EVALUATED FOR USE IN THE STATE OF TEXAS**

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. 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 (Ultimate Multipoint)
3	Astragal details (Ultimate Hurricane)
4	Door panel details
5	Horizontal & vertical cross sections
6	Vertical cross sections
7	Frame anchoring

CONFIG.	FRAME TYPE	MODEL	DESIGN PRESSURE (PSF) ULTIMATE HURRICANE ASTRAGAL		DESIGN PRESSURE (PSF) ULTIMATE MULTIPOINT ASTRAGAL	
			POSITIVE	NEGATIVE	POSITIVE	NEGATIVE
XX	PINE	IN SWING	+45.0	-45.0	+50.0	-50.0
XX		OUT SWING	+55.0	-55.0	+45.0	-45.0
XX	"FusionFrame"	IN SWING	+45.0	-45.0	+50.0	-50.0
XX		OUT SWING	+50.0	-50.0	+45.0	-45.0



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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
2	9/19/19	ADD "FusionFrame" OPTION & UPDATE TO 2018 IBC/IRC CODE
1	10/01/18	UPDATE FOR NEW TESTING

DATE: 8/31/16

SCALE: N.T.S.

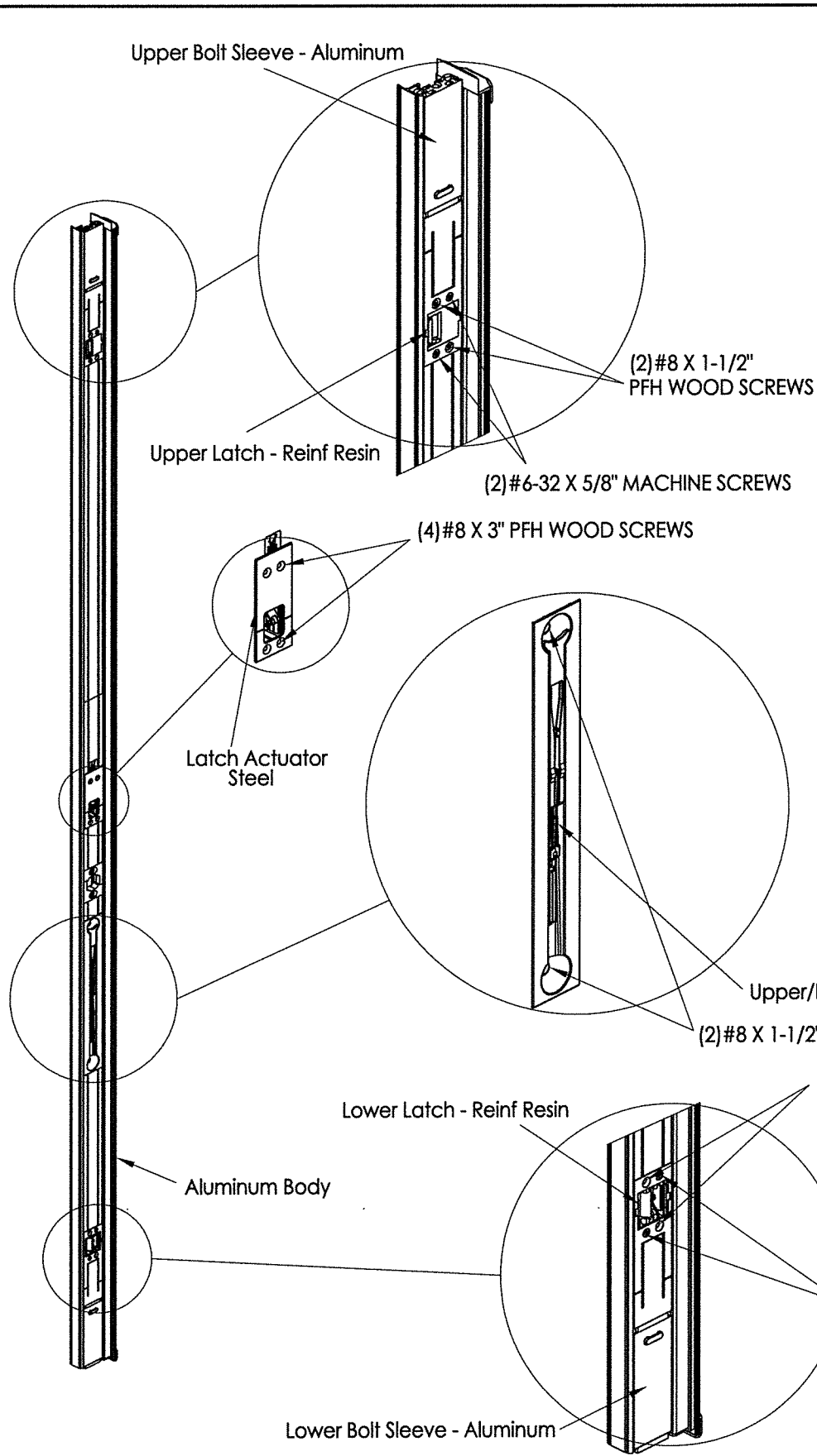
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CHK. BY: LFS

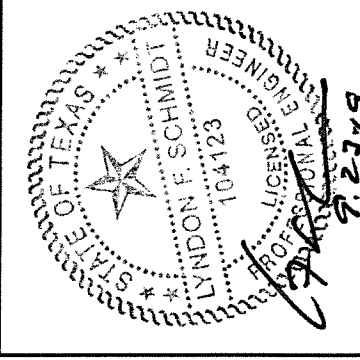
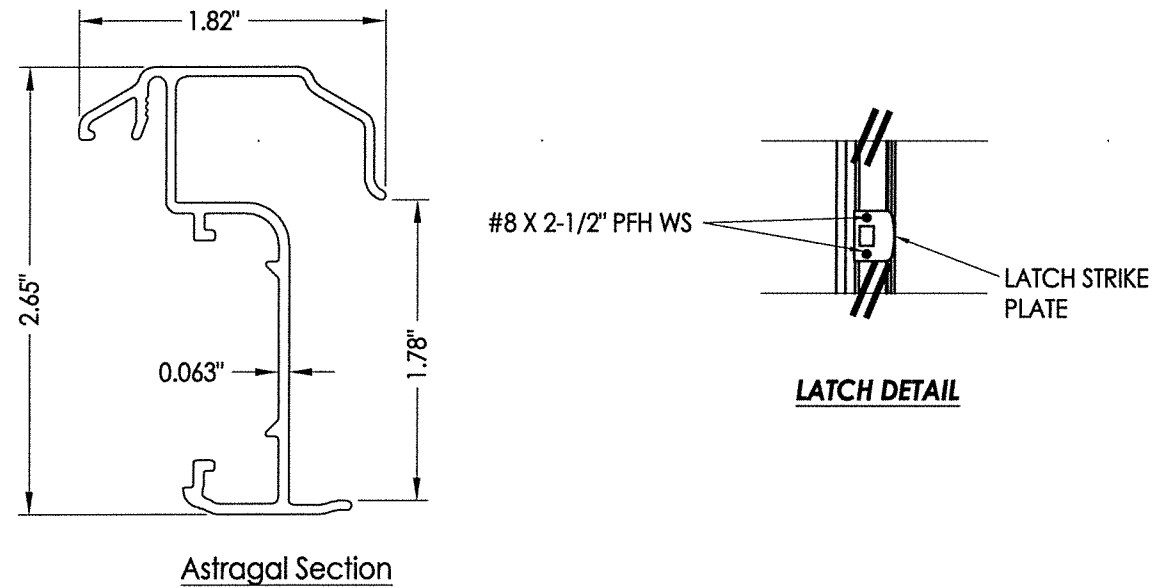
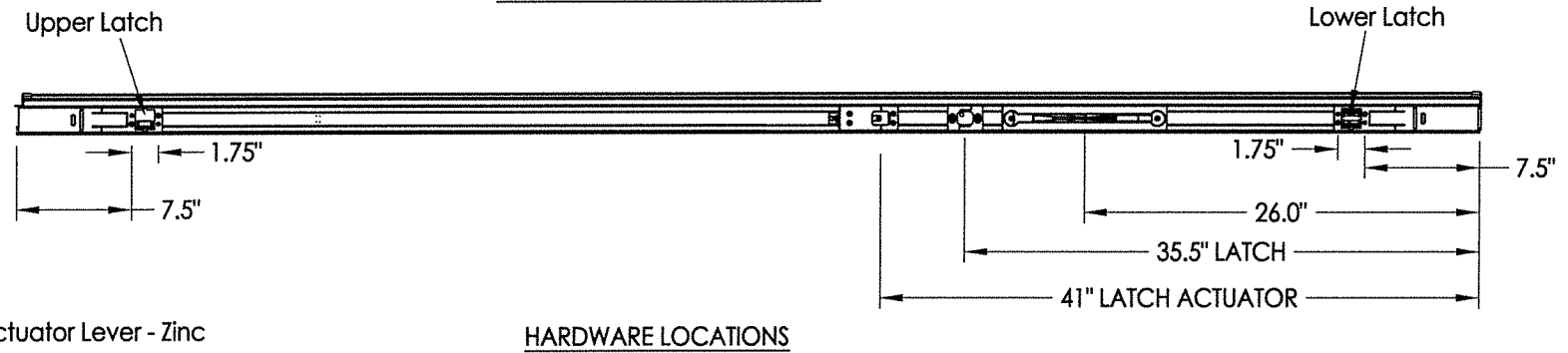
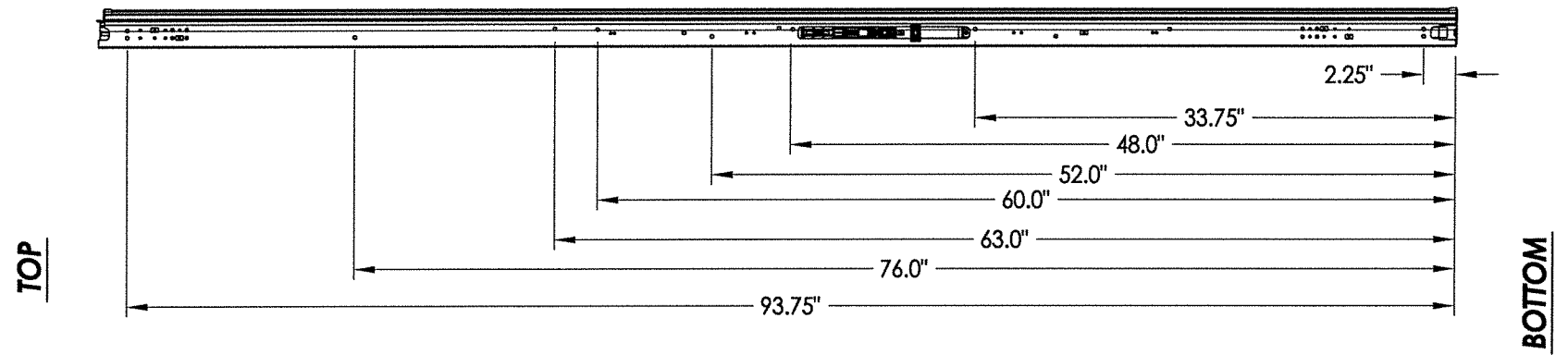
DRAWING NO.: TX-4636

SHEET 1 OF 7

R:\Clients\Endura PERMANENT\B - Texas Dept of Ins\TDI - DR-855 Masonite FG Opaque (LK,DB)\C - Drawings\TX-4633.36.dwg, 2.2



**ULTIMATE MULTIPOINT ASTRAGAL**



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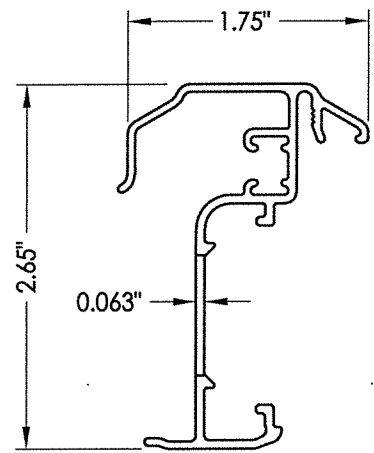
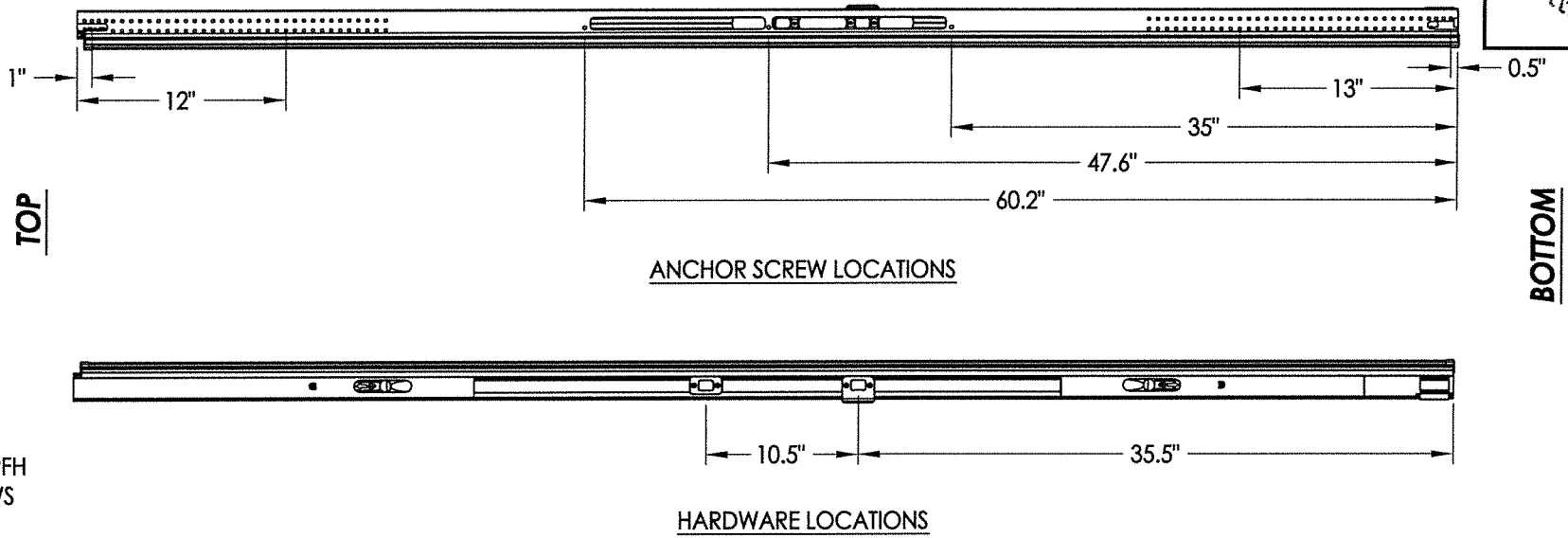
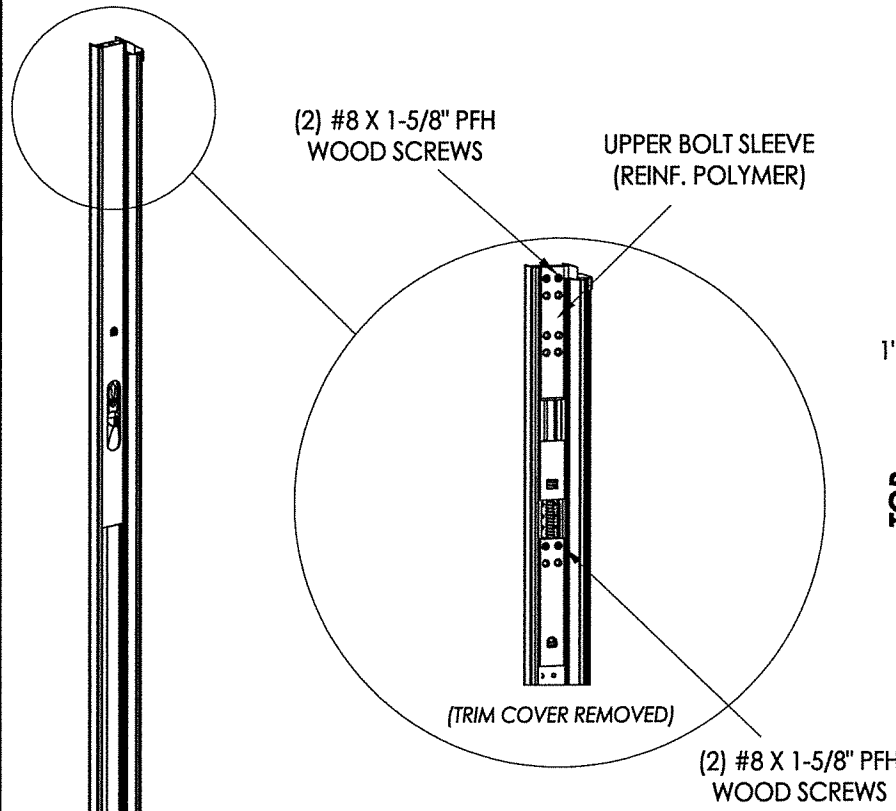
TEXAS BOARD OF PROFESSIONAL ENGINEERS  
CERTIFICATE OF REGISTRATION # F-11852

PRODUCT:	ENDURA
PART OR ASSEMBLY:	ASTRAGAL DETAILS (ULTIMATE MULTI-POINT)

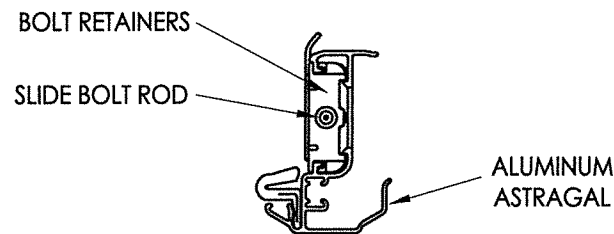
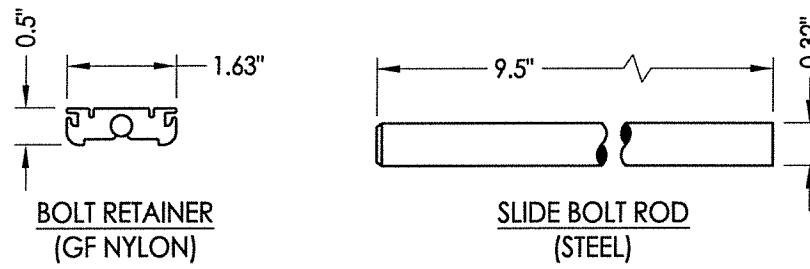
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1	10/01/18	LFS	UPDATE FOR NEW TESTING

DATE:	8/31/16
SCALE:	N.T.S.
DWG. BY:	JK
CHK. BY:	LFS
DRAWING NO.:	TX-4636
SHEET	2 OF 7

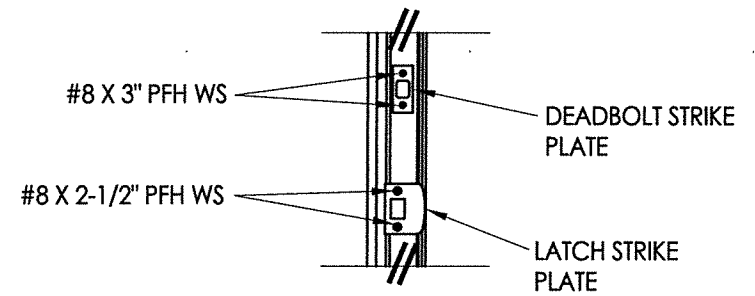
© 2016 R.W. BUILDING CONSULTANTS INC.



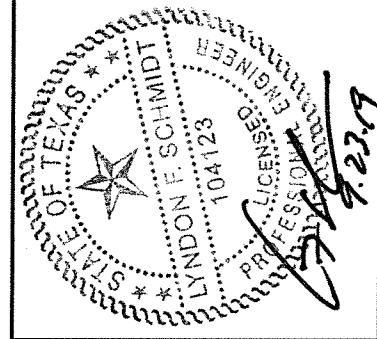
ASTRAGAL SECTION



ALUMINUM ASTRAGAL ASSEMBLY



LATCH & DEADBOLT DETAIL



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

PRODUCT: ENDURA

PART OR ASSEMBLY: ASTRAGAL DETAILS (ULTIMATE HURRICANE)

NO.	DATE	REVISIONS
2	9/19/19	ADD "FusionFrame" OPTION & UPDATE TO 2018 IBC/IRC CODE
1	10/01/18	UPDATE FOR NEW TESTING

DATE: 8/31/16

SCALE: N.T.S.

DWG. BY: JK

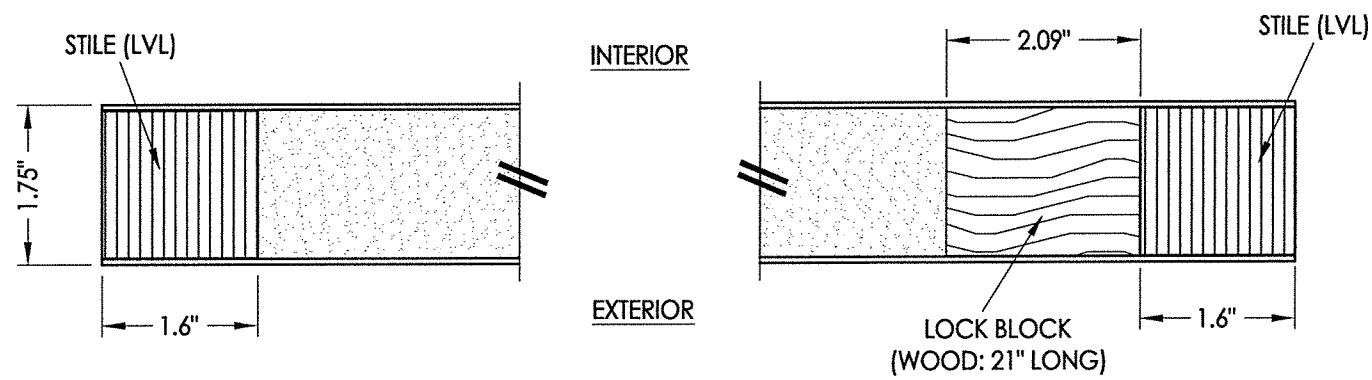
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DRAWING NO.: TX-4636

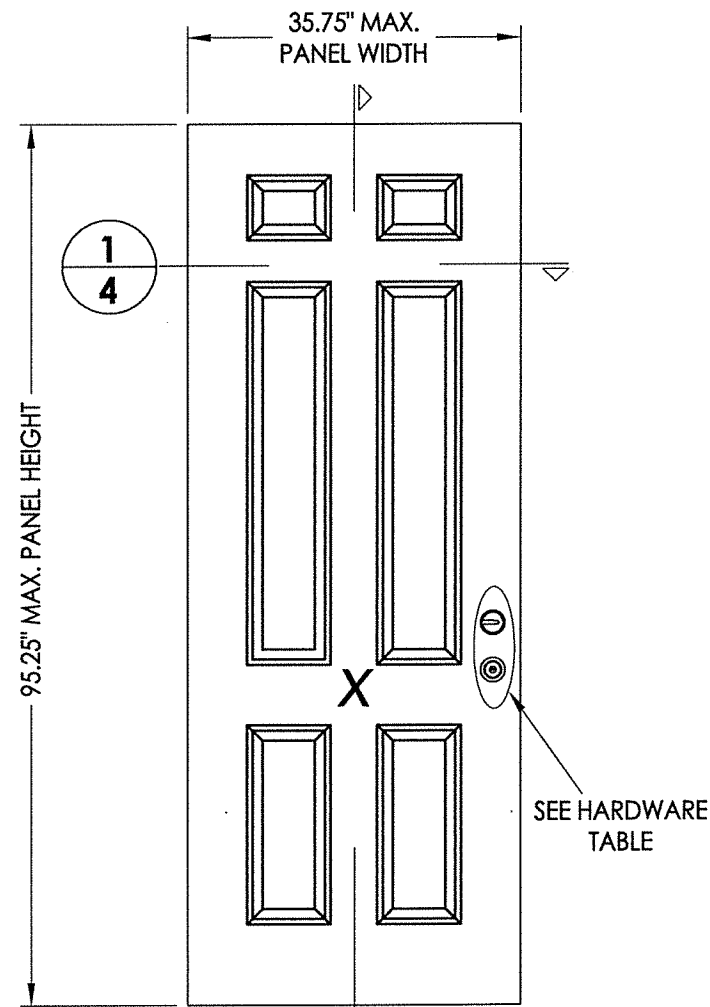
SHEET 3 OF 7



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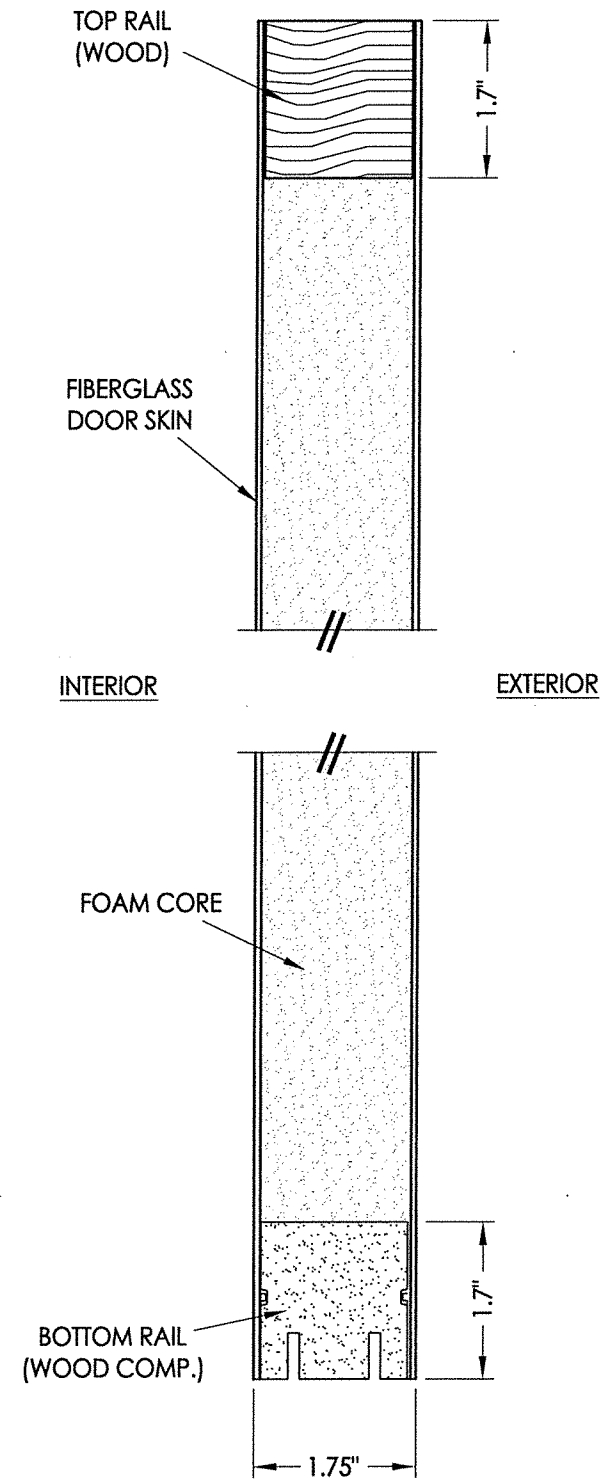
**1**  
**4** HORIZONTAL CROSS SECTION



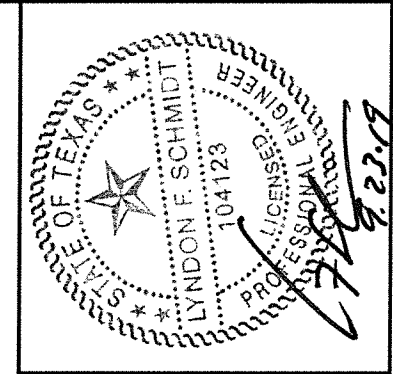
**2**  
**4**  
**40** DOOR PANEL  
Masonite  
Fiberglass

DOOR SKIN: FIBERGLASS (0.075" 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**  
**4** VERTICAL CROSS SECTION



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

PRODUCT: ENDURA  
PART OR ASSEMBLY: DOOR PANEL DETAILS & GLAZING DETAIL

NO.	DATE	REVISIONS
2	9/19/19	ADD "FusionFrame" OPTION & UPDATE TO 2018 IBC/IRC CODE
1	10/01/18	UPDATE FOR NEW TESTING
		BY

DATE: 8/31/16

SCALE: N.T.S.

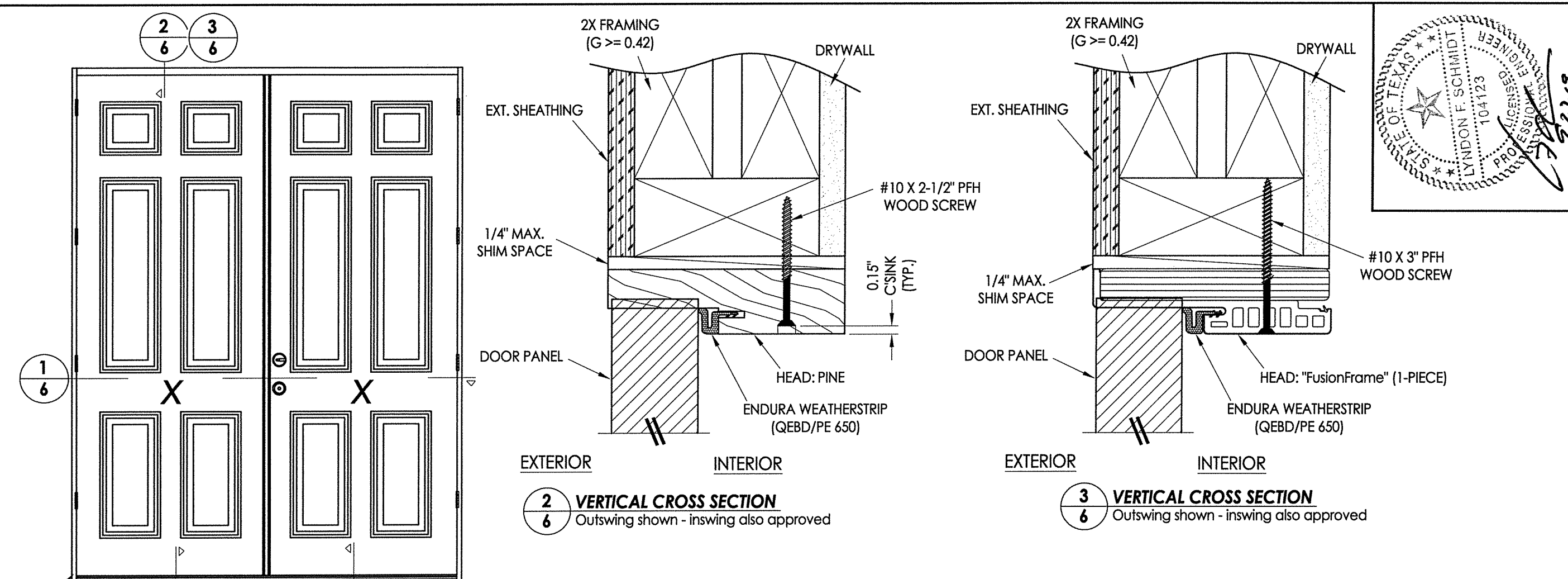
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DRAWING NO.: TX-4636

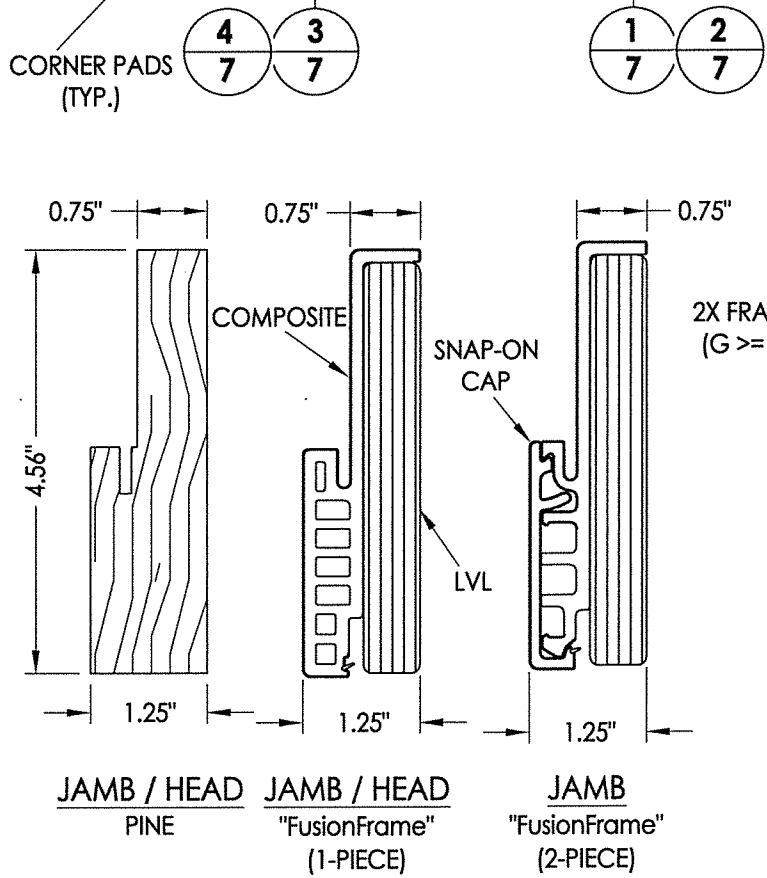
SHEET 4 OF 7

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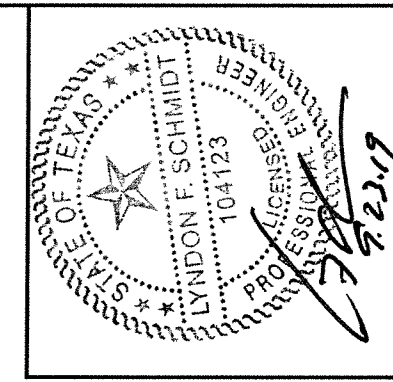
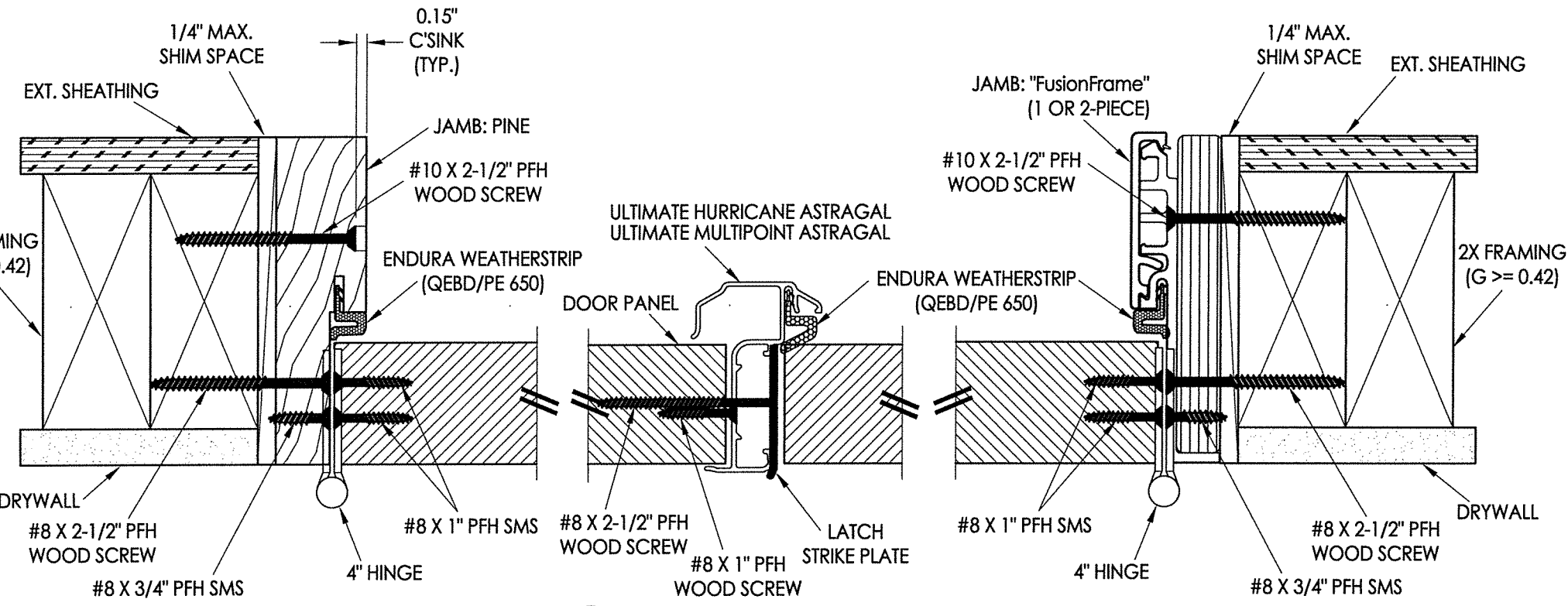


**2** **VERTICAL CROSS SECTION**  
**6** Outswing shown - inswing also approved

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



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



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PRODUCT: ENDURA

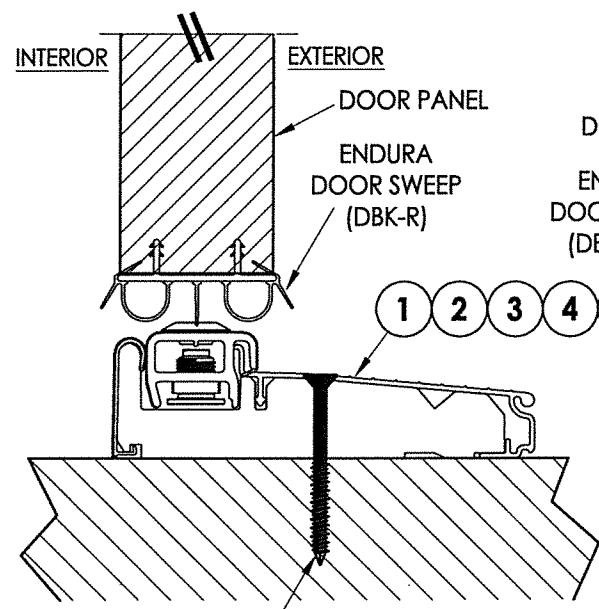
PART OR ASSEMBLY: HORIZONTAL & VERTICAL CROSS SECTIONS

NO.	DATE	REVISIONS
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1	10/01/18	UPDATE FOR NEW TESTING

DATE: 8/31/16  
 SCALE: N.T.S.  
 DWG. BY: JK  
 CHK. BY: LFS  
 DRAWING NO.: TX-4636  
 SHEET 5 OF 7

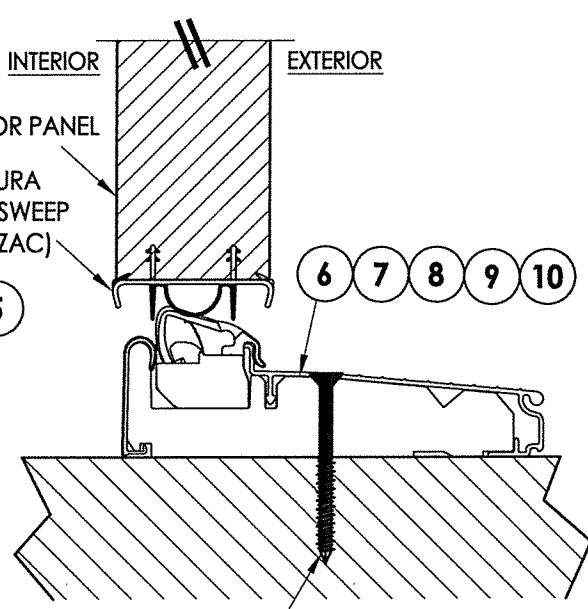
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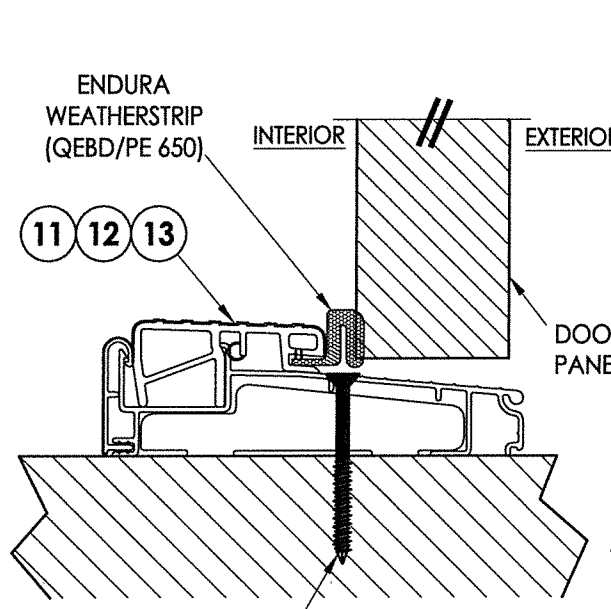
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**1 VERTICAL CROSS SECTION**  
6 Inswing Adjustable Threshold



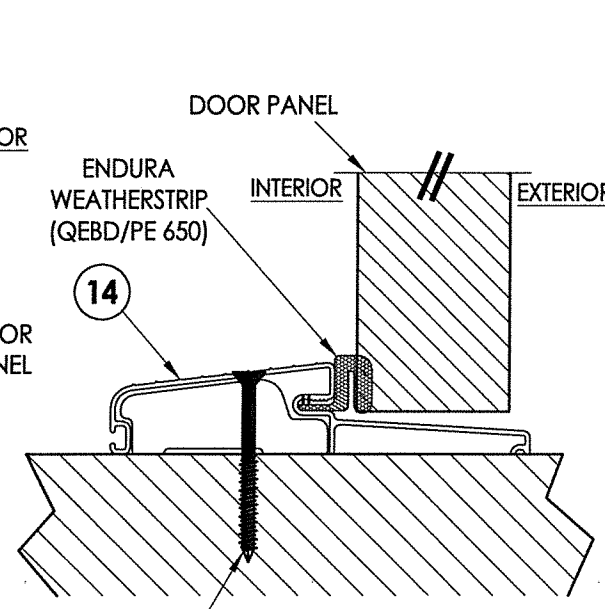
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**2 VERTICAL CROSS SECTION**  
6 Inswing Articulating Threshold w/ Pin Capture



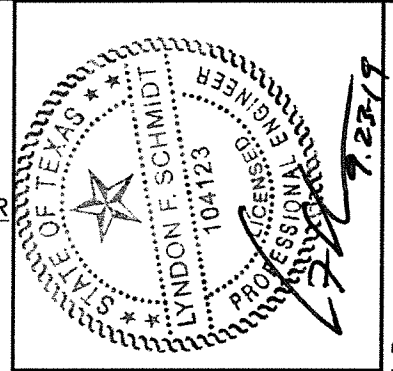
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**3 VERTICAL CROSS SECTION**  
6 Outswing Bump Threshold



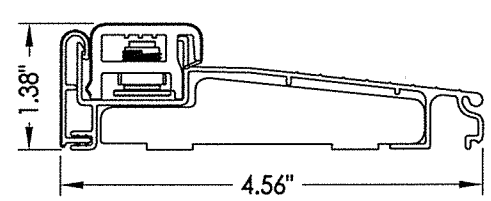
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**4 VERTICAL CROSS SECTION**  
6 Outswing Bump Threshold

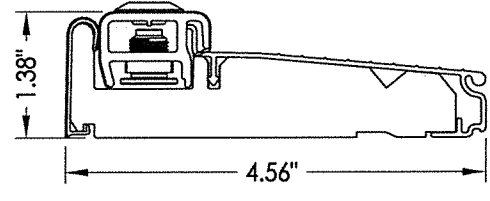


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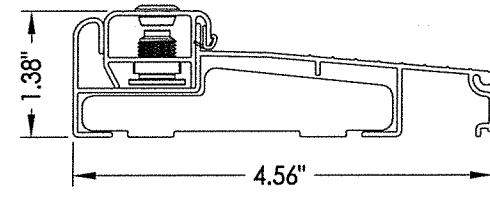
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P.O. Box 230 Valrico FL 33595  
Phone No.: 813.659.9197  
TEXAS BOARD OF PROFESSIONAL ENGINEERS  
CERTIFICATE OF REGISTRATION # F-11852



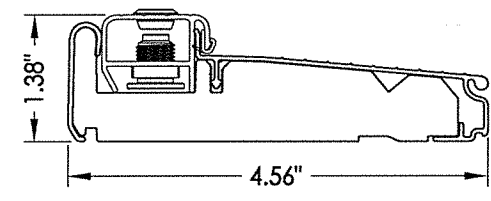
**1 INSWING ADJUSTABLE THRESHOLD**  
ZAI4565



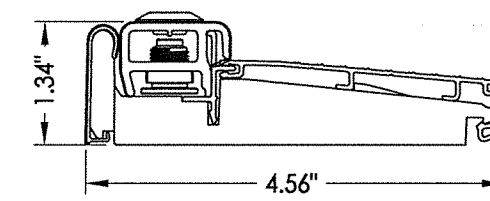
**2 INSWING ADJUSTABLE THRESHOLD**  
ZAI4565FN  
MAX. DESIGN PRESSURE = ±35 PSF  
(ULTIMATE HURRICANE ASTRAGAL)



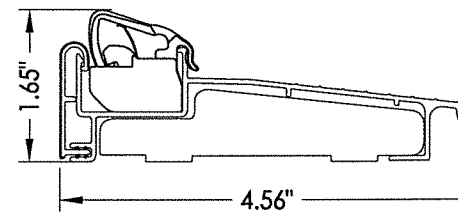
**3 INSWING ADJUSTABLE THRESHOLD**  
ZAILAA4565



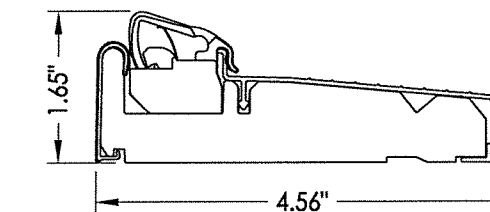
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ZAI4565FN  
MAX. DESIGN PRESSURE = ±35 PSF  
(ULTIMATE HURRICANE ASTRAGAL)



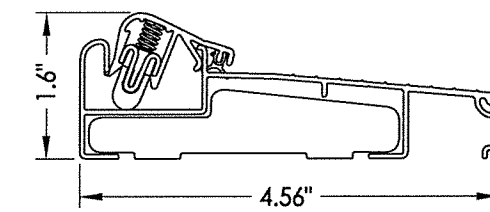
**5 INSWING ADJUSTABLE THRESHOLD**  
ZAI4565RDS  
MAX. DESIGN PRESSURE = ±40 PSF



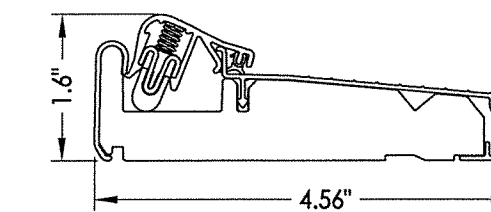
**6 INSWING ARTICULATING THRESHOLD**  
ZACL4565  
MAX. DESIGN PRESSURE = ±35 PSF  
(ULTIMATE HURRICANE ASTRAGAL)



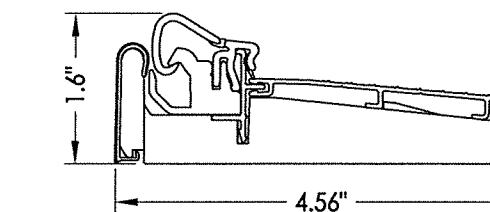
**7 INSWING ARTICULATING THRESHOLD**  
ZAC4565FN  
MAX. DESIGN PRESSURE = ±30 PSF



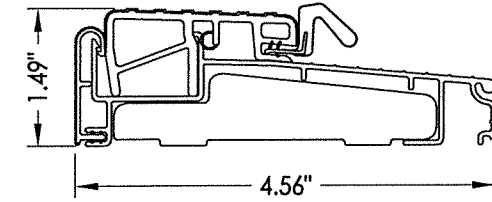
**8 INSWING ARTICULATING THRESHOLD**  
ZACLA4565  
MAX. DESIGN PRESSURE = ±35 PSF  
(ULTIMATE HURRICANE ASTRAGAL)



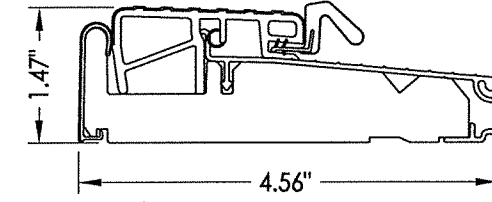
**9 INSWING ARTICULATING THRESHOLD**  
ZACAA4565FN  
MAX. DESIGN PRESSURE = ±30 PSF



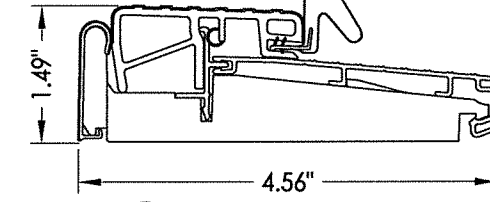
**10 INSWING ARTICULATING THRESHOLD**  
ZAC4565RDS  
MAX. DESIGN PRESSURE = ±35 PSF



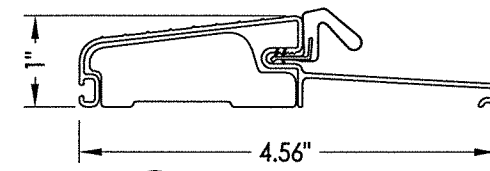
**11 OUTSWING THRESHOLD**  
ZOBL4565



**12 OUTSWING THRESHOLD**  
ZOB4565FN



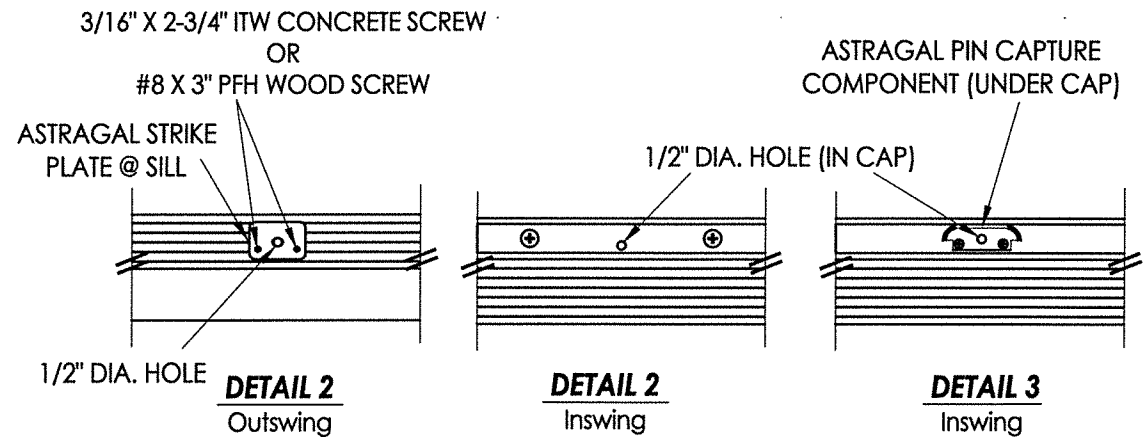
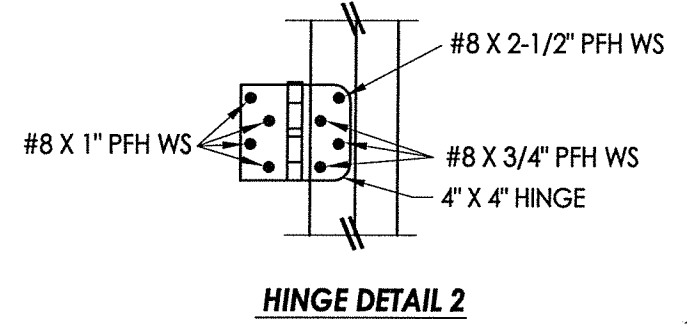
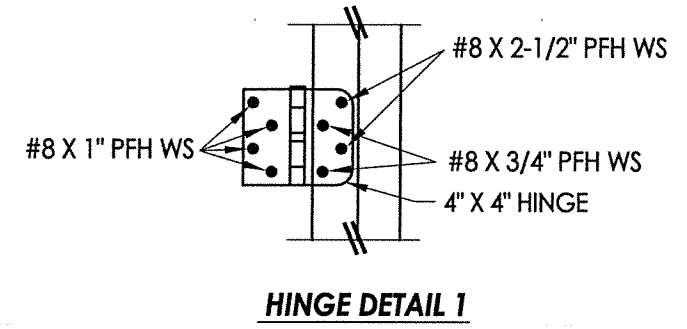
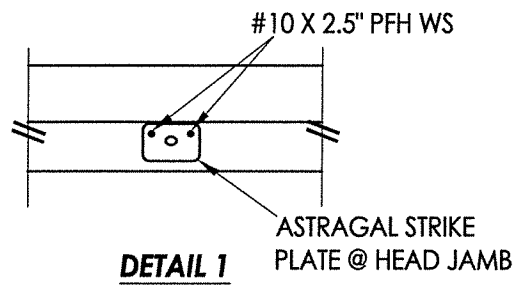
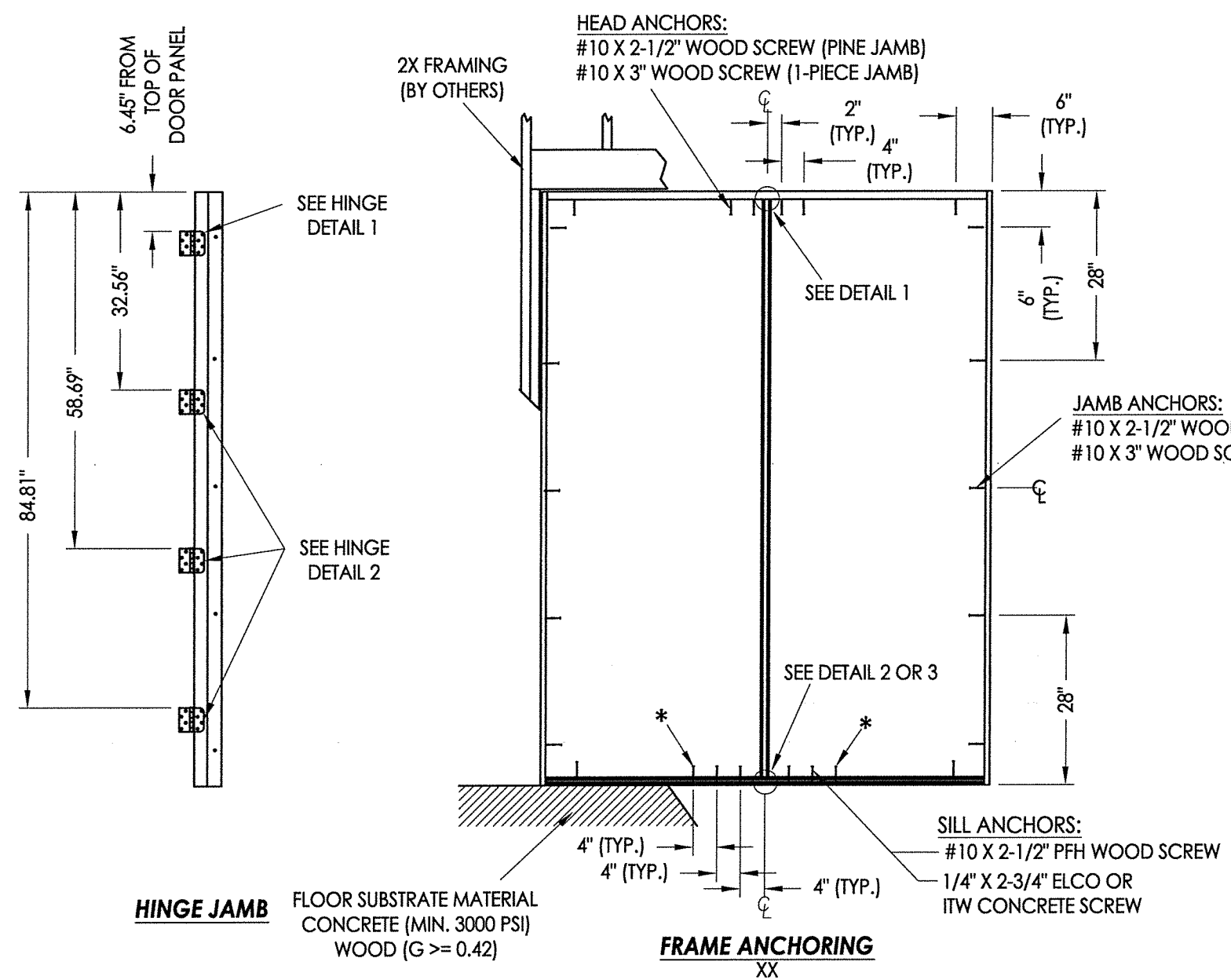
**13 OUTSWING THRESHOLD**  
ZOB4565RDS



**14 OUTSWING THRESHOLD**  
FOB4566

PRODUCT: ENDURA	
PART OR ASSEMBLY: VERTICAL CROSS SECTIONS	
NO.	DATE
2	9/19/19
1	10/01/18
REVISIONS	
DATE:	8/31/16
SCALE:	N.T.S.
DWG. BY:	JK
CHK. BY:	LFS
DRAWING NO.:	TX-4636
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.

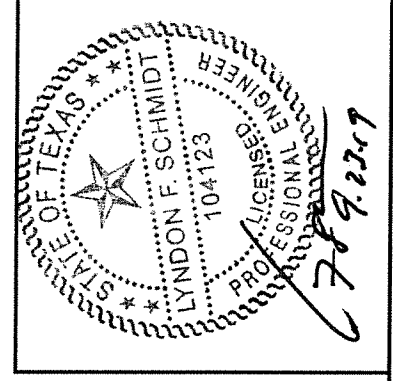
- CONCRETE ANCHOR NOTES:**
- Concrete anchor locations at the corners may be adjusted to maintain the min. edge distance to mortar joints.
  - Concrete anchor locations noted as "MAX. ON CENTER" must be adjusted to maintain the min. edge distance to mortar joints, additional concrete anchors may be required 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.



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

PRODUCT:	ENDURA
PART OR ASSEMBLY:	FRAME ANCHORING
DATE:	8/31/16
SCALE:	N.T.S.
DWG. BY:	JK
CHK. BY:	LFS
DRAWING NO.:	TX-4636
SHEET	7 OF 7

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