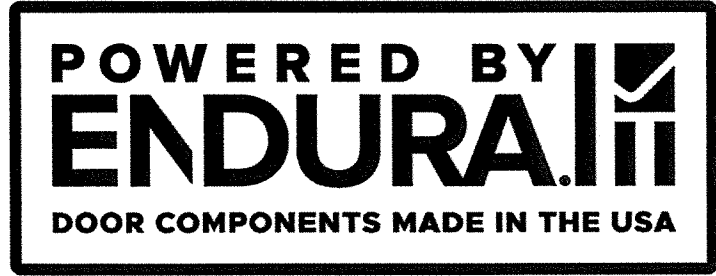


Z:\Clients\Endura PERMANENT\B - Texas Dept of Ins\TDI - DR-852_IELD-WEN Steel Opaque (L,K,DB)\C - Drawings\TX-4641.44.dwg



Opaque Steel Door

"NON-IMPACT"
INSWING / OUTSWING

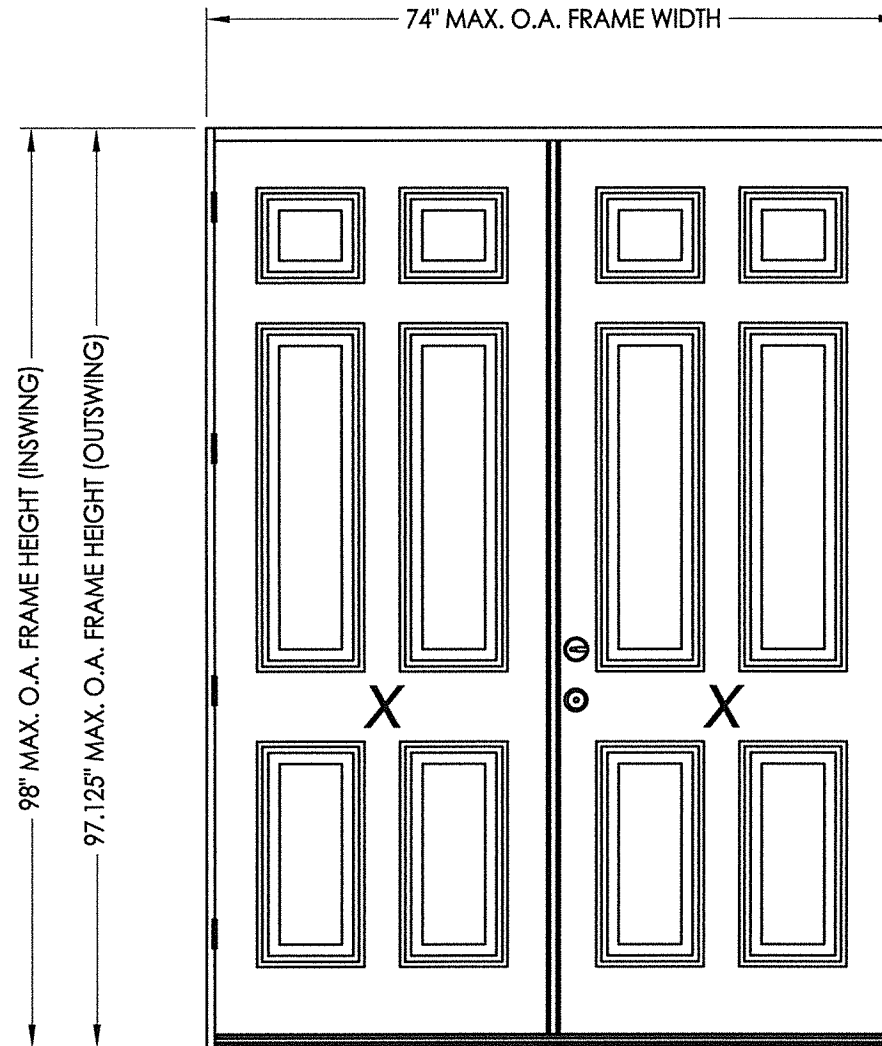
TDI DR-852

EVALUATED FOR USE IN THE STATE OF TEXAS

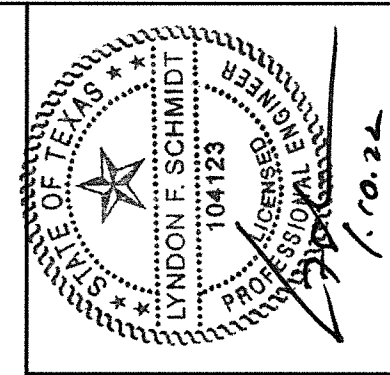
The Steel Door system described herein complies with the 2018 International Residential Code (IRC), Sections R301 & R609 and the 2018 International Building Code (IBC), Sections 1404.13, 1609, 1709.5, 2403 and 2404 subject to the following conditions:

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 1609.1.2 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.	MODEL	DESIGN PRESSURE (PSF) ULTIMATE HURRICANE ASTRAGAL		DESIGN PRESSURE (PSF) ULTIMATE MULTIPOINT ASTRAGAL	
		POSITIVE	NEGATIVE	POSITIVE	NEGATIVE
XX	INSWING	+45.0	-45.0	+40.0	-45.0
XX	OUTSWING	+45.0	-45.0	+35.0	-35.0



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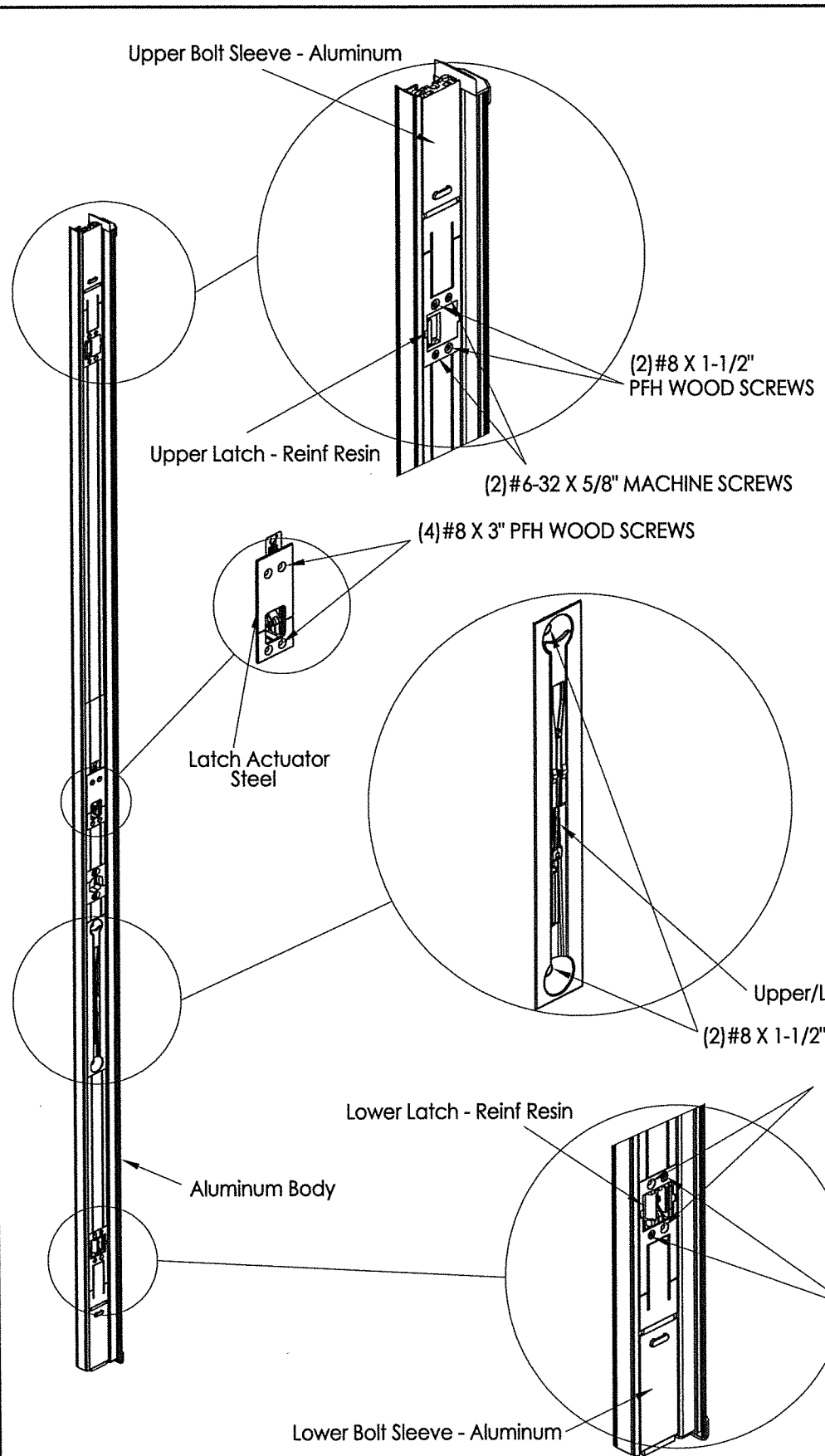
RW BUILDING CONSULTANTS, INC.
P.O. Box 230 Vairico FL. 33595
Phone No.: 813.659.9197
TEXAS BOARD OF PROFESSIONAL ENGINEERS
CERTIFICATE OF REGISTRATION # F-11852

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

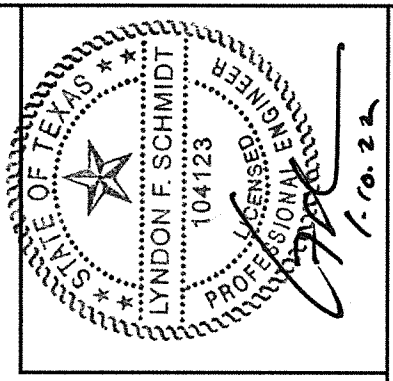
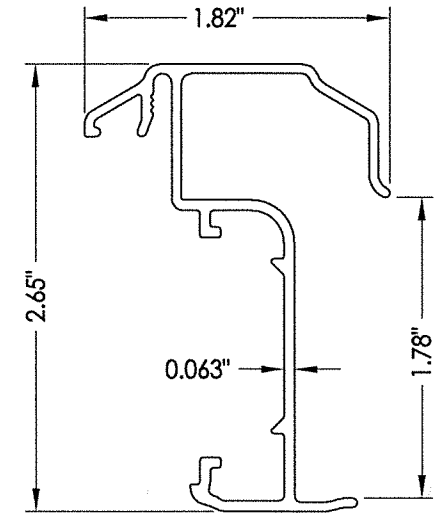
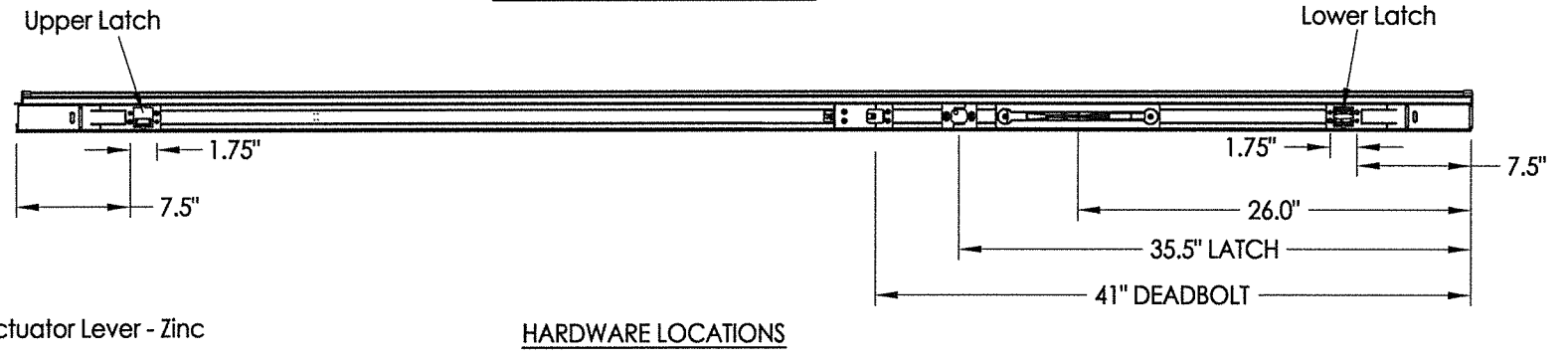
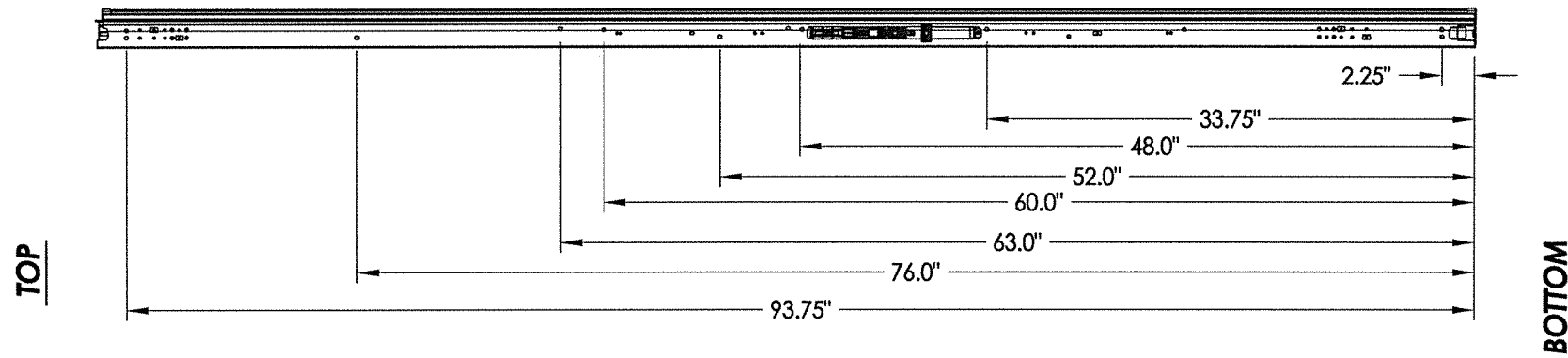
NO.	DATE	REVISIONS
2	11/10/21	UPDATE TO 2018 IBC/IRC CODE
1	9/10/18	UPDATE FOR NEW TESTING

DATE: 10/27/16
SCALE: N.T.S.
DWG. BY: JK
CHK. BY: LFS
DRAWING NO.: TX-4644
SHEET 1 OF 7

Z:\Clients\Endura PERMANENT B - Texas Dept of Ins\TDI - DR-852 JELD-WEN Steel Opaque (LK,DB)C - Drawings\TX-4641.44.dwg



ULTIMATE MULTIPOINT ASTRAGAL



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 Phone No.: 813.659.9197

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

PRODUCT: ENDURA

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

NO.	DATE	REVISIONS
2	11/10/21	UPDATE TO 2018 IBC/IRC CODE
1	9/10/18	UPDATE FOR NEW TESTING
LFS		
LFS		
BY		

DATE: 10/27/16

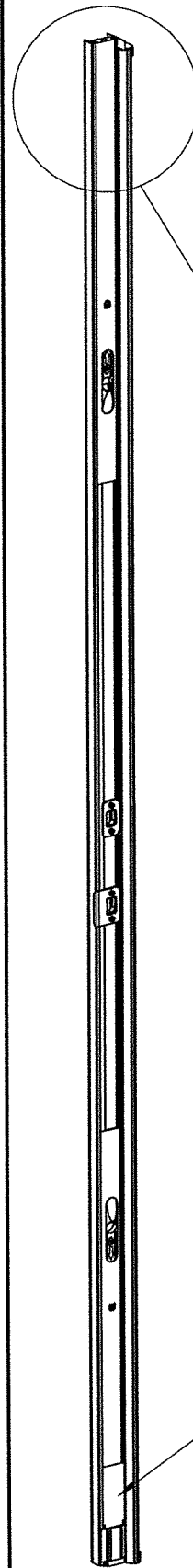
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DWG. BY: JK

CHK. BY: LFS

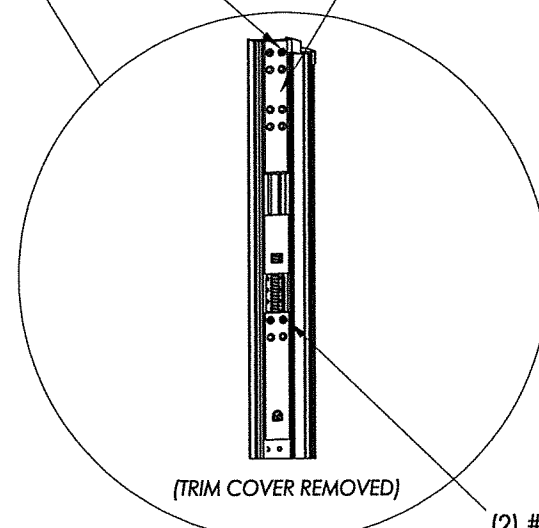
DRAWING NO.: TX-4644

SHEET 2 OF 7



ULTIMATE HURRICANE ASTRAGAL

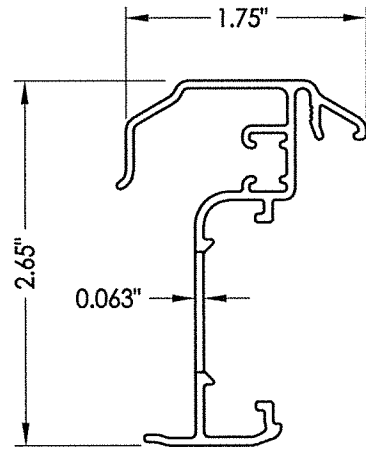
(2) #8 X 1-5/8" PFH WOOD SCREWS
UPPER BOLT SLEEVE (REINF. POLYMER)



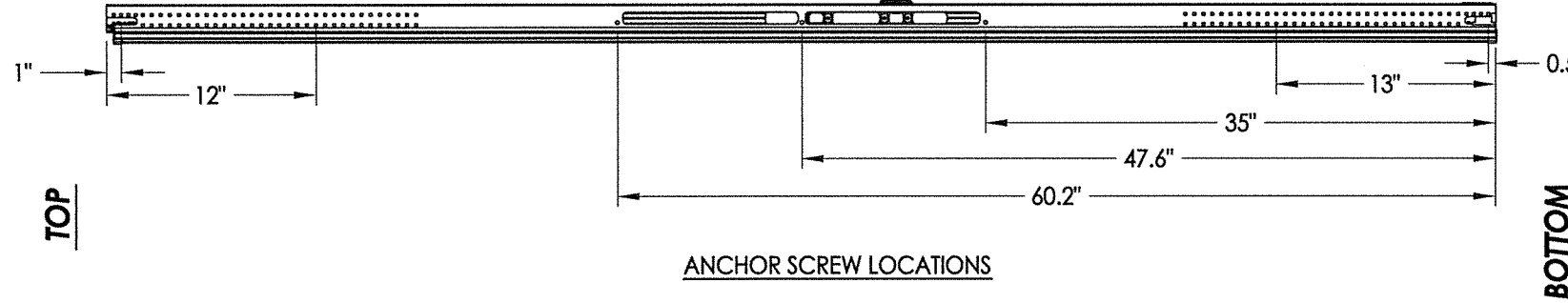
(TRIM COVER REMOVED)

(2) #8 X 1-5/8" PFH WOOD SCREWS

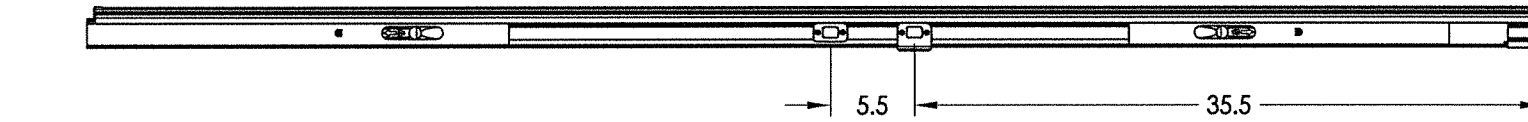
LOWER BOLT SLEEVE (REINF. POLYMER)



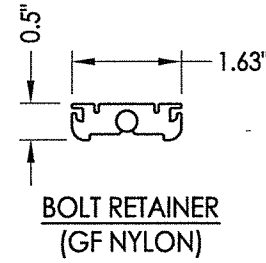
ASTRAGAL SECTION



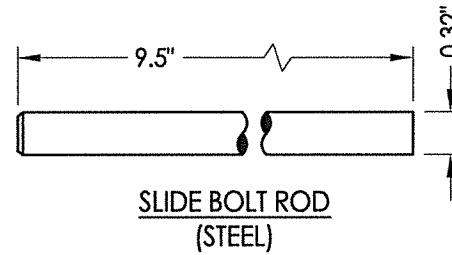
ANCHOR SCREW LOCATIONS



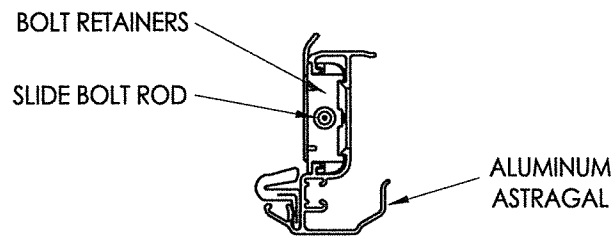
HARDWARE LOCATIONS



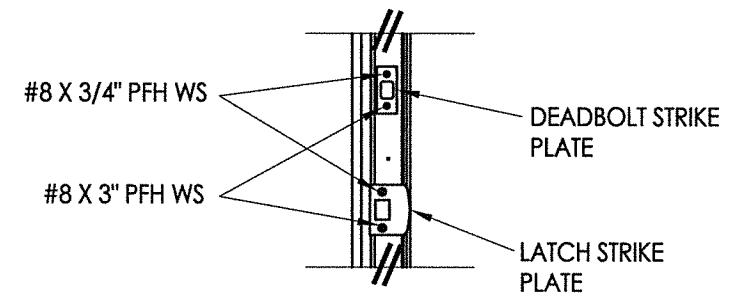
BOLT RETAINER (GF NYLON)



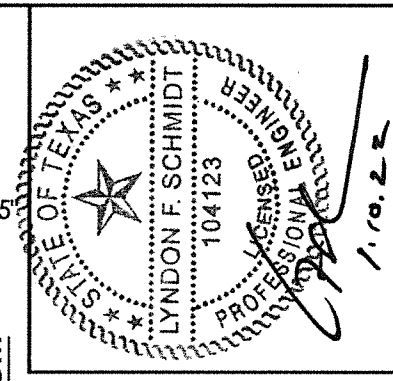
SLIDE BOLT ROD (STEEL)



ALUMINUM ASTRAGAL ASSEMBLY



LATCH & DEADBOLT DETAIL



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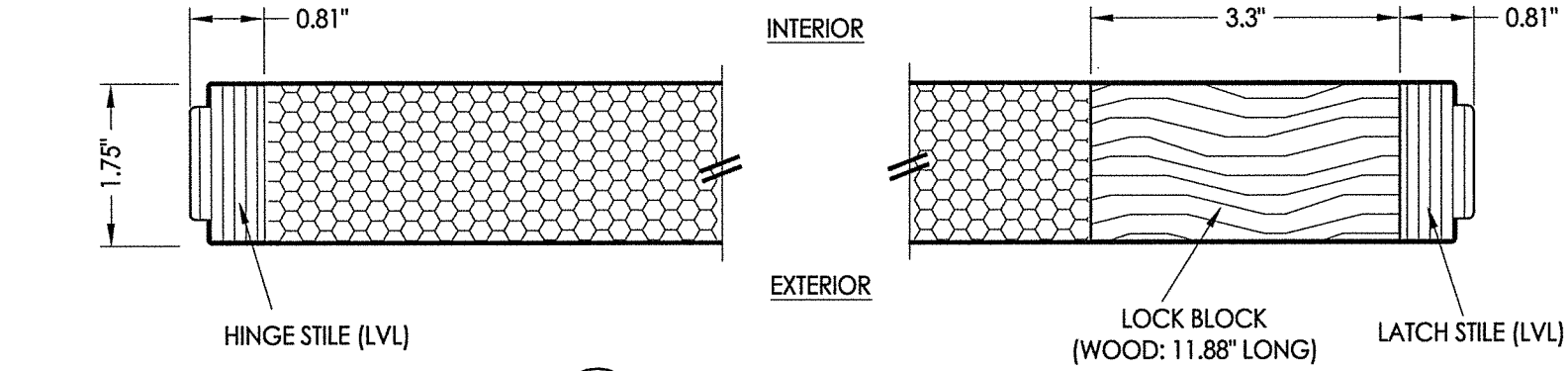
TEXAS BOARD OF PROFESSIONAL ENGINEERS
CERTIFICATE OF REGISTRATION # F-11852

PRODUCT:	ENDURA
PART OR ASSEMBLY:	ASTRAGAL DETAILS (ULTIMATE HURRICANE)

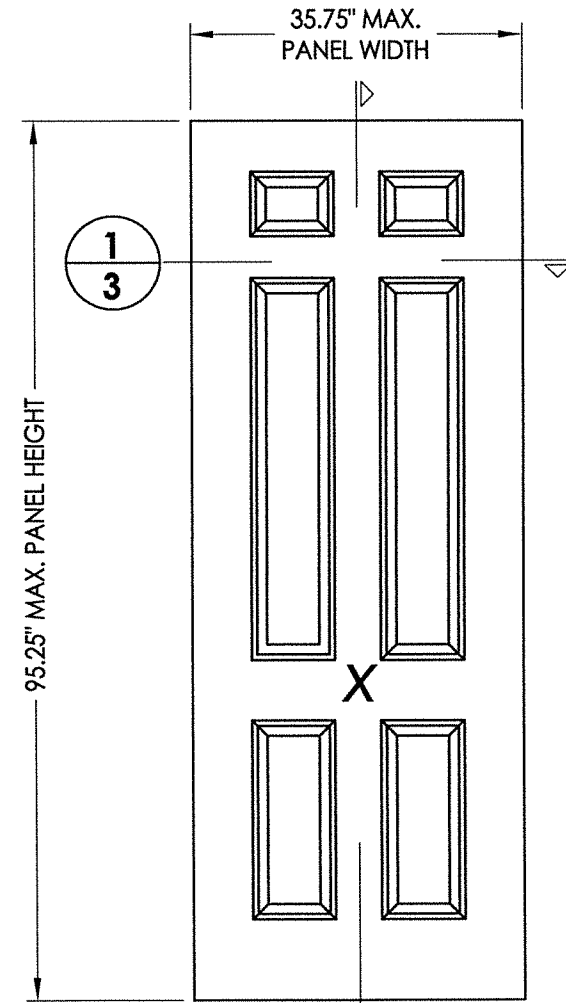
NO.	DATE	REVISIONS
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1	9/10/18	UPDATE FOR NEW TESTING
		LFS
		BY

DATE:	10/27/16
SCALE:	N.T.S.
DWG. BY:	JK
CHK. BY:	LFS
DRAWING NO.:	TX-4903
SHEET	3 OF 7

Z:\Clients\Endura PERMANENT\B - Texas Dept of Ins\TDI - DR-852 JELD-WEN Steel Opaque (L,K,DB)\C - Drawings\TX-4641.44.dwg

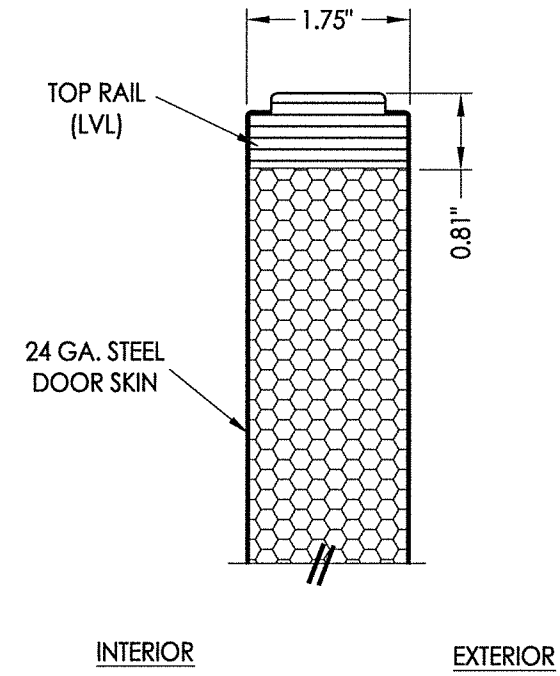


1
3 HORIZONTAL CROSS SECTION

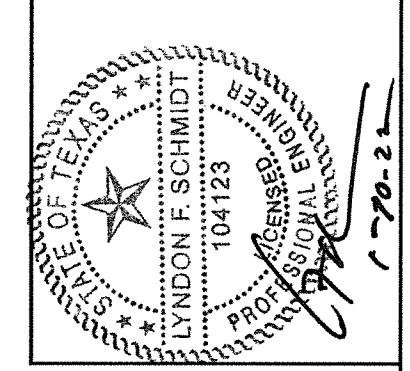


2
3
DOOR PANEL
JELD-WEN
Steel (Wood Edge)

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



2
3 VERTICAL CROSS SECTION

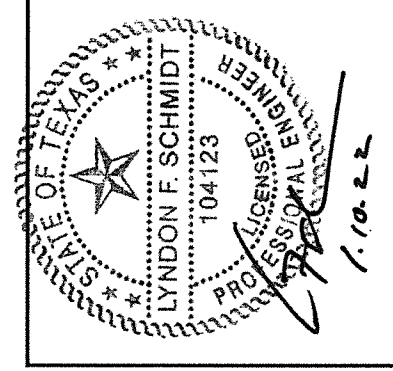


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TEXAS BOARD OF PROFESSIONAL ENGINEERS
CERTIFICATE OF REGISTRATION # F-11852

PRODUCT: ENDURA		PART OR ASSEMBLY: DOOR PANEL DETAILS & GLAZING DETAIL	
		LFS	LFS
		BY	BY
DATE: 10/27/16		REVISIONS	
SCALE: N.T.S.		NO. DATE	
DWG. BY: JK		2 11/10/21 UPDATE TO 2018 IBC/IRC CODE	
CHK. BY: LFS		1 9/10/18 UPDATE FOR NEW TESTING	
DRAWING NO.: TX-4644			
SHEET 4 OF 7			

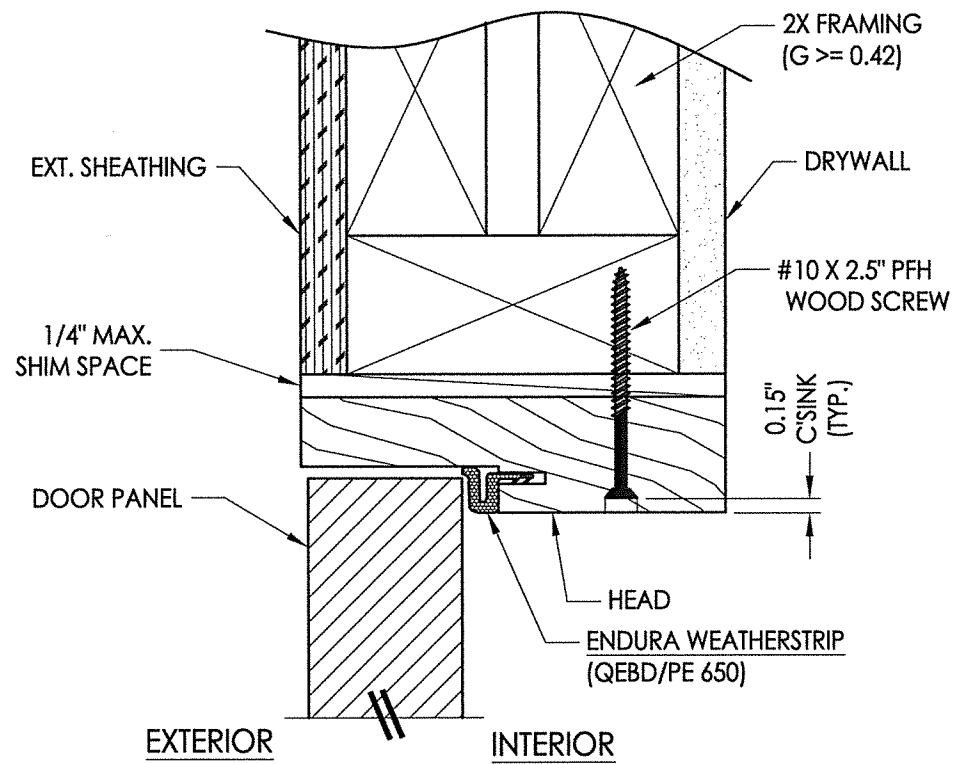
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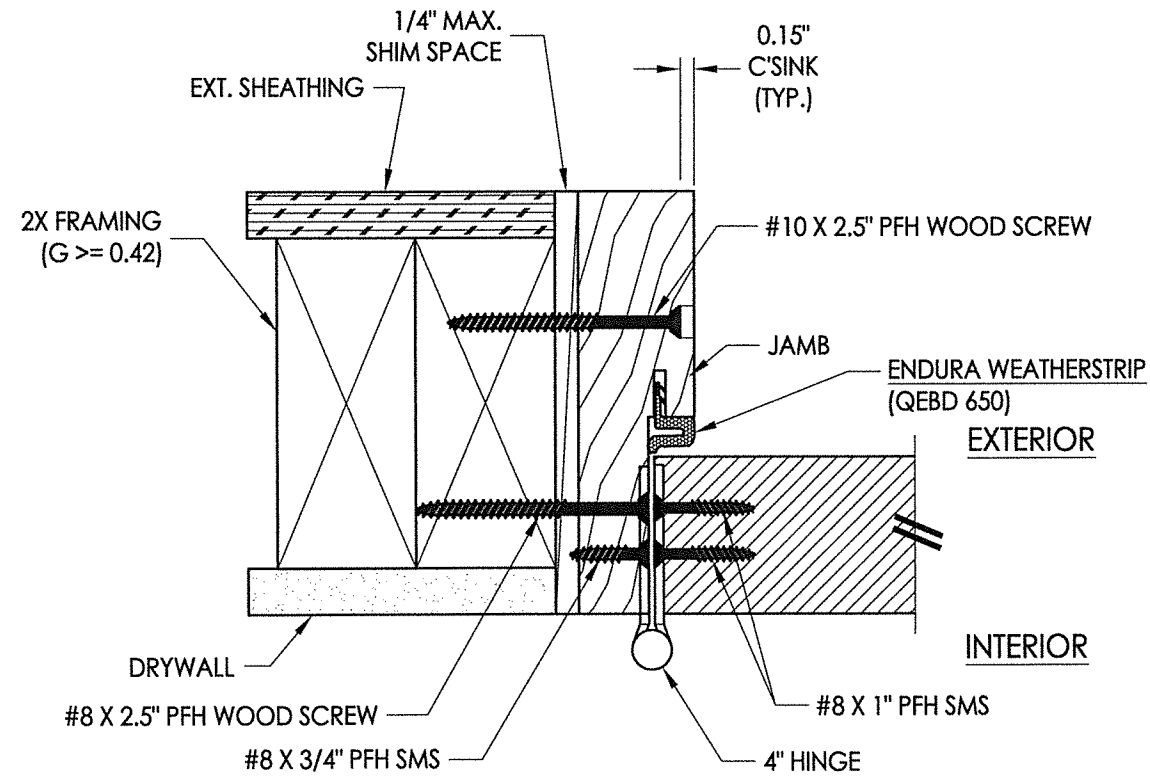
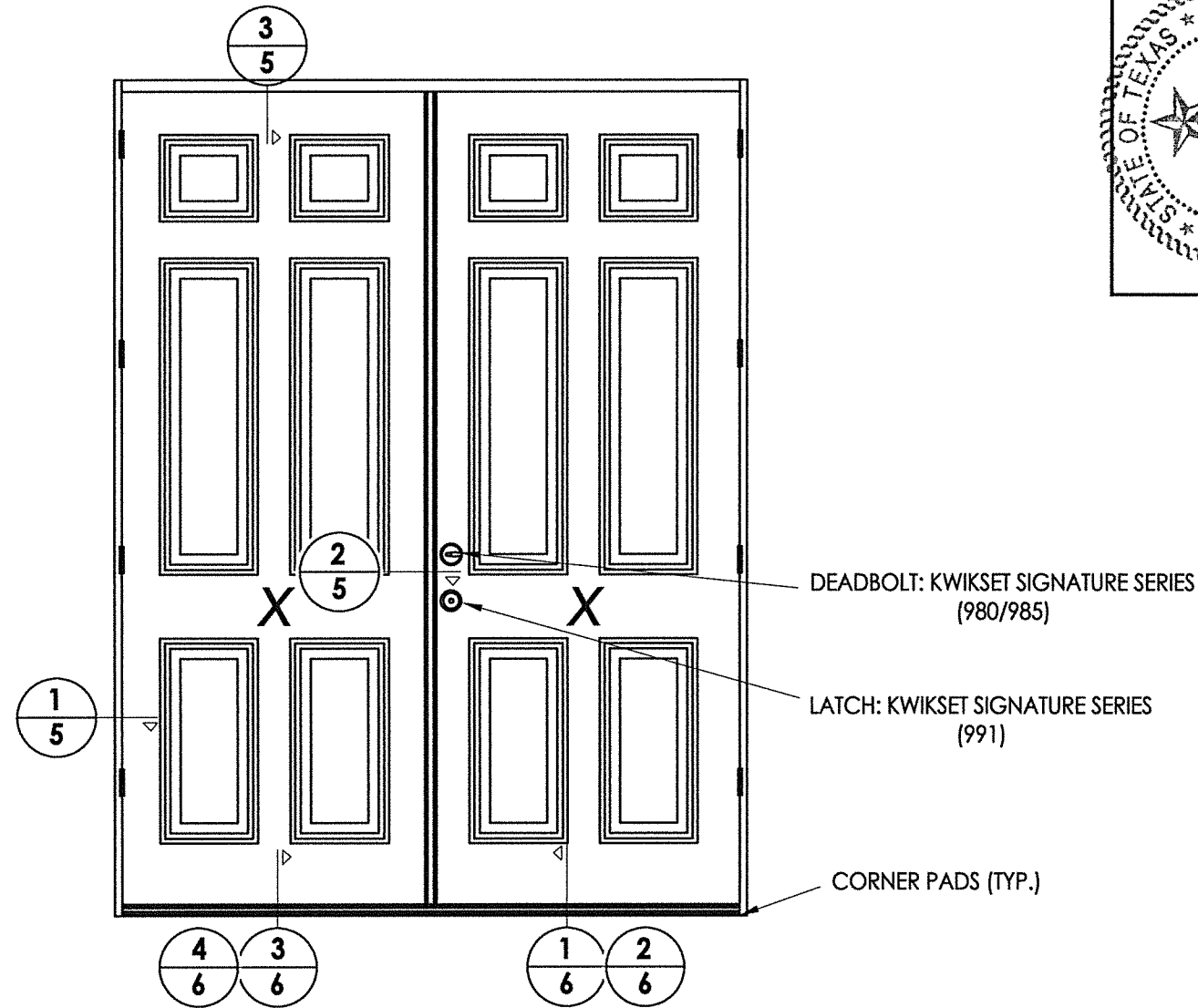
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Phone No.: 813.659.9197

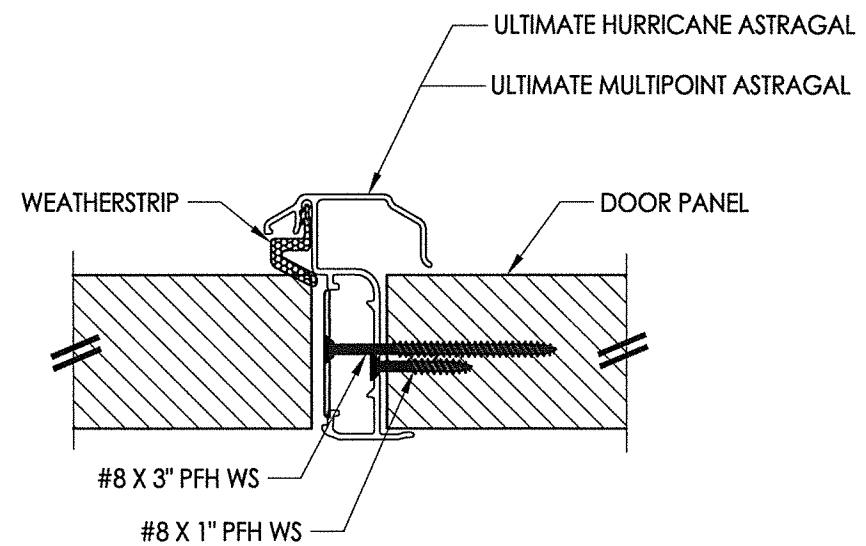
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CERTIFICATE OF REGISTRATION # F-11852



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



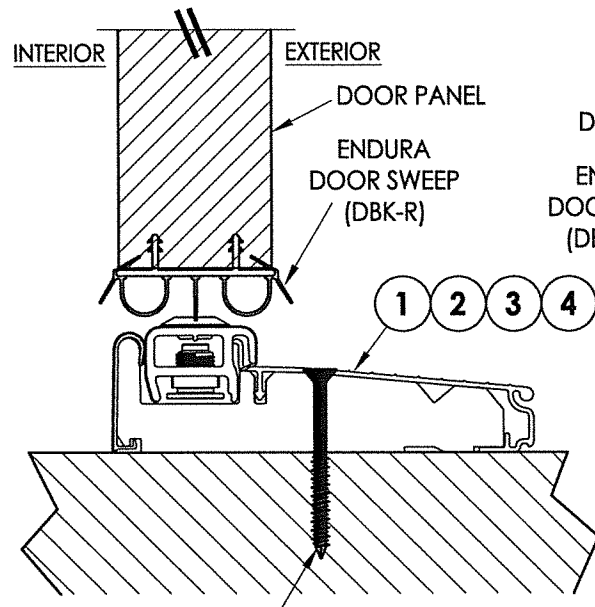
1 **HORIZONTAL CROSS SECTION**
5 Inswing shown - Outswing also approved



2 **HORIZONTAL CROSS SECTION**
5

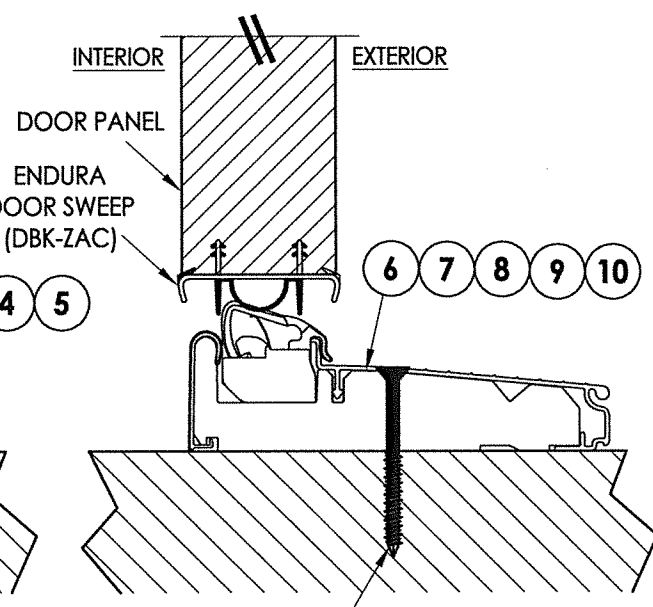
PRODUCT:	ENDURA		
PART OR ASSEMBLY:	HORIZONTAL & VERTICAL CROSS SECTIONS		
DATE	NO.	DATE	BY
11/10/21	2	11/10/21	LFS
9/10/18	1	9/10/18	LFS
REVISIONS			
DATE:	10/27/16		
SCALE:	N.T.S.		
DWG. BY:	JK		
CHK. BY:	LFS		
DRAWING NO.:	TX-4644		
SHEET	5	OF	7

Z:\Clients\Endura PERMANENT\B - Texas Dept of Ins\TDI - DR-852 JELD-WEN Steel Opaque (L,K,DB)\C - Drawings\TX-4641.44.dwg



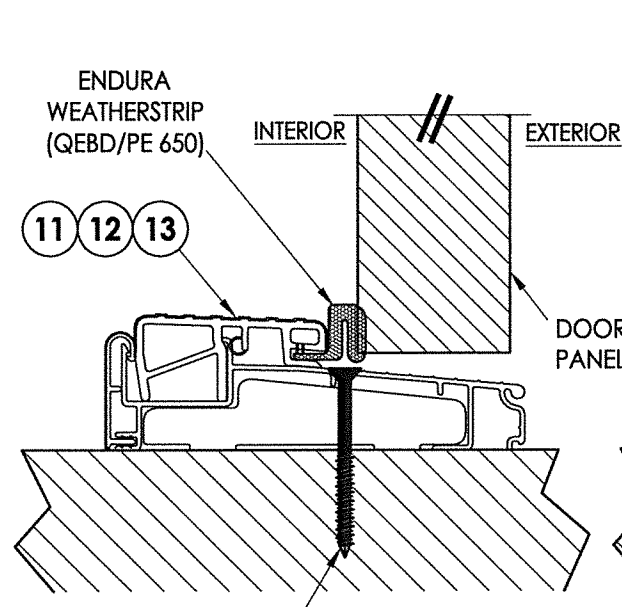
#10 X 2.5" PFH WOOD SCREW OR
1/4" X 2-3/4" DeWALT OR ITW CONCRETE SCREW

1 VERTICAL CROSS SECTION
6 Inswing Adjustable Threshold



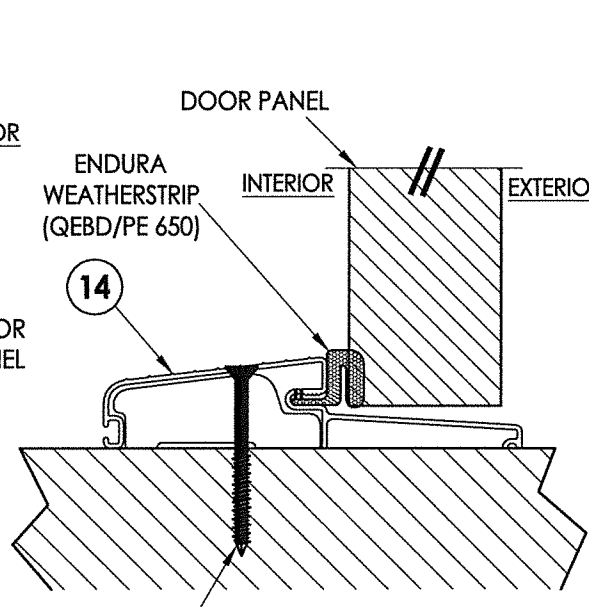
#10 X 2.5" PFH WOOD SCREW OR
1/4" X 2-3/4" DeWALT OR ITW CONCRETE SCREW

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



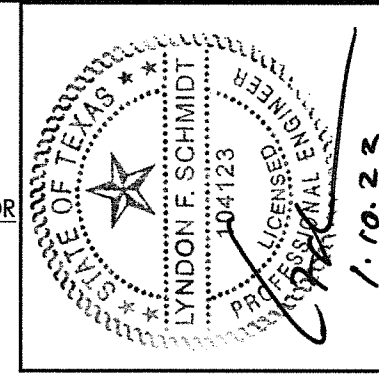
#10 X 2.5" PFH WOOD SCREW OR
1/4" X 2-3/4" DeWALT OR ITW CONCRETE SCREW

3 VERTICAL CROSS SECTION
6 Outswing Bump Threshold



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

4 VERTICAL CROSS SECTION
6 Outswing Bump Threshold

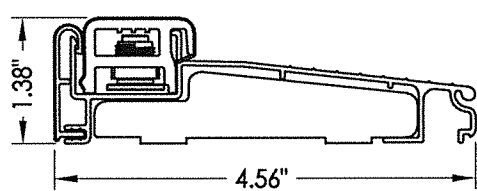


Documents Prepared By: Lyndon F. Schmidt, P.E.
TEXAS P.E. #104123

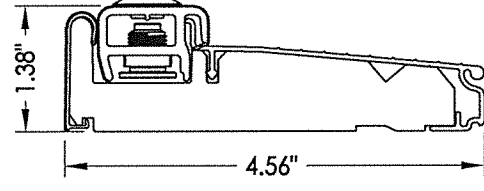
RW BUILDING CONSULTANTS, INC.
P.O. Box 230 Valrico FL 33595
Phone No.: 813.659.9197
TEXAS BOARD OF PROFESSIONAL ENGINEERS
CERTIFICATE OF REGISTRATION # F-11852

PRODUCT: ENDURA

PART OR ASSEMBLY:
VERTICAL CROSS SECTIONS

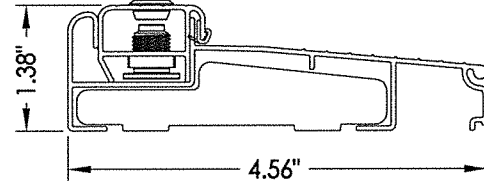


1 INSWING ADJUSTABLE THRESHOLD
ZAI4565

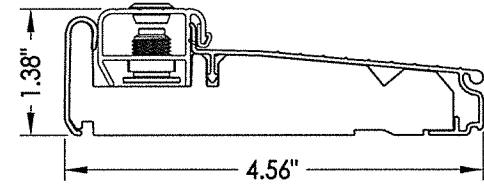


2 INSWING ADJUSTABLE THRESHOLD
ZAI4565FN

MAX. DESIGN PRESSURE = +40/-40 PSF
(ULTIMATE HURRICANE ASTRAGAL)

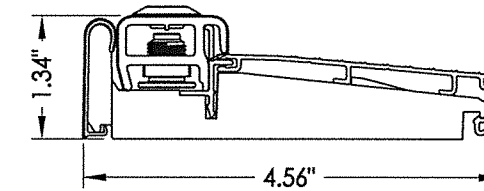


3 INSWING ADJUSTABLE THRESHOLD
ZAI4565



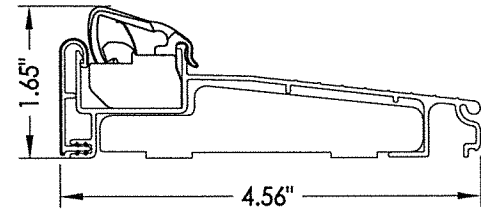
4 INSWING ADJUSTABLE THRESHOLD
ZAI4565FN

MAX. DESIGN PRESSURE = +40/-40 PSF
(ULTIMATE HURRICANE ASTRAGAL)

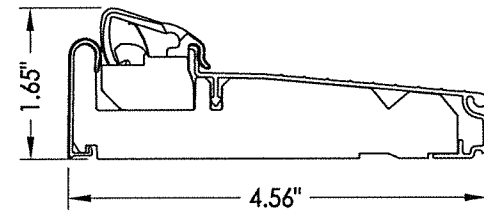


5 INSWING ADJUSTABLE THRESHOLD
ZAI4565RDS

MAX. DESIGN PRESSURE = ±40 PSF

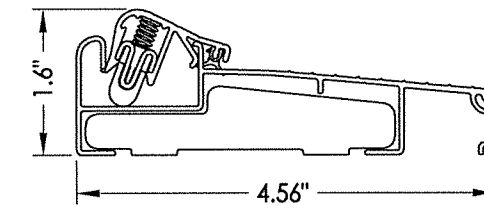


6 INSWING ARTICULATING THRESHOLD
ZACL4565

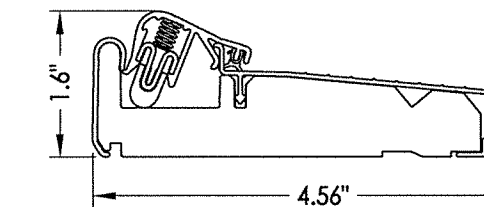


7 INSWING ARTICULATING THRESHOLD
ZAC4565FN

MAX. DESIGN PRESSURE = +40/-40 PSF
(ULTIMATE HURRICANE ASTRAGAL)

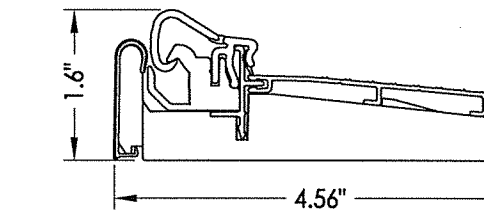


8 INSWING ARTICULATING THRESHOLD
ZAC4565



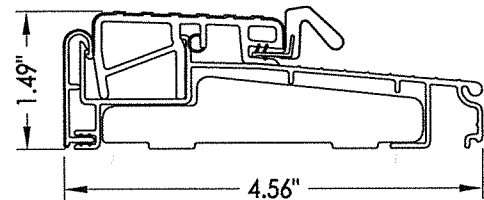
9 INSWING ARTICULATING THRESHOLD
ZAC4565FN

MAX. DESIGN PRESSURE = +40/-40 PSF
(ULTIMATE HURRICANE ASTRAGAL)

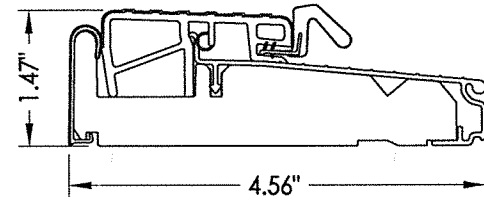


10 INSWING ARTICULATING THRESHOLD
ZAC4565RDS

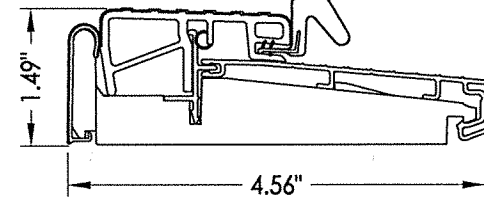
MAX. DESIGN PRESSURE = ±35 PSF



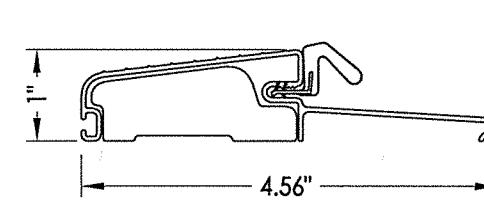
11 OUTSWING THRESHOLD
ZOB4565



12 OUTSWING THRESHOLD
ZOB4565FN



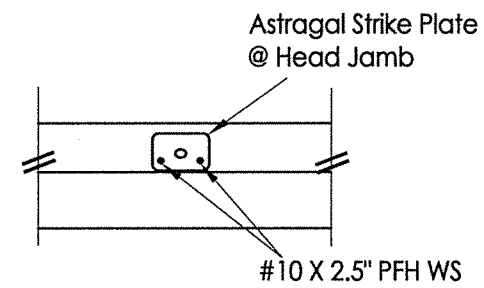
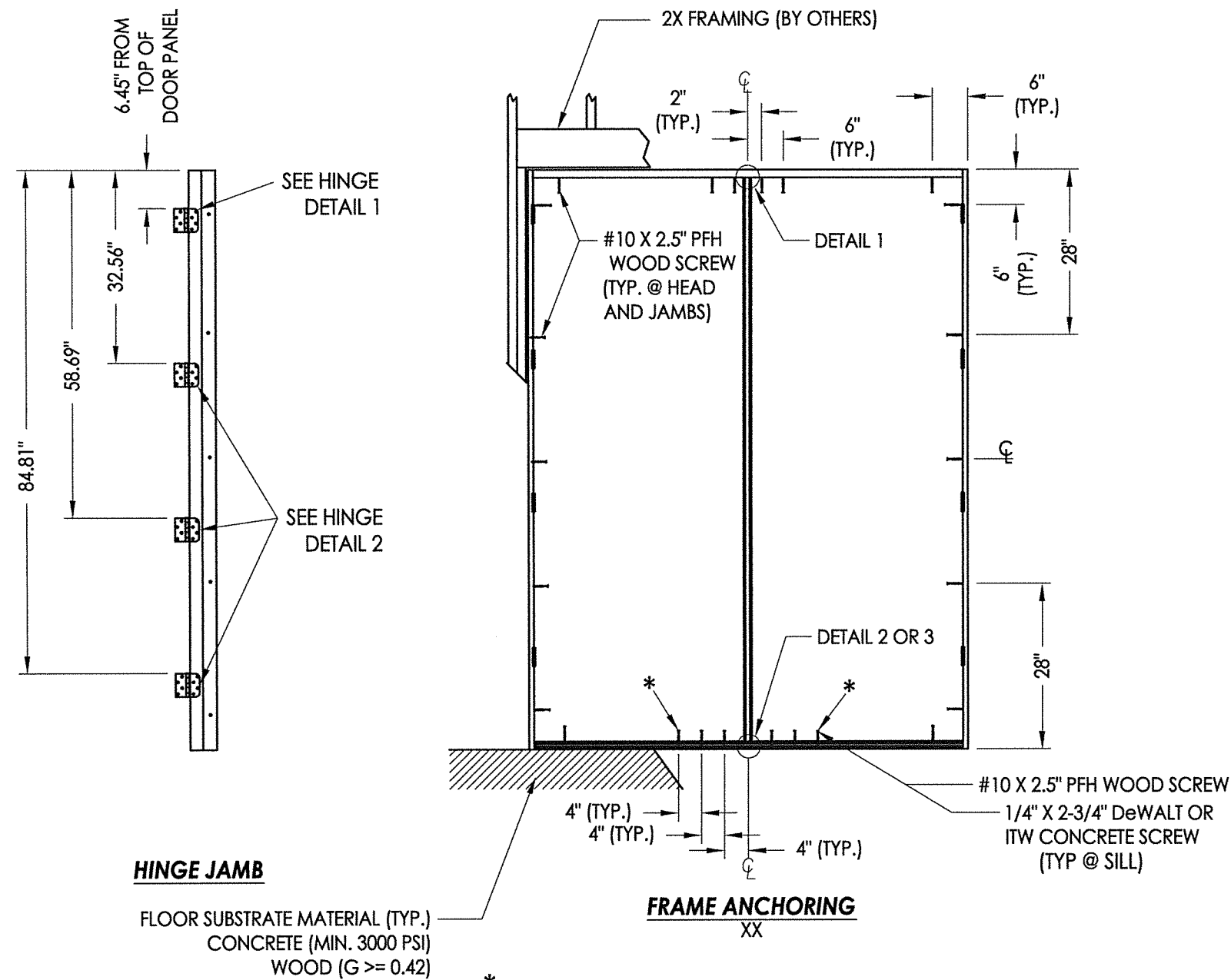
13 OUTSWING THRESHOLD
ZOB4565RDS



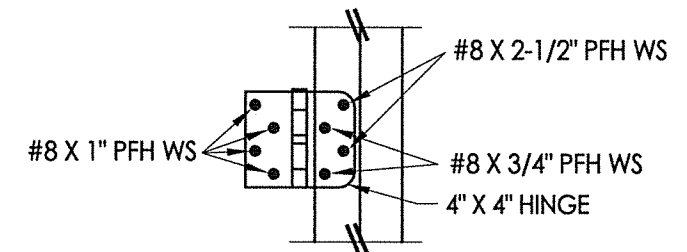
14 OUTSWING THRESHOLD
FOB4566

DATE:	10/27/16
SCALE:	N.T.S.
DWG. BY:	JK
CHK. BY:	LFS
DRAWING NO.:	TX-4644
SHEET	6 OF 7

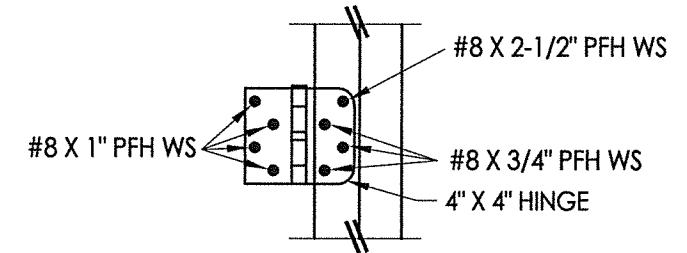
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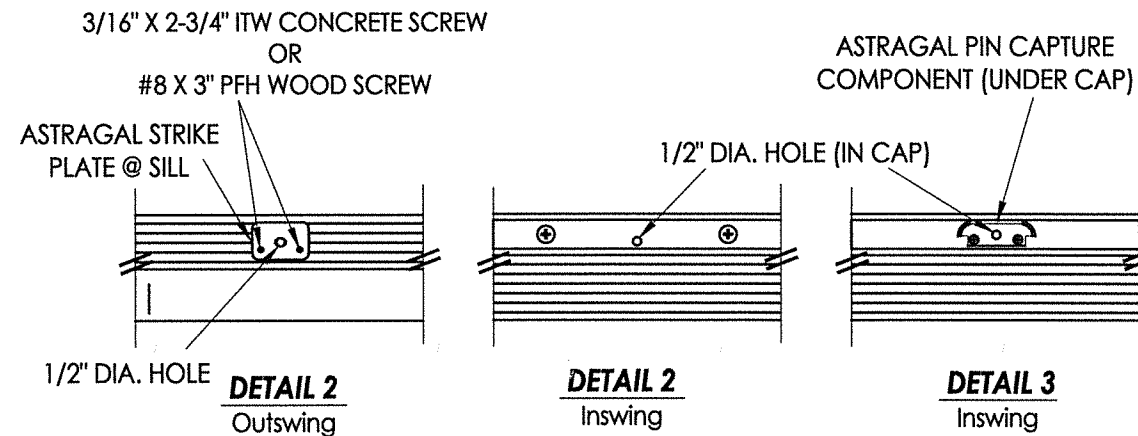
DETAIL 1



HINGE DETAIL 1



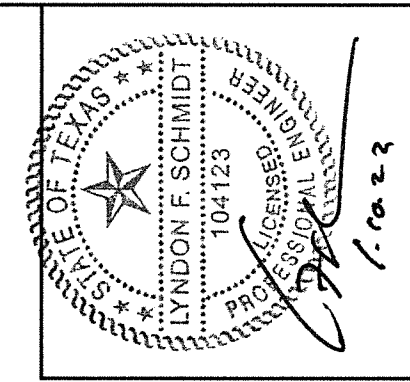
HINGE DETAIL 2



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"
	1/4"	1-3/4"	1-1/2"	4"
DeWALT ULTRACON®	1/4"	1-3/4"	1"	4"



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

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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:	FRAME ANCHORING	
DATE	NO.	BY
11/10/21	2	LFS
9/10/18	1	LFS
REVISIONS		
DATE:	10/27/16	
SCALE:	N.T.S.	
DWG. BY:	JK	
CHK. BY:	LFS	
DRAWING NO.:	TX-4644	
SHEET	7	OF 7