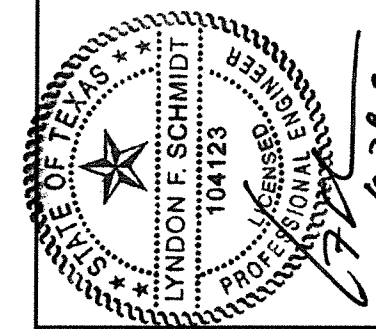
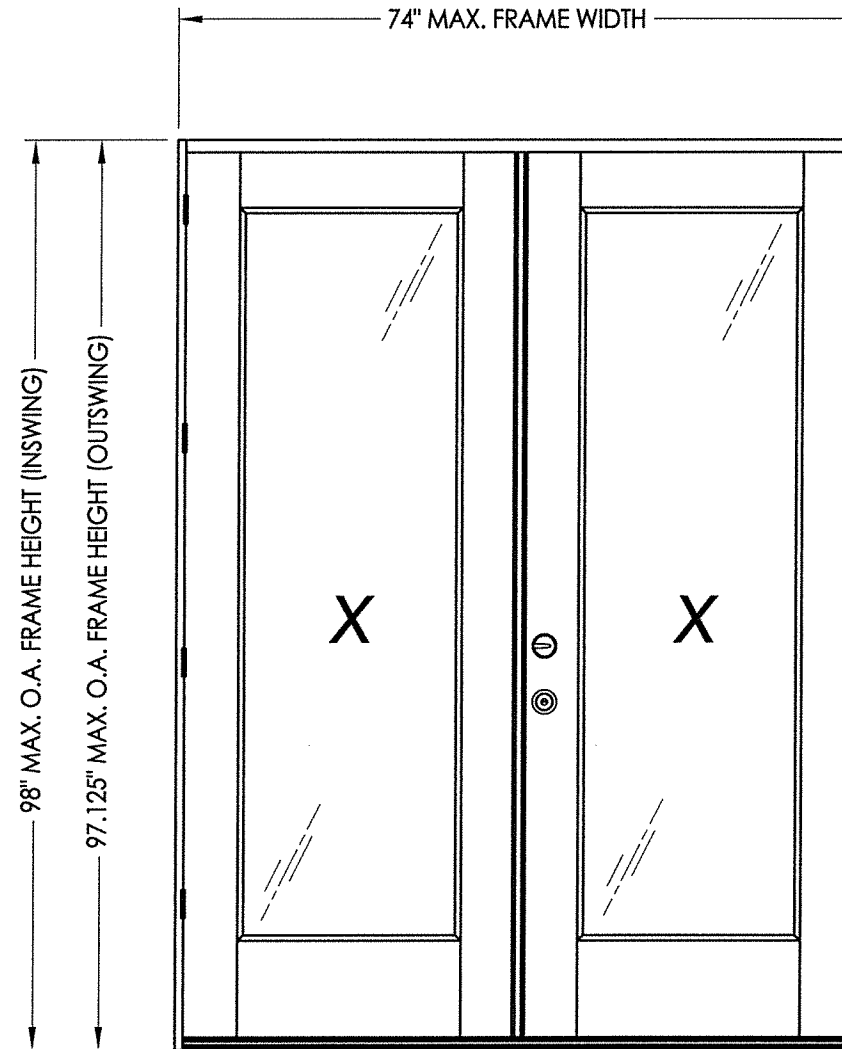


Glazed Steel Door

"NON-IMPACT"
IN SWING / OUT SWING



Documents Prepared By: Lyndon F. Schmidt, P.E.
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EVALUATED FOR USE IN THE STATE OF TEXAS

The Glazed 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 (Ultimate Flip Lever)
3	Astragal details (Ultimate Multipoint)
4	Astragal details (Ultimate Hurricane)
5	Door panel details (lip lite insert glazing)
6	Horizontal cross sections
7	Vertical cross sections
8	Frame anchoring

CONFIG.	MODEL	DESIGN PRESSURE (PSF) ULTIMATE HURRICANE ASTRAGAL		DESIGN PRESSURE (PSF) ULTIMATE MULTIPOINT ASTRAGAL		DESIGN PRESSURE (PSF) ULTIMATE FLIP LEVER ASTRAGAL	
		POSITIVE	NEGATIVE	POSITIVE	NEGATIVE	POSITIVE	NEGATIVE
XX	IN SWING	+35.0	-40.0	+40.0	-45.0	+40.0	-45.0
	OUT SWING	+40.0	-40.0	+40.0	-40.0	+25.0	-25.0

PRODUCT: ENDURA

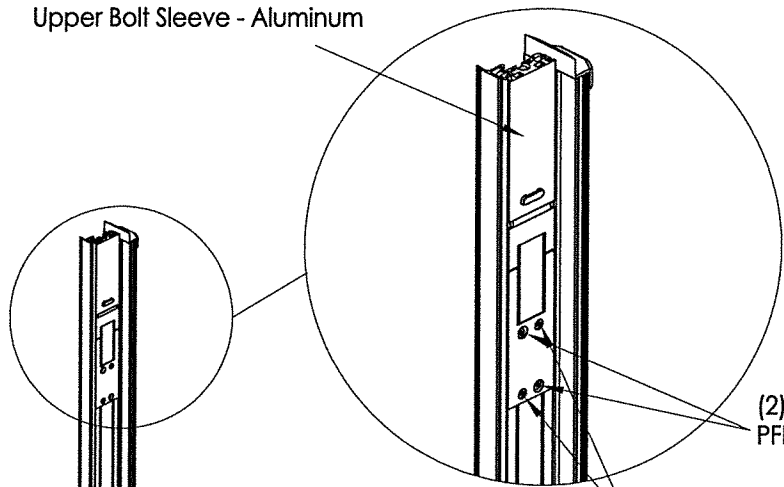
PART OR ASSEMBLY: TYPICAL ELEVATION, DESIGN PRESSURES & GENERAL NOTES

NO.	DATE	REVISIONS
5	10/28/19	ADD "FusionFrame" OPTION & UPDATE TO 2018 IBC/IRC CODE
4	9/11/18	UPDATE FOR NEW TESTING
3	11/01/16	ADDED THRESHOLDS
2	5/5/15	ADD NEW ASTRAGAL PIN CAPTURE
1	12/03/13	ADDED ARTICULATING SILL

DATE: 7/12/12
SCALE: N.T.S.
DWG. BY: JK
CHK. BY: LFS
DRAWING NO.: TX-4172
SHEET 1 OF 8

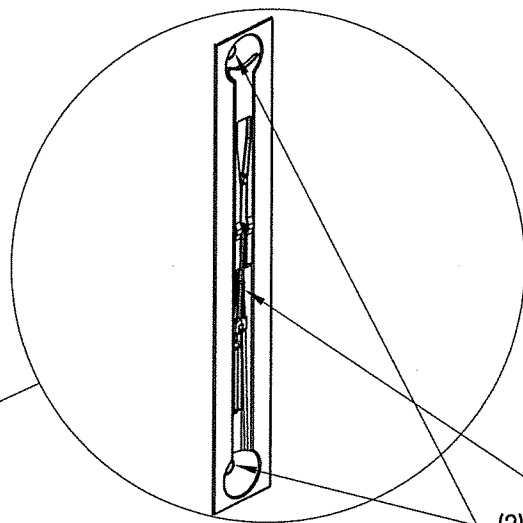
R:\Clients\Endura PERMANENT\B - Texas Dept of Ins\TDI - DR-585 Masonite Steel\C - Drawings\REV 2018 IBC\TX-4171-72.dwg, 2.2

Upper Bolt Sleeve - Aluminum



(2) #8 X 1-1/2" PFH WOOD SCREWS

(2) #6-32 X 5/8" MACHINE SCREWS



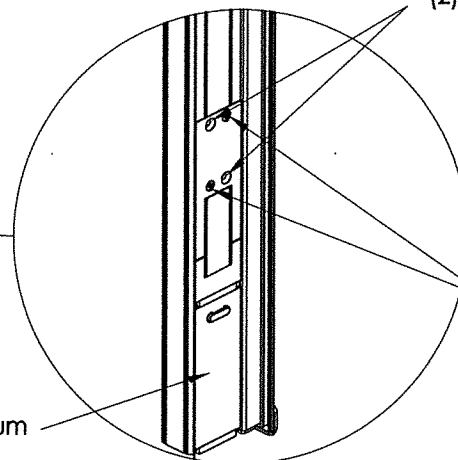
Upper/Lower Bolt Actuator Lever - Zinc

(2) #8 X 1-1/2" PFH WOOD SCREWS

(2) #8 X 1-1/2" PFH WOOD SCREWS

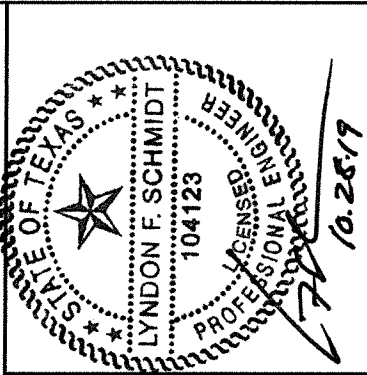
Aluminum Body

Lower Bolt Sleeve - Aluminum



(2) #6-32 X 5/8" MACHINE SCREWS

ULTIMATE FLIP LEVER ASTRAGAL

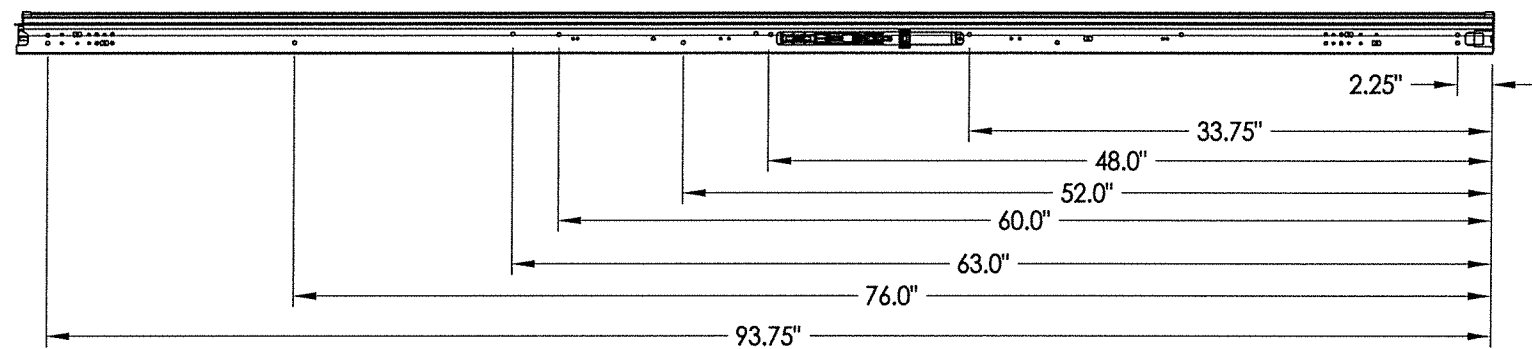


Documents Prepared By: Lyndon F. Schmidt, P.E.
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TOP

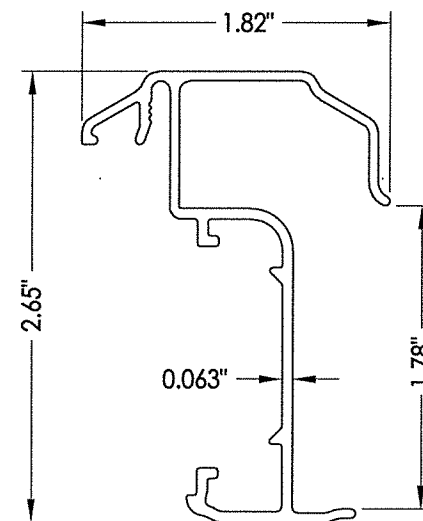


ANCHOR SCREW LOCATIONS

BOTTOM



HARDWARE LOCATIONS

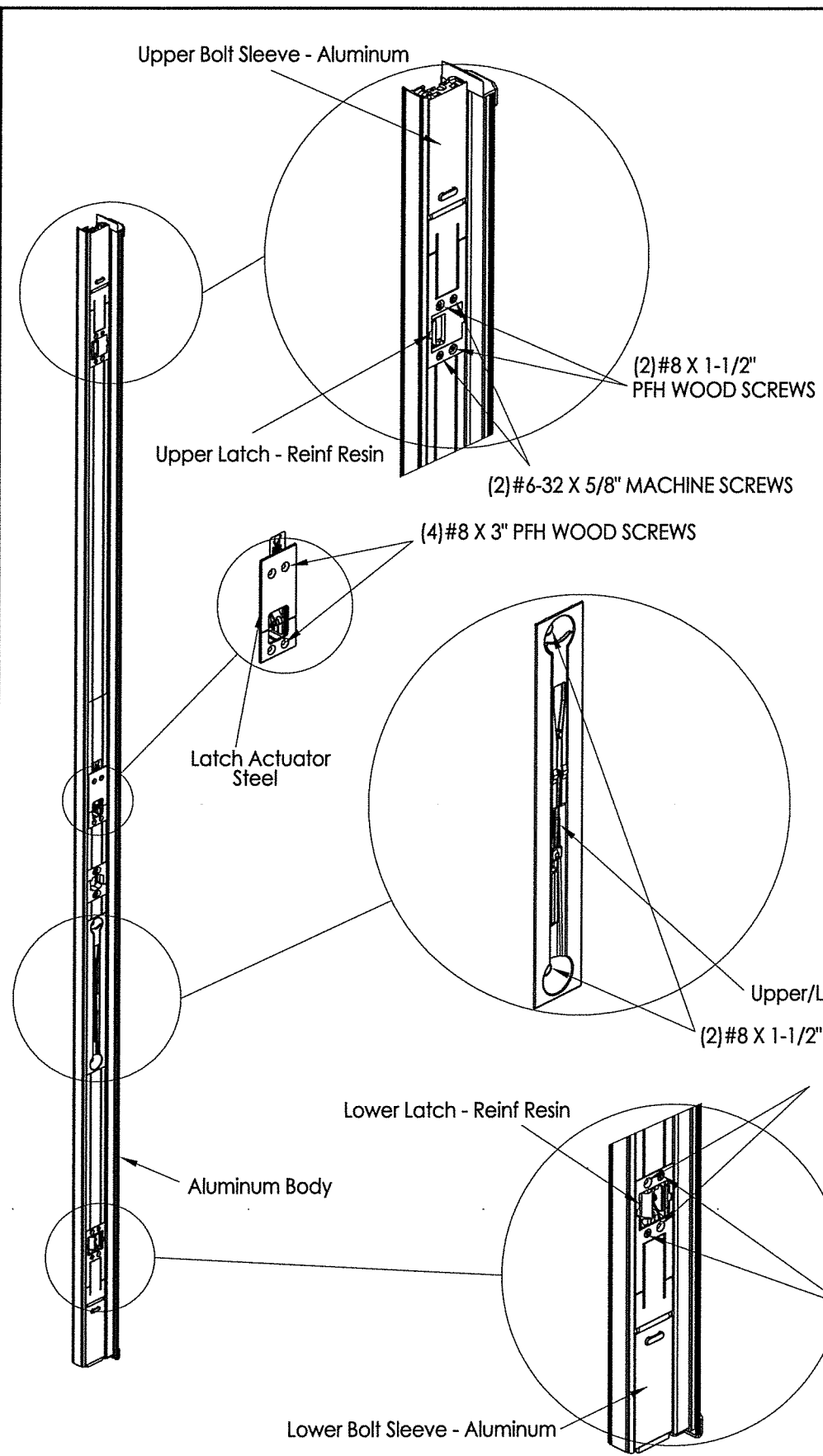


Astragal Section

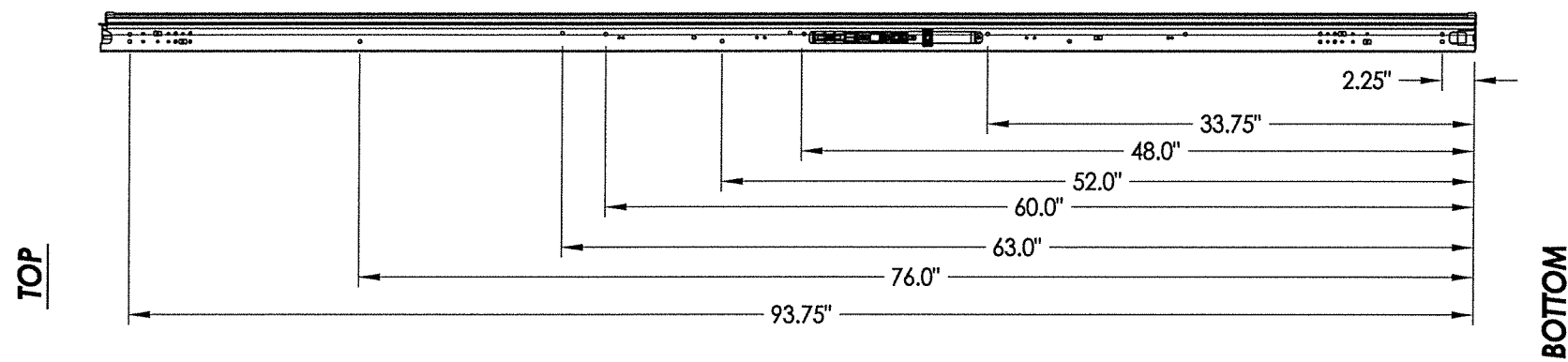
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PART OR ASSEMBLY: ASTRAGAL DETAILS (ULTIMATE FLIP LEVER)			
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4	9/11/18	UPDATE FOR NEW TESTING	LFS
3	11/01/16	ADDED THRESHOLDS	LFS
2	5/5/15	ADD NEW ASTRAGAL PIN CAPTURE	LFS
1	12/03/13	ADDED ARTICULATING SILL	LFS
NO.	DATE		BY
REVISIONS			
DATE: 7/12/12		SCALE: N.T.S.	
DWG. BY: JK		CHK. BY: LFS	
DRAWING NO.: TX-4172		SHEET 2 OF 8	

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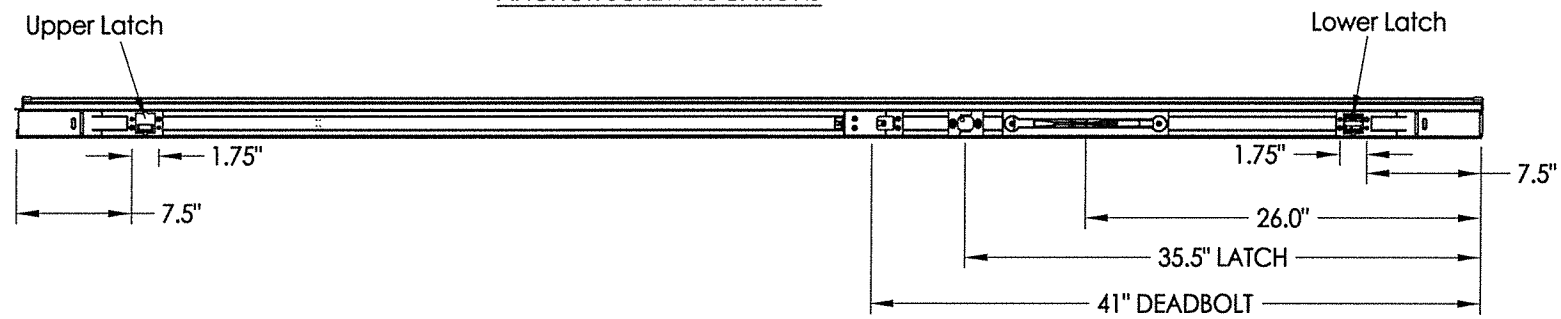
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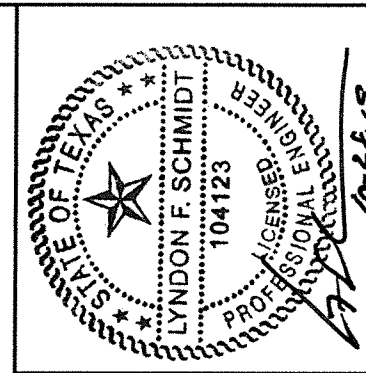
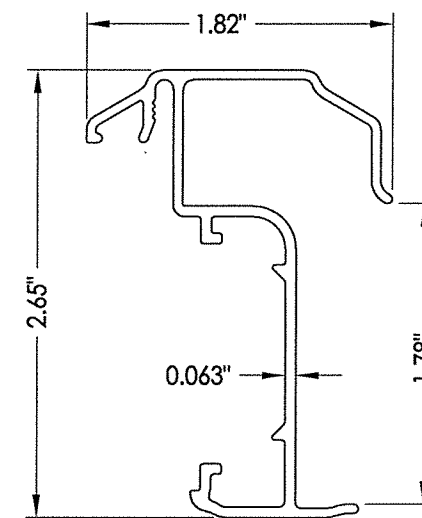
ULTIMATE MULTI-POINT ASTRAGAL



ANCHOR SCREW LOCATIONS



HARDWARE LOCATIONS



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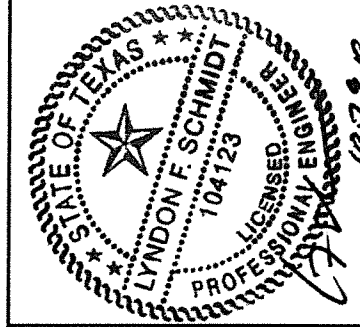
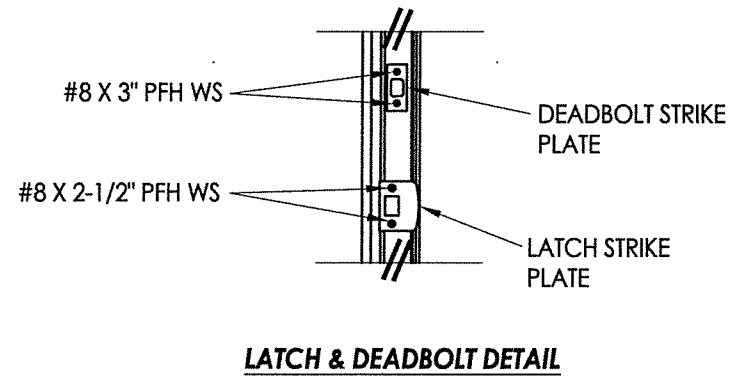
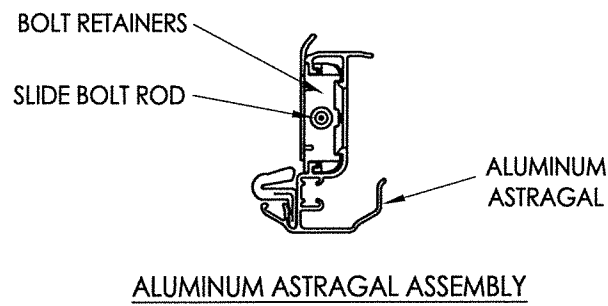
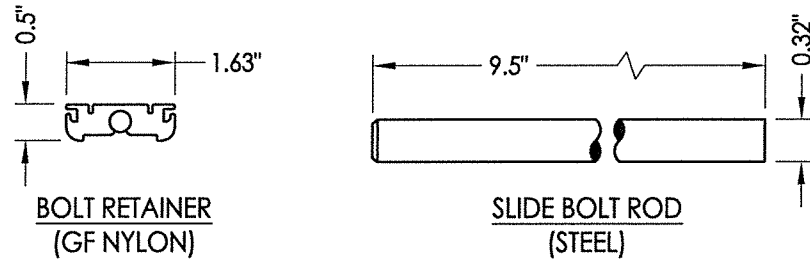
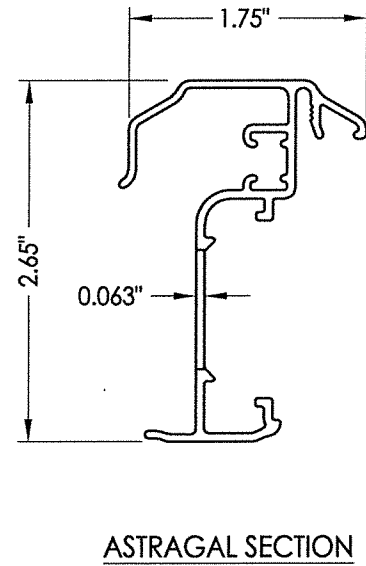
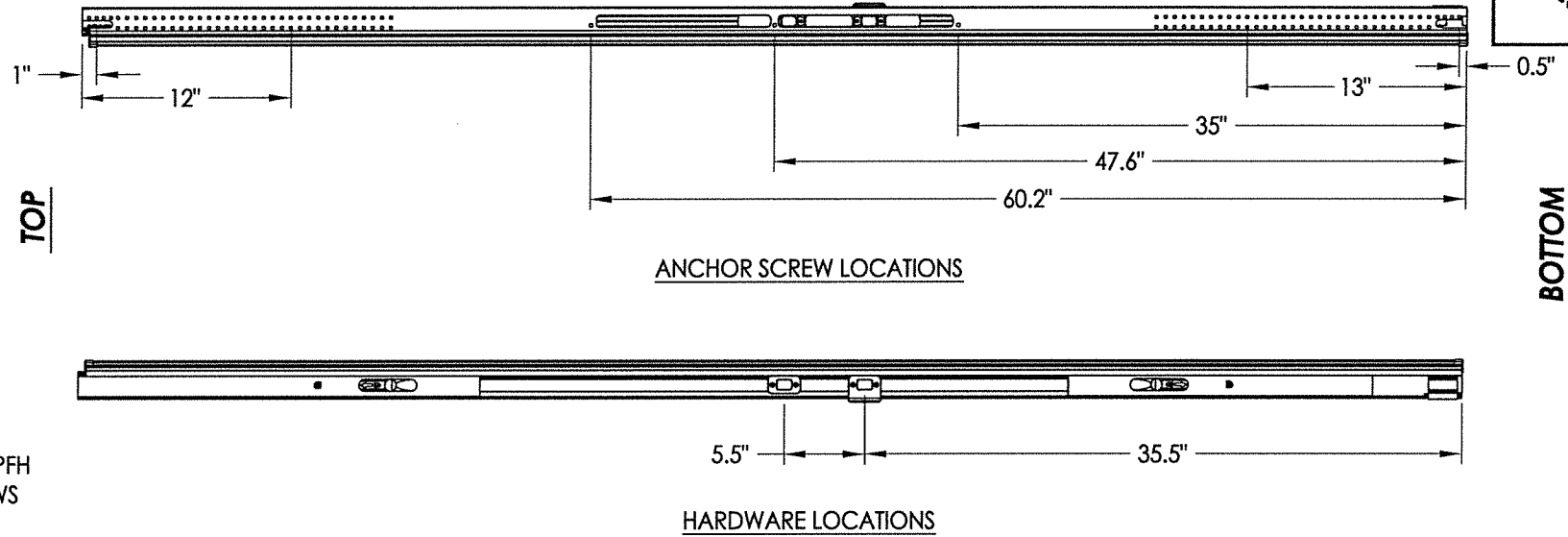
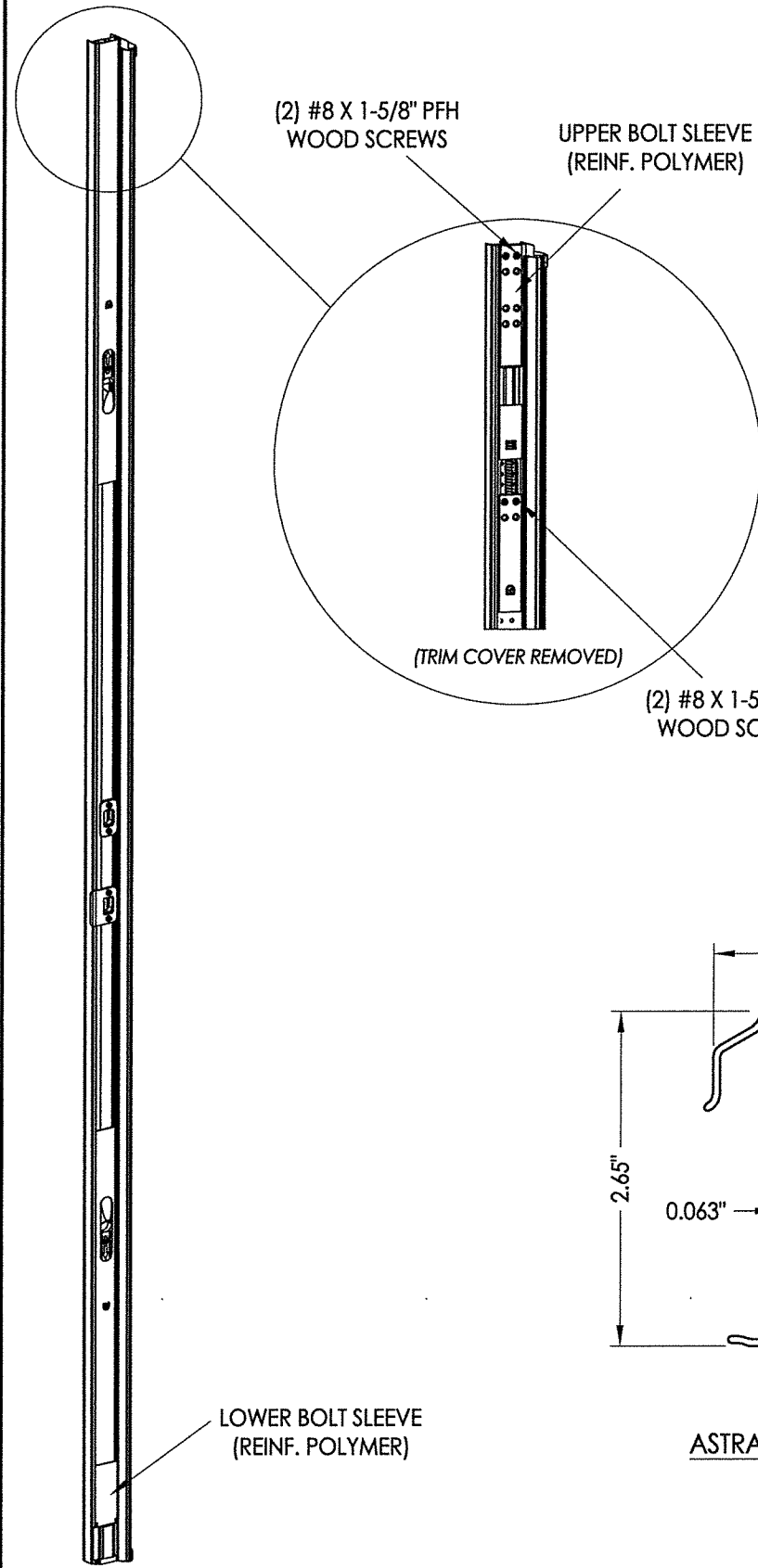
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Phone No.: 813.659.9197

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

NO.	DATE	REVISIONS
5	10/28/19	ADD "FusionFrame" OPTION & UPDATE TO 2018 IBC/IRC CODE
4	9/11/18	UPDATE FOR NEW TESTING
3	11/01/16	ADDED THRESHOLDS
2	5/5/15	ADD NEW ASTRAGAL PIN CAPTURE
1	12/03/13	ADDED ARTICULATING SILL

DATE:	7/12/12
SCALE:	N.T.S.
DWG. BY:	JK
CHK. BY:	LFS
DRAWING NO.:	TX-4172
SHEET	3 OF 8



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CERTIFICATE OF REGISTRATION # F-11852

PRODUCT: ENDURA

PART OR ASSEMBLY: ASTRAGAL DETAILS (ULTIMATE HURRICANE)

NO.	DATE	REVISIONS
5	10/28/19	ADD "FusionFrame" OPTION & UPDATE TO 2018 IBC/IRC CODE
4	9/11/18	UPDATE FOR NEW TESTING
3	10/25/16	ADDED THRESHOLDS
2	5/5/15	ADD NEW ASTRAGAL PIN CAPTURE
1	12/03/13	ADDED ARTICULATING SILL
		NO. DATE

DATE: 7/12/12

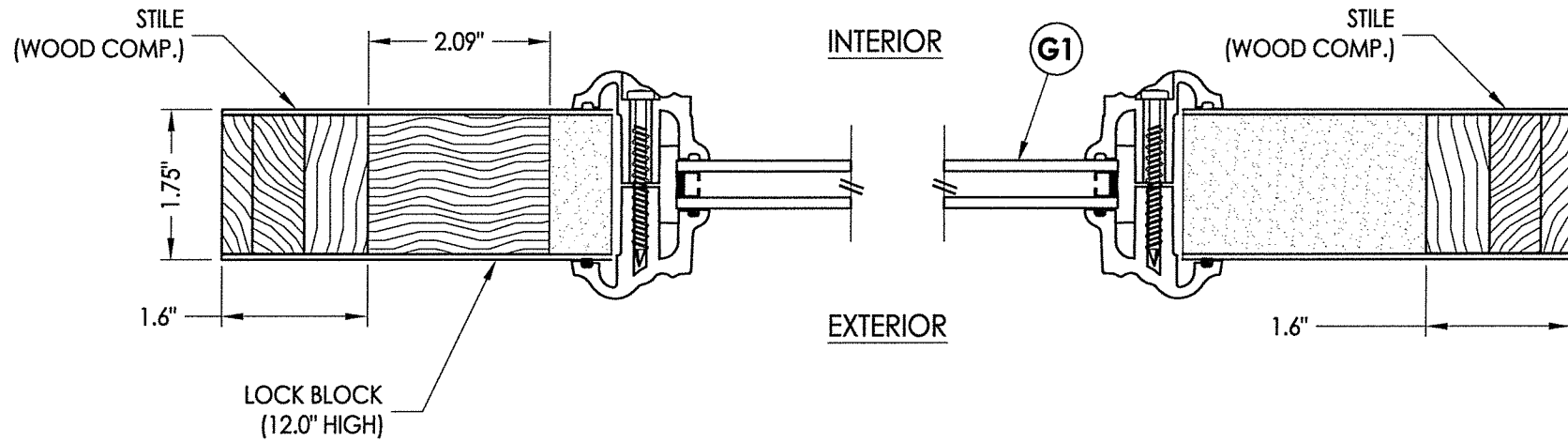
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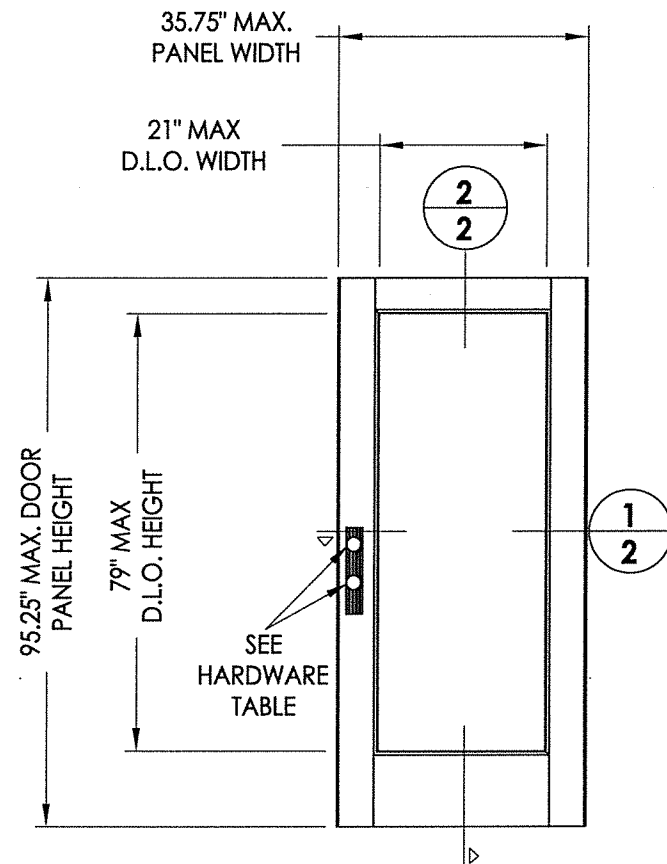
CHK. BY: LFS

DRAWING NO.: TX-4172

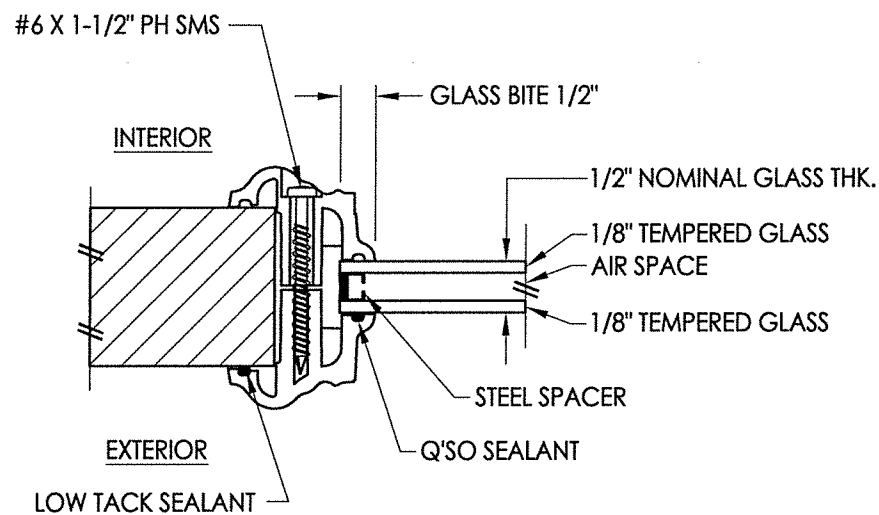
SHEET 4 OF 8



1
2 HORIZONTAL CROSS SECTION

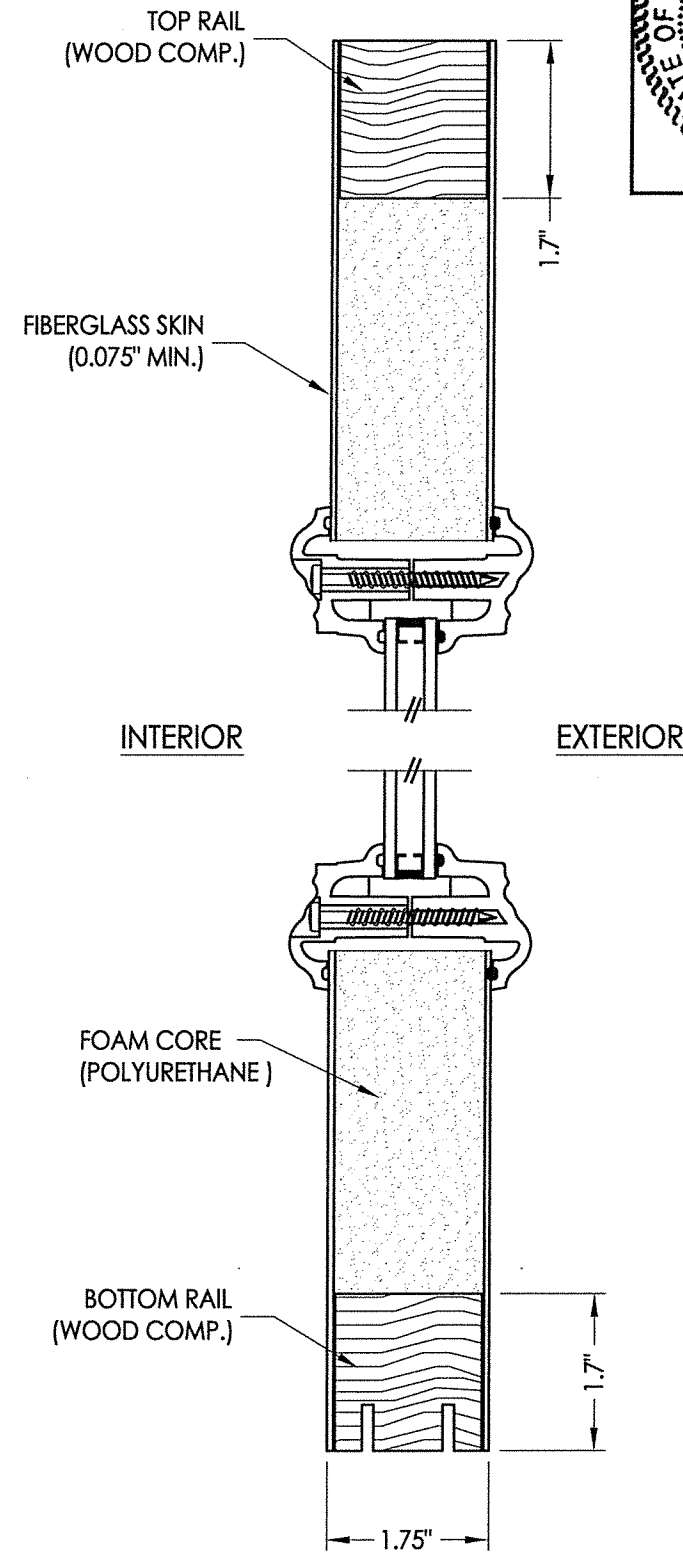


MASONITE
Insert glazed
(fiberglass)

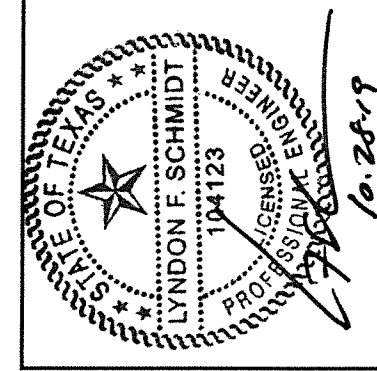


G1 GLAZING DETAIL
Lip Lite Insert Glazing

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



2
2 VERTICAL CROSS SECTION



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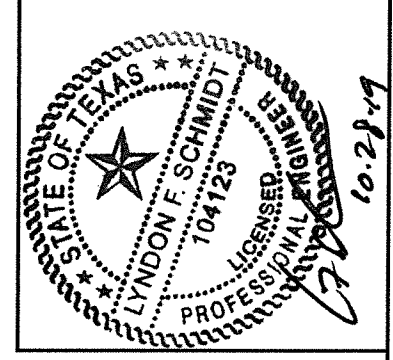
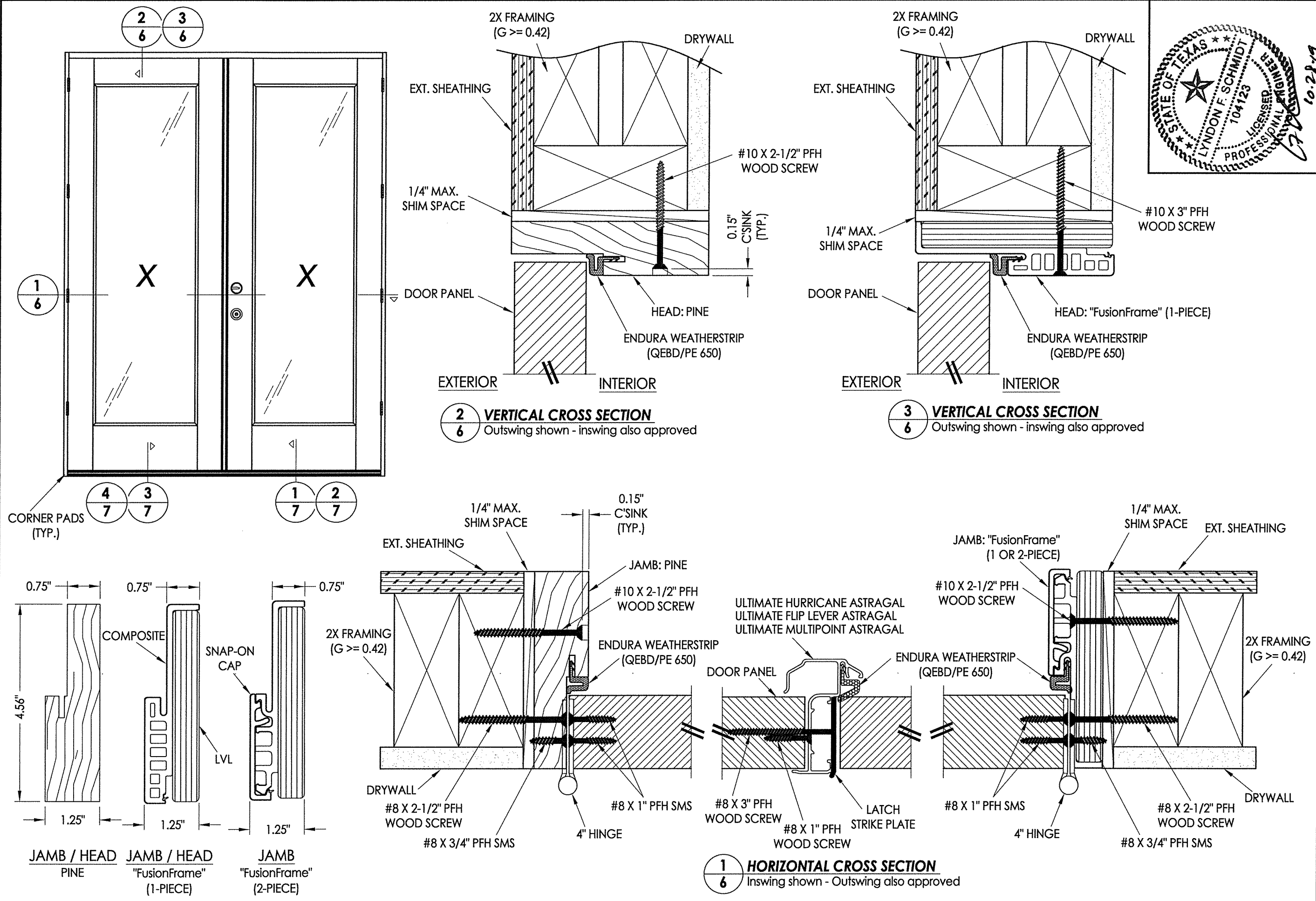
TEXAS BOARD OF PROFESSIONAL ENGINEERS
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PRODUCT: ENDURA
PART OR ASSEMBLY: DOOR PANEL DETAILS (LIP LITE INSERT GLAZING)

NO.	DATE	REVISIONS
5	10/28/19	ADD "FusionFrame" OPTION & UPDATE TO 2018 IBC/IRC CODE
4	9/11/18	UPDATE FOR NEW TESTING
3	11/01/16	ADDED THRESHOLDS
2	5/5/15	ADD NEW ASTRAGAL PIN CAPTURE
1	12/03/13	ADDED ARTICULATING SILL

DATE: 7/12/12
SCALE: N.T.S.
DWG. BY: JK
CHK. BY: LFS
DRAWING NO.: TX-4172
SHEET 5 OF 8

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 CERTIFICATE OF REGISTRATION # F-11852

PRODUCT: ENDURA

PART OR ASSEMBLY: HORIZONTAL CROSS SECTIONS

NO.	DATE	REVISIONS
5	10/28/19	ADD "FusionFrame" OPTION & UPDATE TO 2018 IBC/IRC CODE
4	9/11/18	UPDATE FOR NEW TESTING
3	11/01/16	ADDED THRESHOLDS
2	5/5/15	ADD NEW ASTRAGAL PIN CAPTURE
1	12/03/13	ADDED ARTICULATING SILL

DATE: 7/12/12

SCALE: N.T.S.

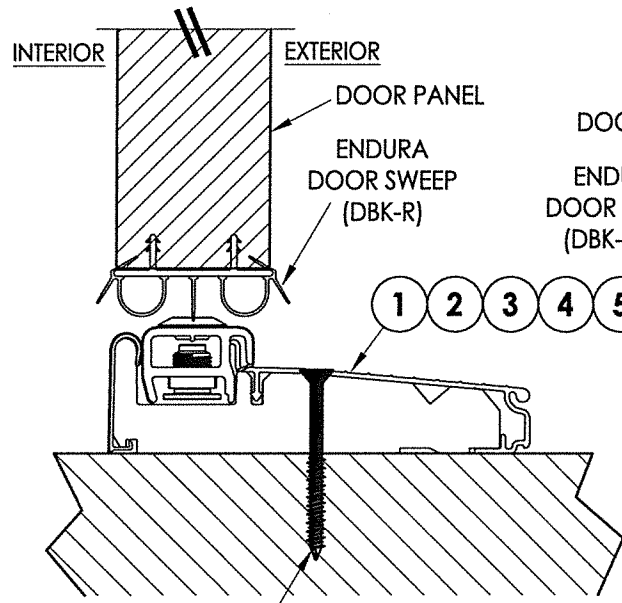
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DRAWING NO.: TX-4172

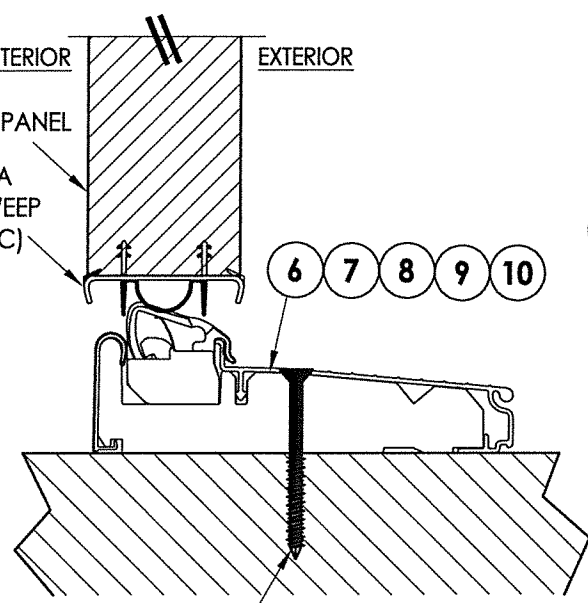
SHEET 6 OF 8

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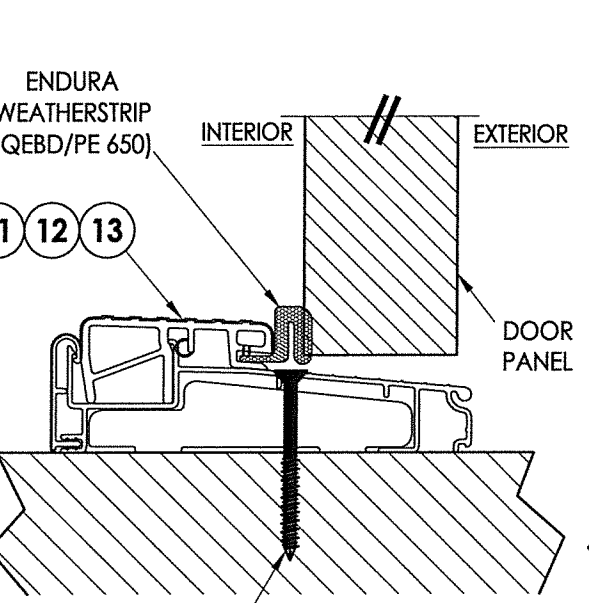
#10 X 2.5" PFH WOOD SCREW OR
1/4" X 2-3/4" ELCO OR ITW CONCRETE SCREW

1 VERTICAL CROSS SECTION
7 Inswing Adjustable Threshold



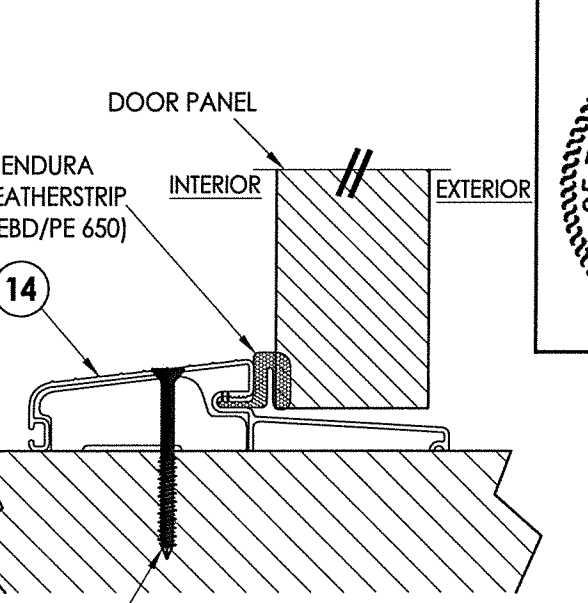
#10 X 2.5" PFH WOOD SCREW OR
1/4" X 2-3/4" ELCO OR ITW CONCRETE SCREW

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



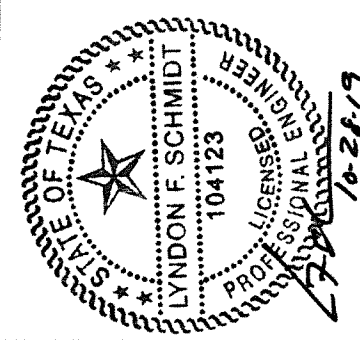
#10 X 2.5" PFH WOOD SCREW OR
1/4" X 2-3/4" ELCO OR ITW CONCRETE SCREW

3 VERTICAL CROSS SECTION
7 Outswing Bump Threshold



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

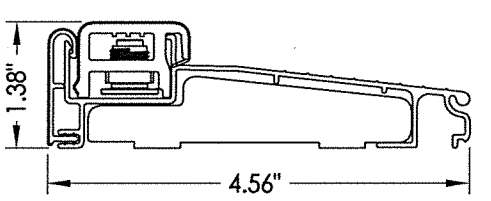
4 VERTICAL CROSS SECTION
7 Outswing Bump Threshold



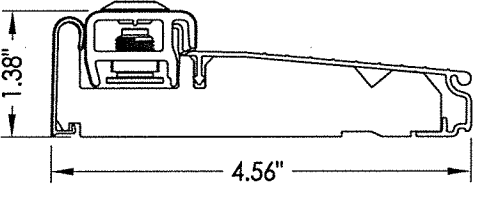
Documents Prepared By: Lyndon F. Schmidt, P.E.
TEXAS P.E. #104123

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P.O. Box 230 Valrico FL 33585
Phone No.: 813.659.9197

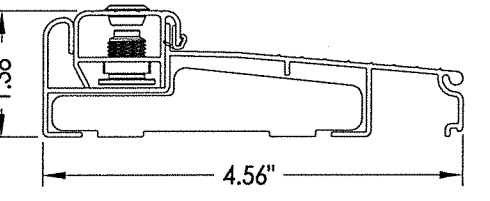
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CERTIFICATE OF REGISTRATION # F-11852



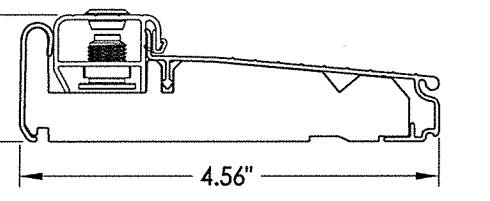
1 INSWING ADJUSTABLE THRESHOLD
ZAIL4565



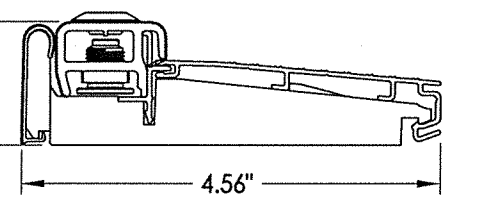
2 INSWING ADJUSTABLE THRESHOLD
ZAI4565FN



3 INSWING ADJUSTABLE THRESHOLD
ZAILAA4565

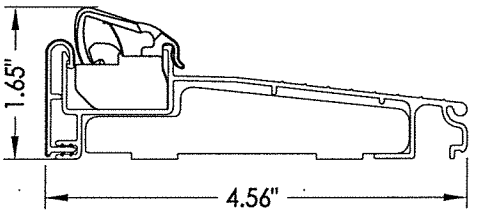


4 INSWING ADJUSTABLE THRESHOLD
ZAI4565FN

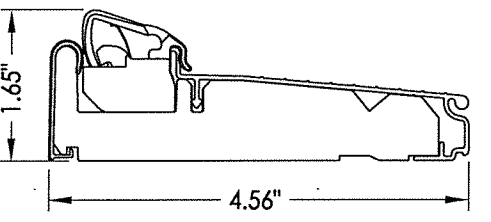


5 INSWING ADJUSTABLE THRESHOLD
ZAI4565RDS

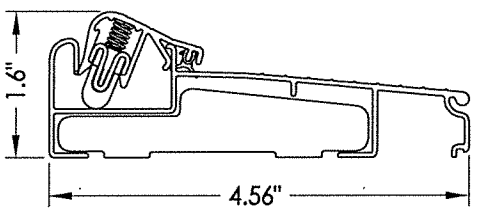
MAX. DESIGN PRESSURE = ±40 PSF



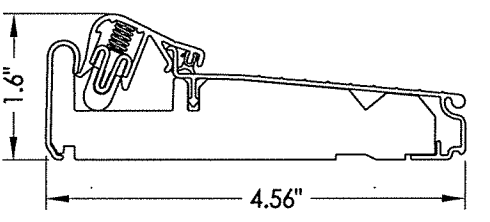
6 INSWING ARTICULATING THRESHOLD
ZACL4565



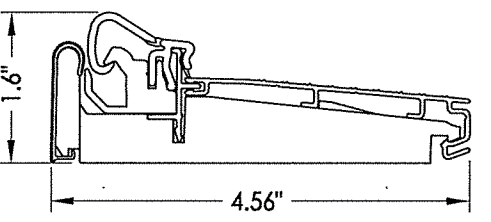
7 INSWING ARTICULATING THRESHOLD
ZAC4565FN



8 INSWING ARTICULATING THRESHOLD
ZAC4565

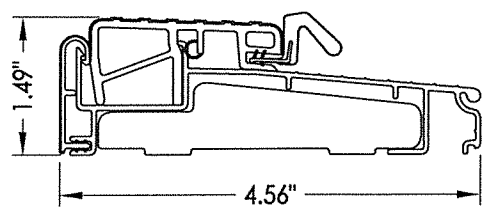


9 INSWING ARTICULATING THRESHOLD
ZACAA4565FN

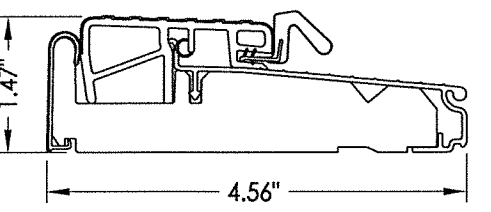


10 INSWING ARTICULATING THRESHOLD
ZAC4565RDS

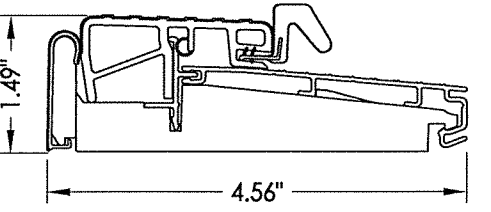
MAX. DESIGN PRESSURE = ±35 PSF



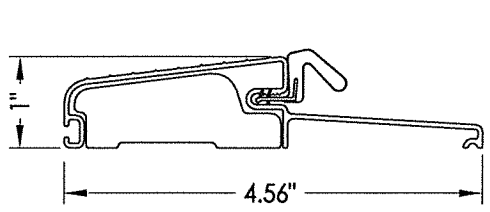
11 OUTSWING THRESHOLD
ZOBL4565



12 OUTSWING THRESHOLD
ZOB4565FN



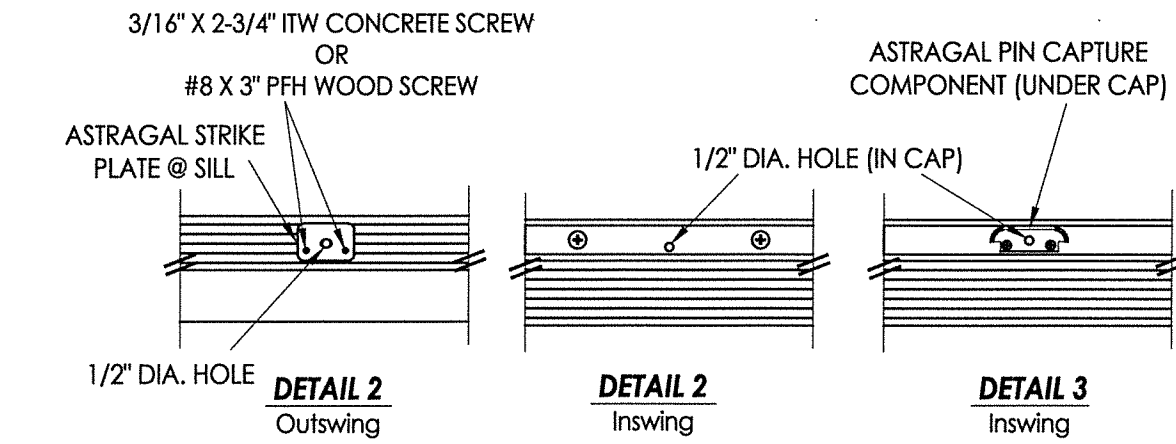
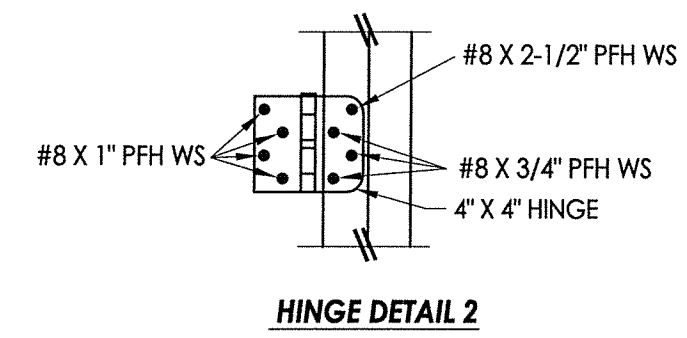
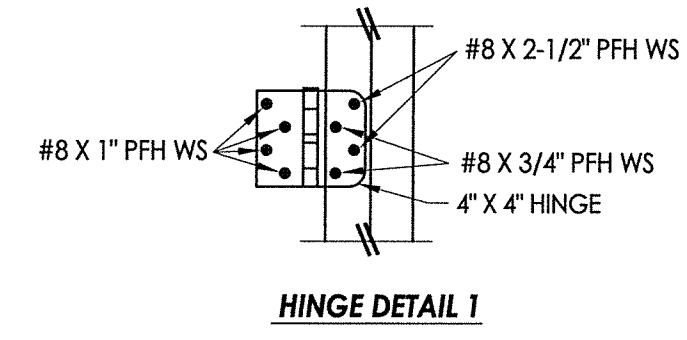
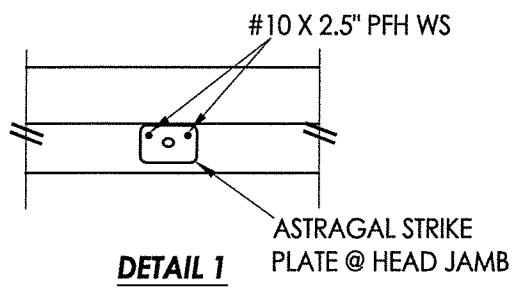
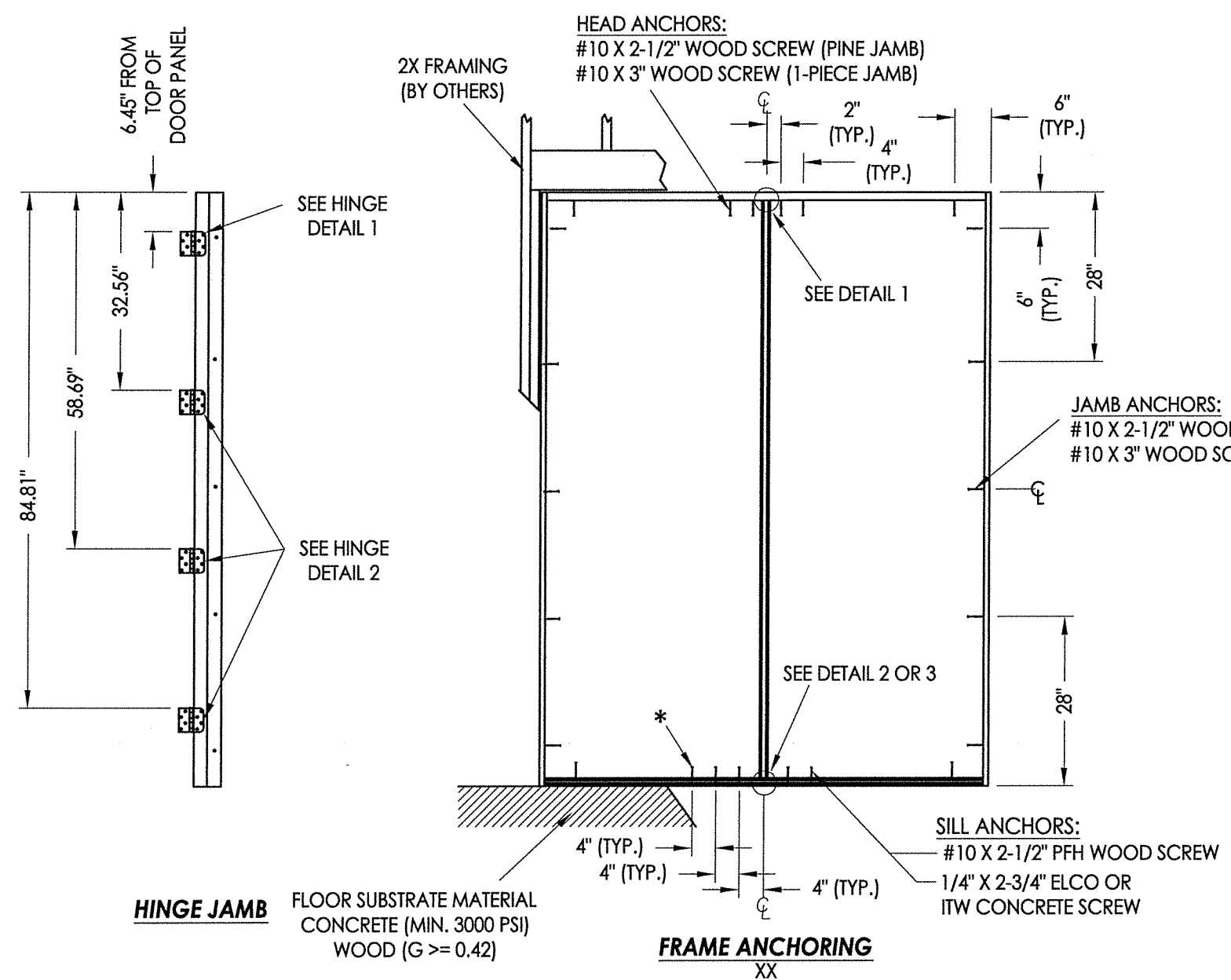
13 OUTSWING THRESHOLD
ZOB4565RDS



14 OUTSWING THRESHOLD
FOB4566

PRODUCT: ENDURA		PART OR ASSEMBLY: VERTICAL CROSS SECTIONS	
5	10/28/19	ADD "FusionFrame" OPTION & UPDATE TO 2018 IBC/IRC CODE	LFS
4	9/11/18	UPDATE FOR NEW TESTING	LFS
3	11/01/16	ADDED THRESHOLDS	LFS
2	5/5/15	ADD NEW ASTRAGAL PIN CAPTURE	LFS
1	12/03/13	ADDED ARTICULATING SILL	LFS
NO.	DATE	REVISIONS	BY
DATE: 7/12/12		SCALE: N.T.S.	
DWG. BY: JK		CHK. BY: LFS	
DRAWING NO.: TX-4172		SHEET 7 OF 8	

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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.

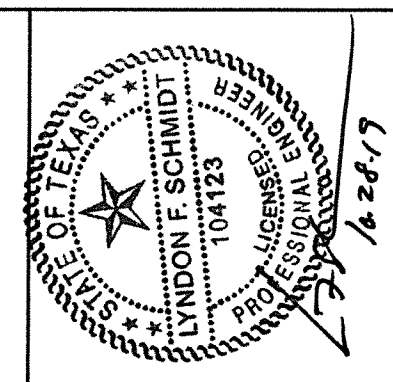
- CONCRETE ANCHOR NOTES:**
- Concrete anchor locations at the corners may be adjusted to maintain the min. edge distance to mortar joints.
 - Concrete anchor locations noted as "MAX. ON CENTER" must be adjusted to maintain the min. edge distance to mortar joints, additional concrete anchors may be required 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: THIS ANCHOR REQUIRED FOR D.P. > 40 PSF.



Documents Prepared By: Lyndon F. Schmidt, P.E.
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TEXAS BOARD OF PROFESSIONAL ENGINEERS
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PRODUCT:	ENDURA	
REVISIONS		
NO.	DATE	BY
5	10/28/19	ADD "FusionFrame" OPTION & UPDATE TO 2018 IBC/IRC CODE
4	9/11/18	UPDATE FOR NEW TESTING
3	11/01/16	ADDED THRESHOLDS
2	5/5/15	ADD NEW ASTRAGAL PIN CAPTURE
1	12/03/13	ADDED ARTICULATING SILL

DATE: 7/12/12
 SCALE: N.T.S.
 DWG. BY: JK
 CHK. BY: LFS
 DRAWING NO.: TX-4172
 SHEET 8 OF 8

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