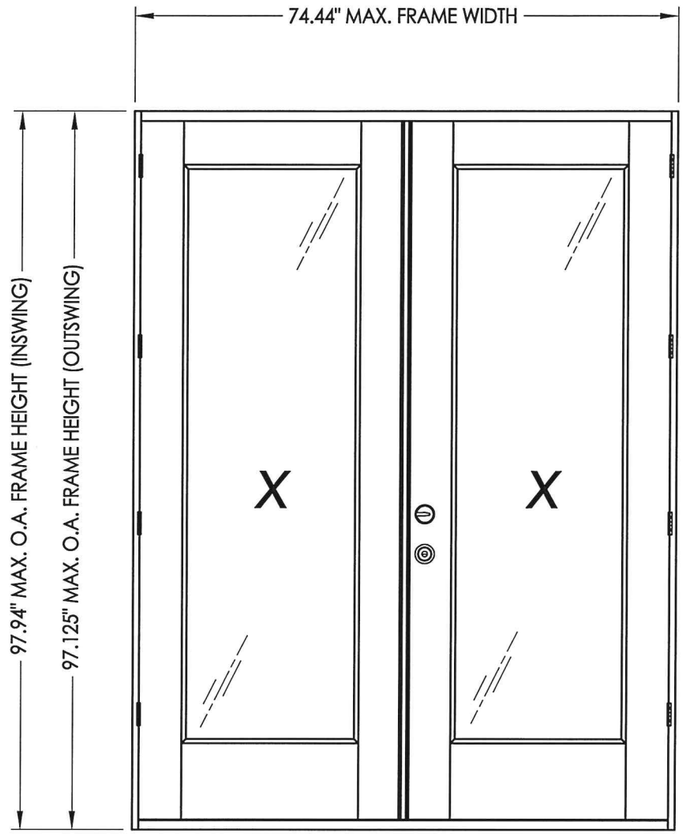
Endura PRODUCTS, INC.

8811 West Market Street
Colfax, NC 27235

Glazed Fiberglass Door

"NON-IMPACT"
INSWING / OUTSWING



EVALUATED FOR USE IN THE STATE OF TEXAS

The Glazed Fiberglass Door system described herein complies with the 2006 International Residential Code (IRC), Sections R301 & R613 and the 2006 International Building Code (IBC), Sections 1405.12, 1609, 1714.5, 2403 and 2404 (including Texas revisions) 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 Flip Lever)
3	Astragal details (Ultimate Multi-point)
4	Astragal details (Ultimate Hurricane)
5	Door panel details (flush glazing)
6	Horizontal cross sections
7	Vertical cross sections
8	Frame anchoring

CONFIG.	*MODEL*	*DESIGN PRESSURE (PSF) ULTIMATE HURRICANE ASTRAGAL*		*DESIGN PRESSURE (PSF) ULTIMATE MULTI-POINT ASTRAGAL*		*DESIGN PRESSURE (PSF) ULTIMATE FLIP LEVER ASTRAGAL*	
		POSITIVE	*NEGATIVE*	*POSITIVE*	*NEGATIVE*	*POSITIVE*	*NEGATIVE*
XX	*INSWING*	*+40.0*	*-40.0*	*+45.0*	*-50.0*	*+35.0*	*-40.0*
	OUTSWING	*+40.0*	*-40.0*	*+45.0*	*-45.0*	*+35.0*	*-35.0*

STATE OF TEXAS — LYNDON F. SCHMIDT — 104123 — LICENSED PROFESSIONAL ENGINEER — 5-11-15

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

R.W. 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*

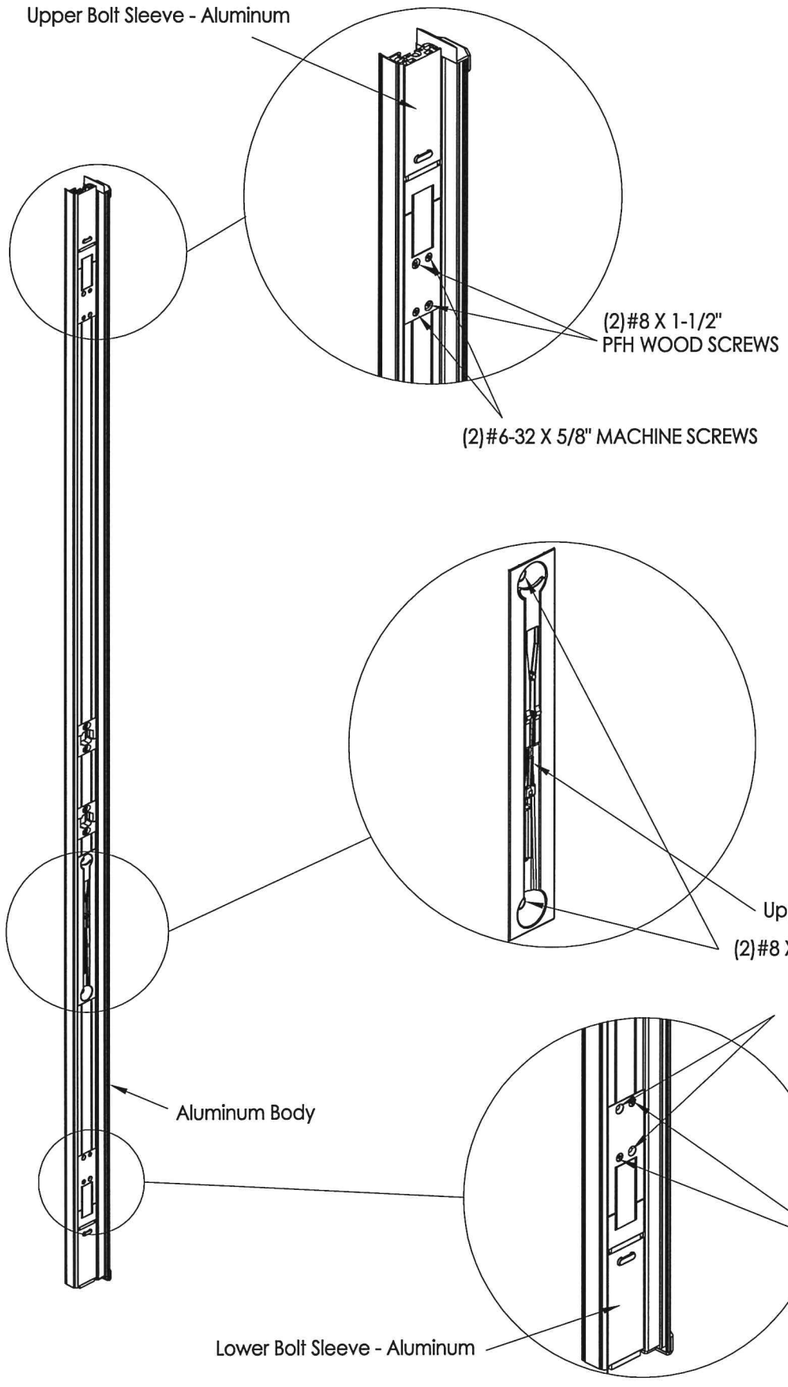
PART OR ASSEMBLY:
TYPICAL ELEVATION, DESIGN PRESSURES & GENERAL NOTES

NO.	DATE	BY	REVISIONS
2	5/5/15	LFS	ADD NEW ASTRAGAL PIN CAPTURE
1	1/07/14	LFS	ADDED ARTICULATING SILL

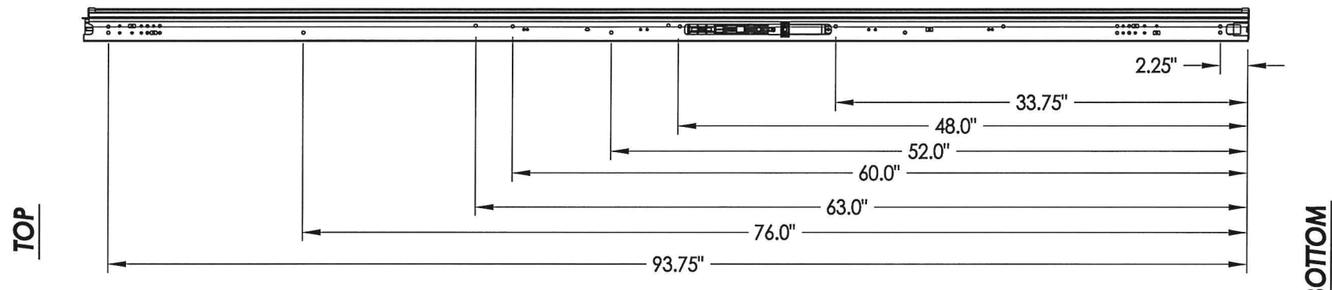
DATE: 8/07/12
SCALE: N.T.S.
DWG. BY: JK
CHK. BY: LFS
DRAWING NO.: TX-4205
SHEET 1 OF 8

© 2012 R.W. BUILDING CONSULTANTS INC.

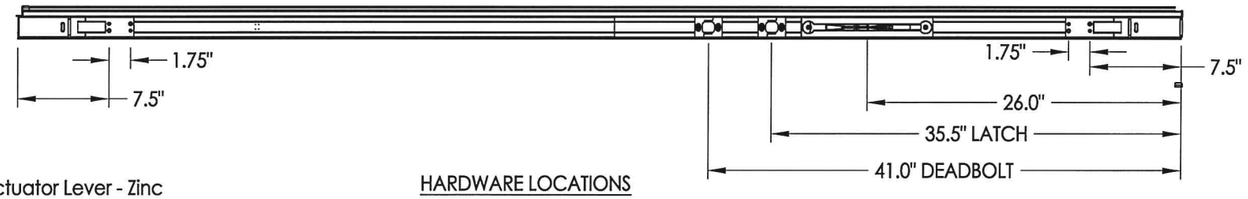
R:\Clients\Endura PERMANENT\Texas Dept of Ins\TDI - 610\Drawings\Current\TX-4204-07.dwg, TX-4205



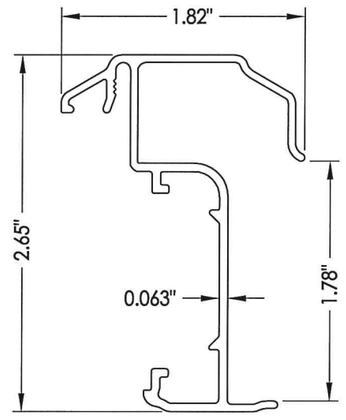
ULTIMATE FLIP LEVER ASTRAGAL



ANCHOR SCREW LOCATIONS



HARDWARE LOCATIONS



Astragal Section

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

R|W 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

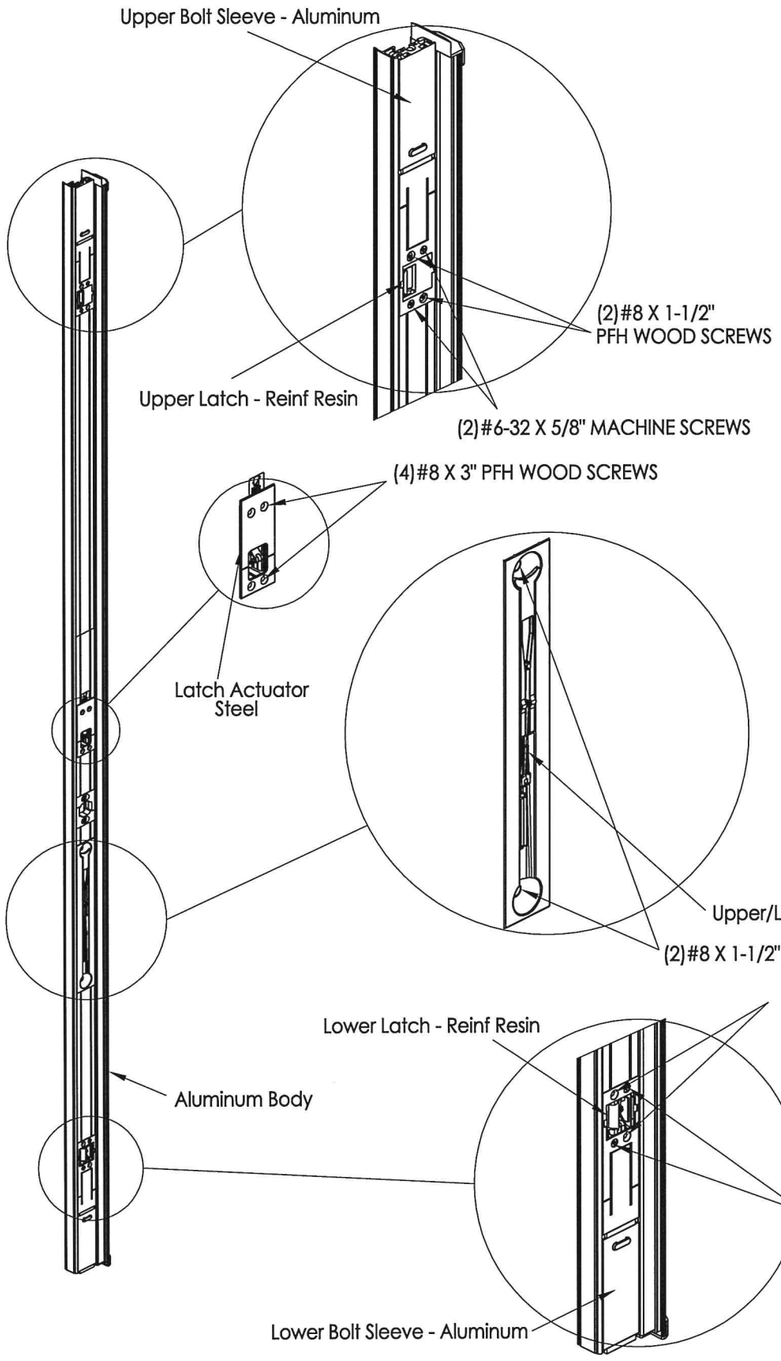
PART OR ASSEMBLY: ASTRAGAL DETAILS (ULTIMATE FLIP LEVER)

NO.	DATE	REVISIONS	BY
2	5/5/15	ADD NEW ASTRAGAL PIN CAPTURE	LFS
1	1/07/14	ADDED ARTICULATING SILL	LFS

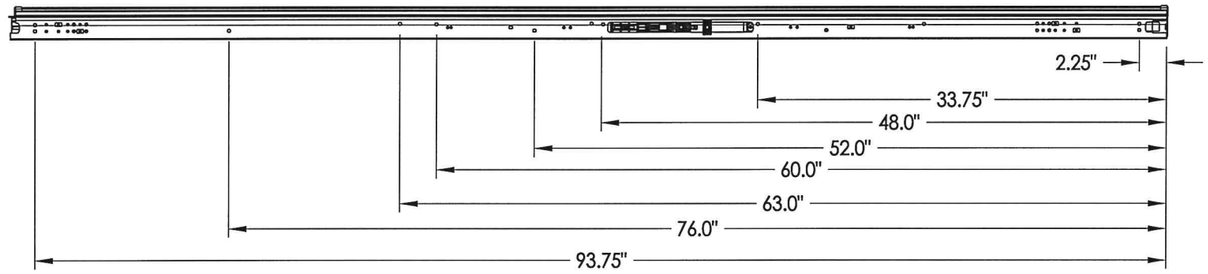
DATE: 8/07/12
SCALE: N.T.S.
DWG. BY: JK
CHK. BY: LFS
DRAWING NO.: TX-4205
SHEET 2 OF 8

© 2012 R.W. BUILDING CONSULTANTS INC.

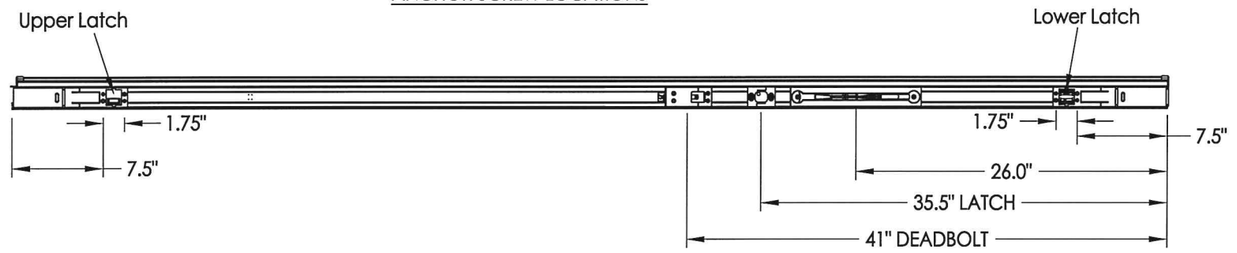
R:\Clients\Endura PERMANENT\Texas Dept of Ins\TDI - 610\Drawings\Current\TX-4204-07.dwg, 2.2



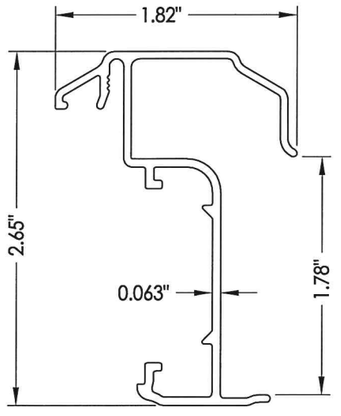
ULTIMATE MULTI-POINT ASTRAGAL



ANCHOR SCREW LOCATIONS



HARDWARE LOCATIONS



Astragal Section

STATE OF TEXAS
LYNDON F. SCHMIDT
104123
LICENSED PROFESSIONAL ENGINEER

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

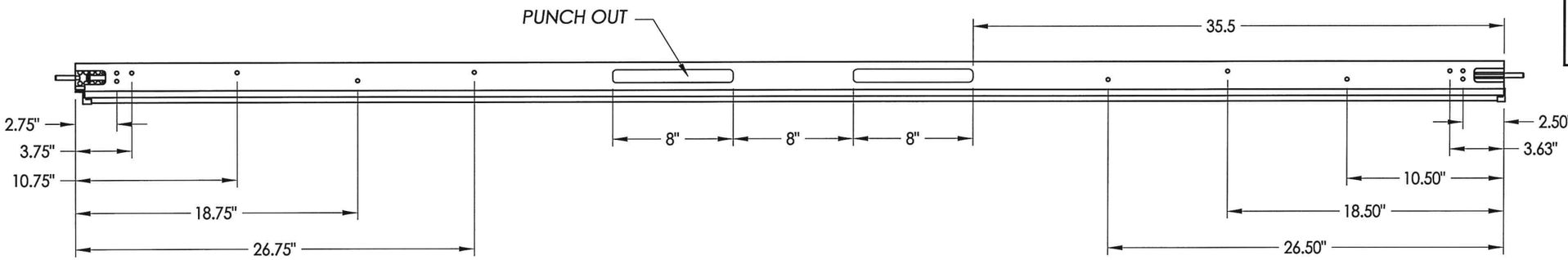
PART OR ASSEMBLY: ASTRAGAL DETAILS (ULTIMATE MULTI-POINT)

NO.	DATE	REVISIONS	BY
2	5/5/15	ADD NEW ASTRAGAL PIN CAPTURE	LFS
1	1/07/14	ADDED ARTICULATING SILL	LFS

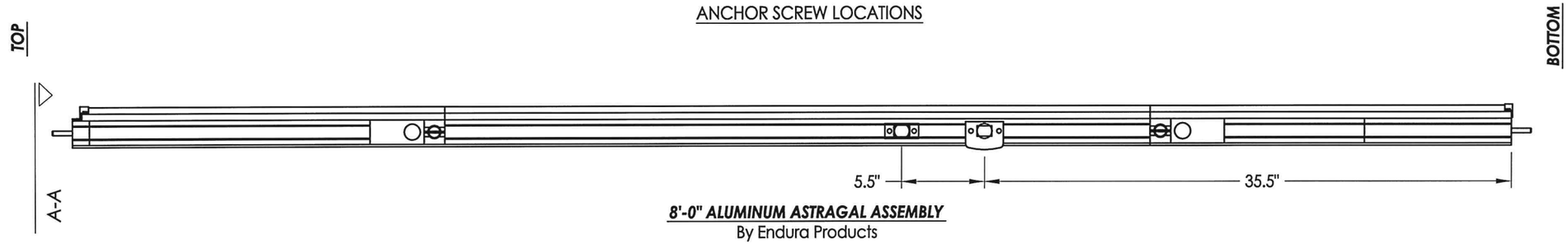
DATE: 8/07/12
SCALE: N.T.S.
DWG. BY: JK
CHK. BY: LFS
DRAWING NO.: TX-4205
SHEET 3 OF 8

© 2012 R.W. BUILDING CONSULTANTS INC.

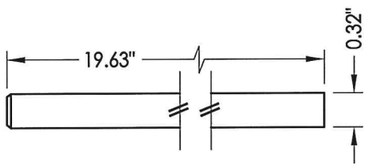
R:\Clients\Endura PERMANENT\Texas Dept of Ins\TDI - 610\Drawings\Current\TX-4204-07.dwg, 3.2



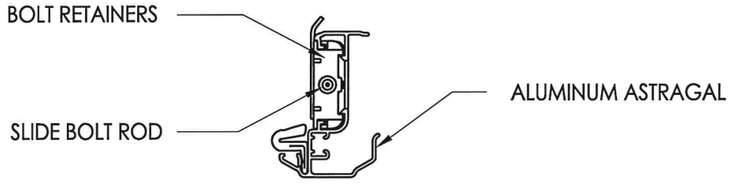
ANCHOR SCREW LOCATIONS



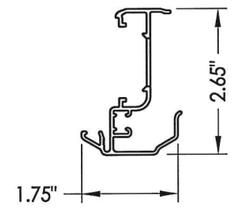
8'-0" ALUMINUM ASTRAGAL ASSEMBLY
By Endura Products



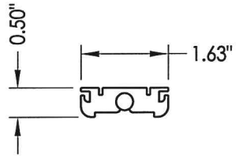
SLIDE BOLT ROD
MATL: Steel



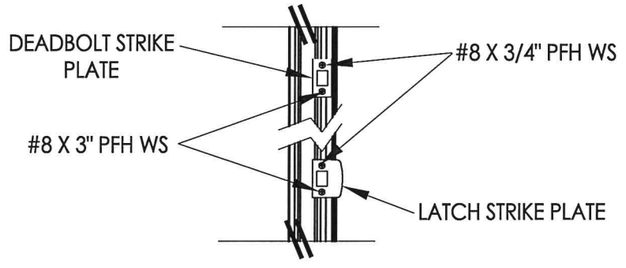
VIEW A-A
Aluminum Astragal Assembly



ULTIMATE HURRICANE ASTRAGAL



BOLT RETAINER
MATL: 9-3/4" Aluminum



LATCH AND DEADBOLT DETAIL

STATE OF TEXAS
LYNDON F. SCHMIDT
104123
LICENSED PROFESSIONAL ENGINEER
5-11-15

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

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

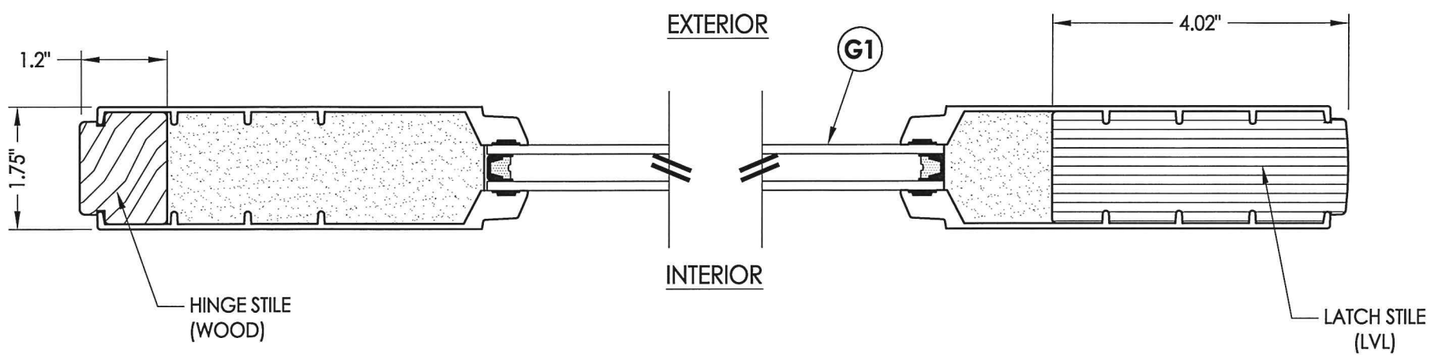
PART OR ASSEMBLY: ASTRAGAL DETAILS (ULTIMATE HURRICANE)

NO.	DATE	REVISIONS	BY
2	5/5/15	ADD NEW ASTRAGAL PIN CAPTURE	LFS
1	1/07/14	ADDED ARTICULATING SILL	LFS

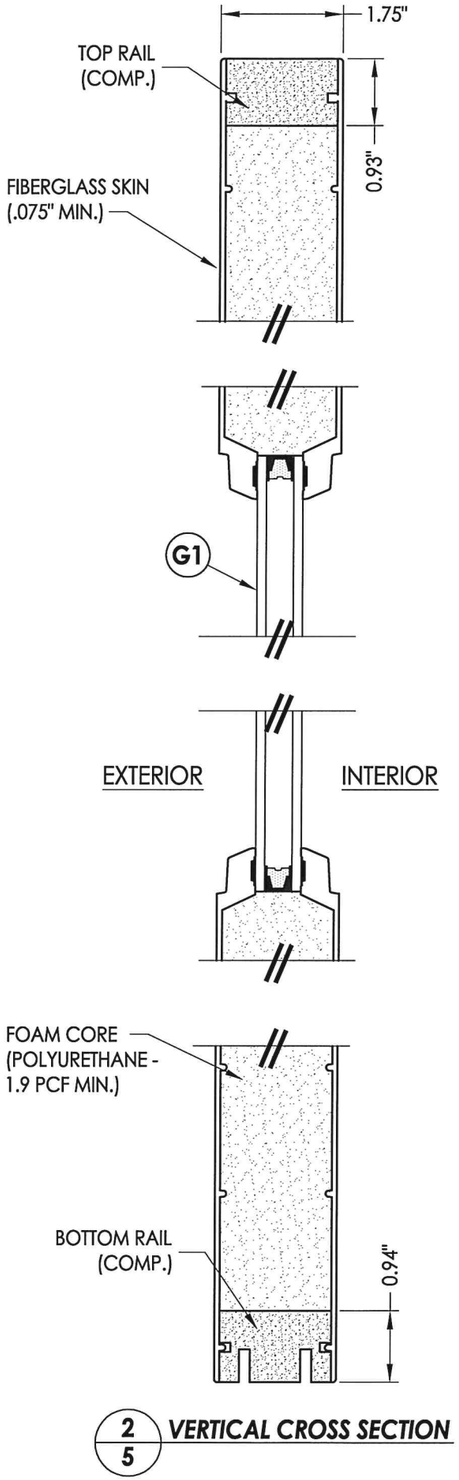
DATE: 8/07/12
SCALE: N.T.S.
DWG. BY: JK
CHK. BY: LFS
DRAWING NO.: TX-4205
SHEET 4 OF 8

© 2008 R.W. BUILDING CONSULTANTS INC.

R:\Clients\Endura PERMANENT\Texas Dept of Ins\TDI - 610\Drawings\Current\TX-4204-07.dwg, 4.2

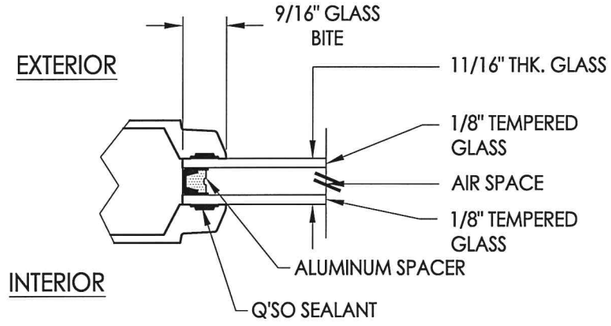


1/5 **HORIZONTAL CROSS SECTION**



2/5 **VERTICAL CROSS SECTION**

THERMA TRU - Flush Glazed
Door Panel
(fiberglass)



G1 **GLAZING DETAIL**

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

R|W 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

STATE OF TEXAS · LYNDON F. SCHMIDT · 104123 · LICENSED PROFESSIONAL ENGINEER

PRODUCT: ENDURA

PART OR ASSEMBLY: DOOR PANEL DETAILS (FIBER CLASSIC-FLUSH GLAZING)

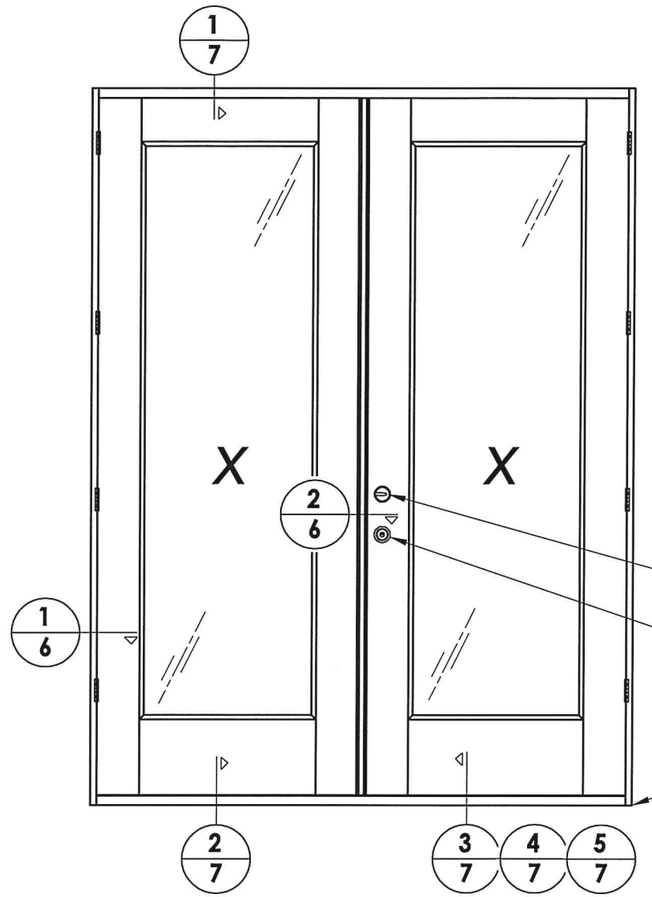
NO.	DATE	BY
2	5/5/15	LFS
1	1/07/14	LFS

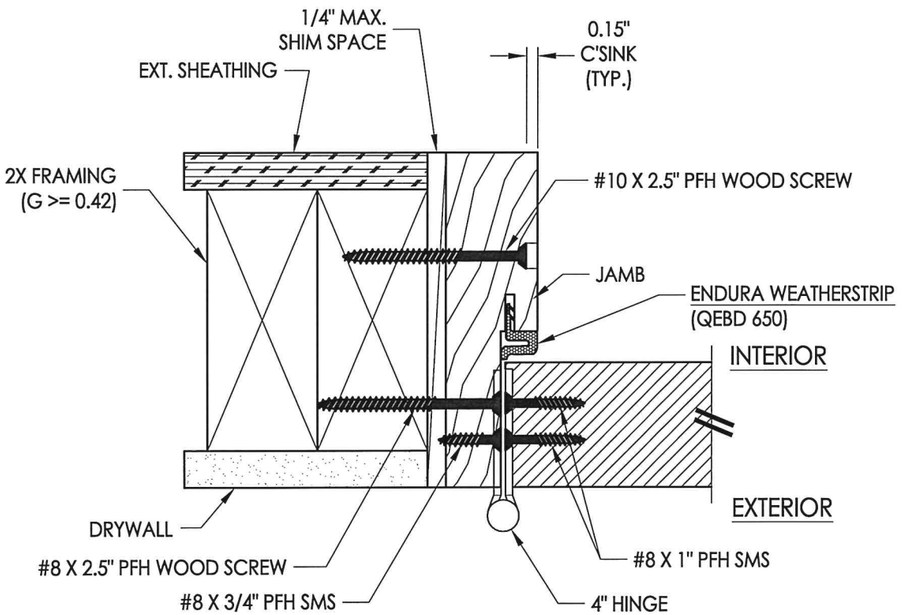
REVISIONS: ADDED ARTICULATING SILL; ADD NEW ASTRAGAL PIN CAPTURE

DATE: 8/07/12
SCALE: N.T.S.
DWG. BY: JK
CHK. BY: LFS
DRAWING NO.: TX-4205
SHEET 5 OF 8

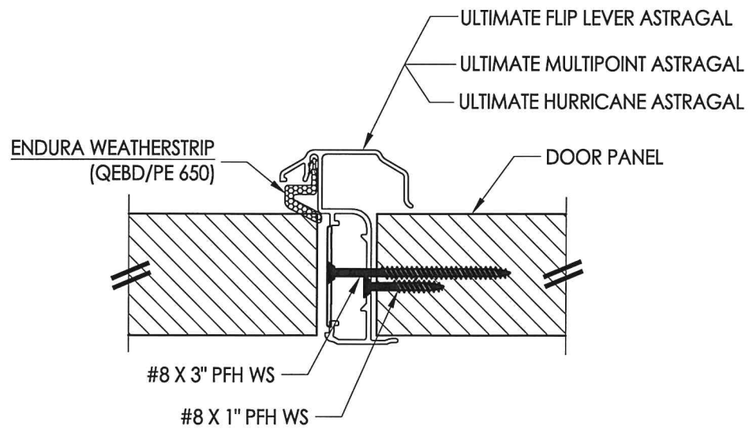
© 2012 R.W. BUILDING CONSULTANTS INC.

R:\Clients\Endura PERMANENT\Texas Dept of Ins\TDI - 610\Drawings\Current\TX-4204-07.dwg, 5.2





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



2/6 **HORIZONTAL CROSS SECTION**

STATE OF TEXAS
LYNDON F. SCHMIDT
104123
LICENSED PROFESSIONAL ENGINEER

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*

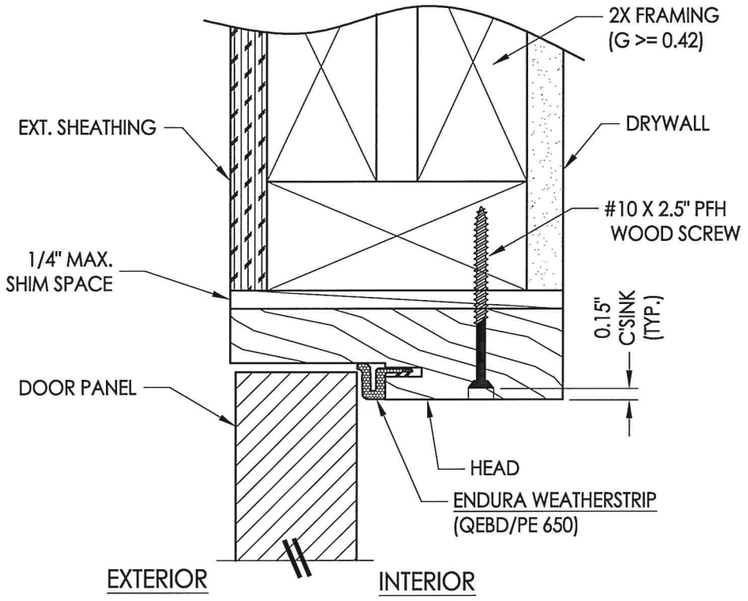
PART OR ASSEMBLY:
HORIZONTAL CROSS SECTIONS

NO.	DATE	REVISIONS	BY
2	5/5/15	ADD NEW ASTRAGAL PIN CAPTURE	LFS
1	1/07/14	ADDED ARTICULATING SILL	LFS

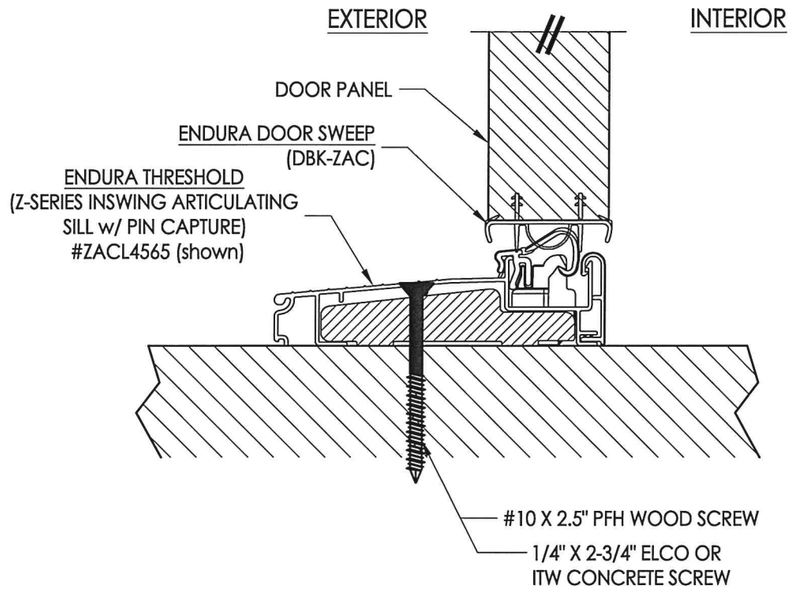
DATE: 1/07/12
SCALE: N.T.S.
DWG. BY: JK
CHK. BY: LFS
DRAWING NO.: TX-4205
SHEET 6 OF 8

© 2012 R.W. BUILDING CONSULTANTS INC.

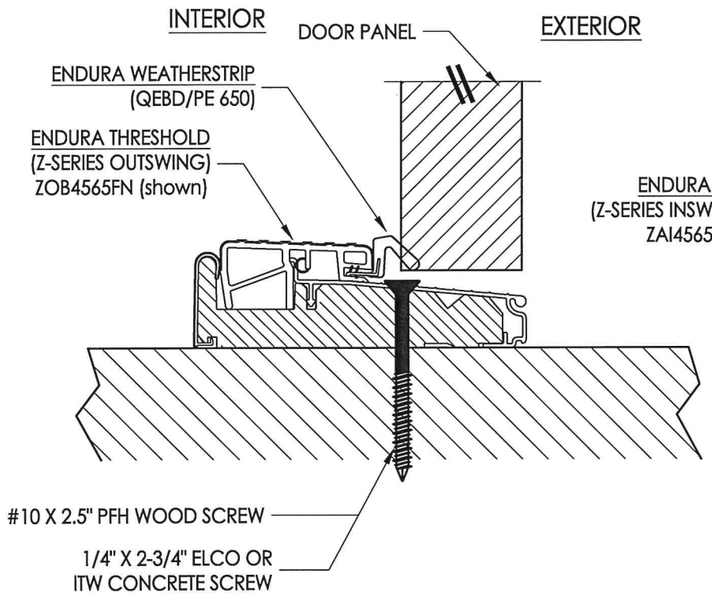
R:\Clients\Endura PERMANENT\Texas Dept of Ins\TDI - 610\Drawings\Current\TX-4204-07.dwg, 6.2



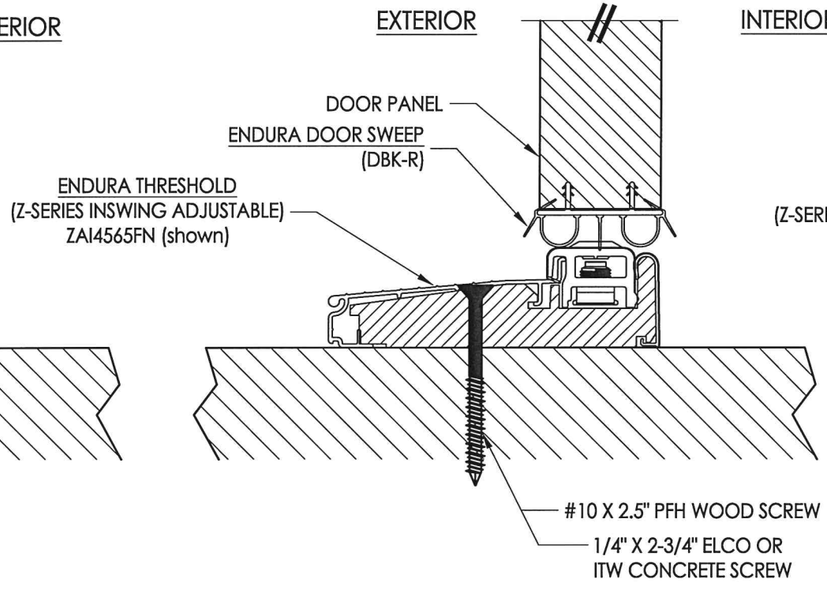
1/7 **VERTICAL CROSS SECTION**
Outswing shown - inswing also approved



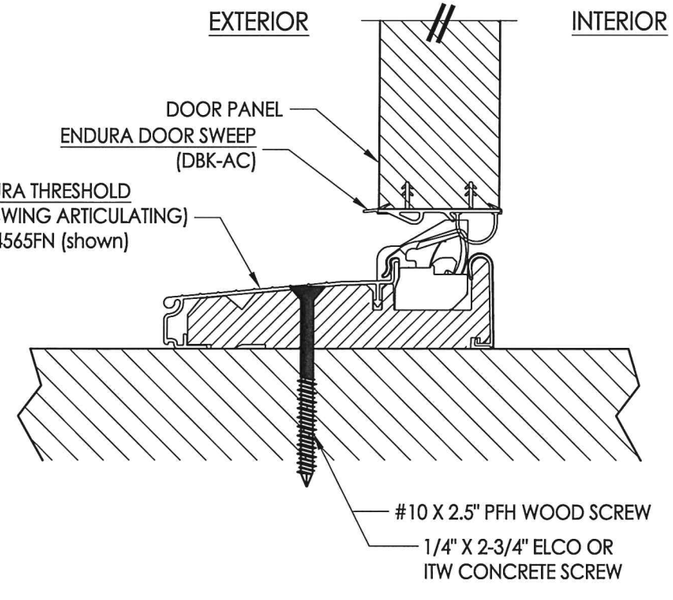
5/7 **VERTICAL CROSS SECTION**
Inswing configuration



2/7 **VERTICAL CROSS SECTION**
Outswing shown



3/7 **VERTICAL CROSS SECTION**
Inswing configuration



4/7 **VERTICAL CROSS SECTION**
Inswing configuration

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

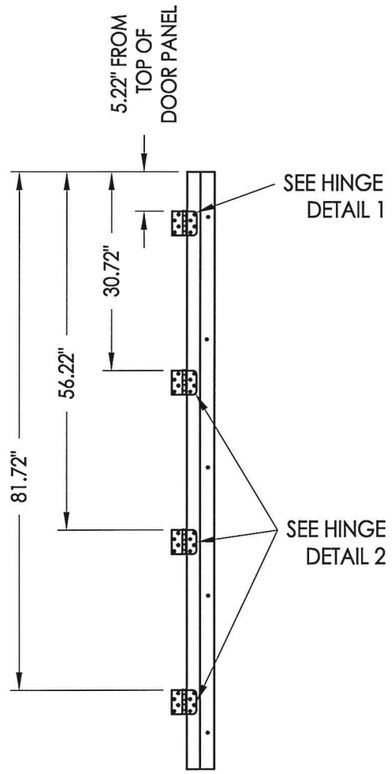
PART OR ASSEMBLY: VERTICAL CROSS SECTIONS

NO.	DATE	REVISIONS	BY
2	5/5/15	ADD NEW ASTRAGAL PIN CAPTURE	LFS
1	1/07/14	ADDED ARTICULATING SILL	LFS

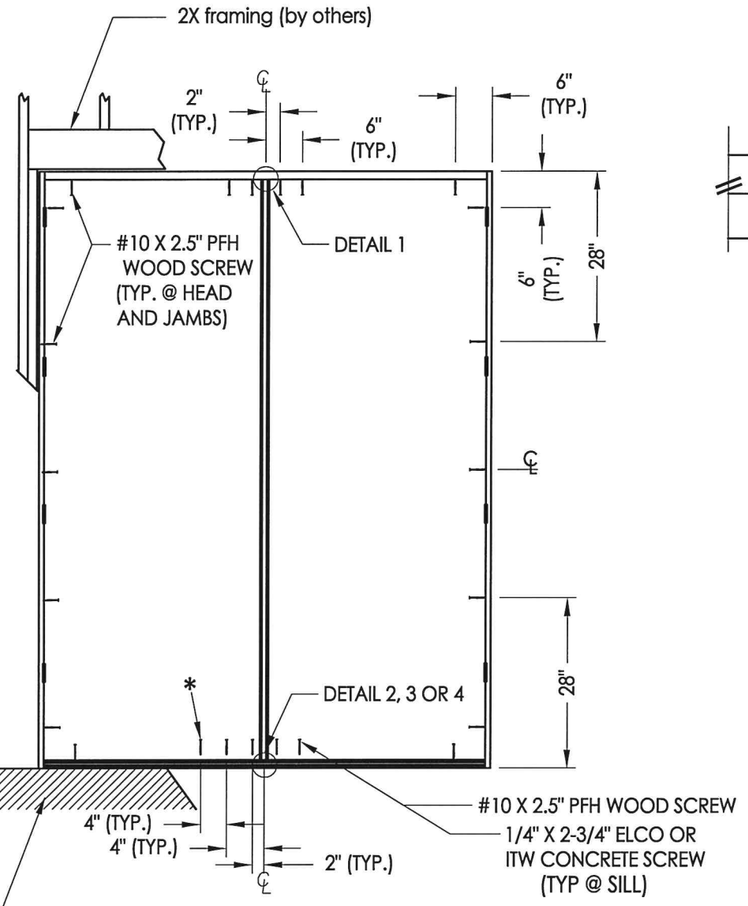
DATE: 8/07/12
SCALE: N.T.S.
DWG. BY: JK
CHK. BY: LFS
DRAWING NO.: TX-4205
SHEET 7 OF 8

© 2012 R.W. BUILDING CONSULTANTS INC.

R:\Clients\Endura PERMANENT\Texas Dept of Ins\TDI - 610\Drawings\Current\TX-4204-07.dwg, 7.2



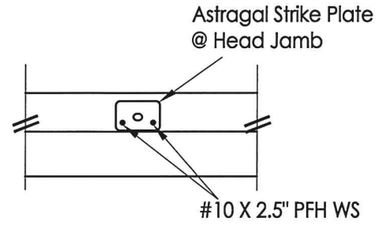
HINGE JAMB



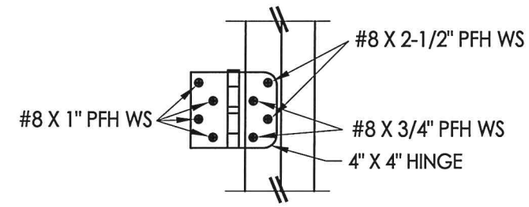
FLOOR SUBSTRATE MATERIAL (TYP.)
CONCRETE (MIN. 3000 PSI)
WOOD (G >= 0.42)

FRAME ANCHORING
XX

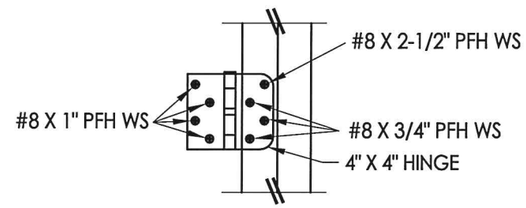
*NOTE: This anchor required for D.P. > 40 PSF.



DETAIL 1



HINGE DETAIL 1

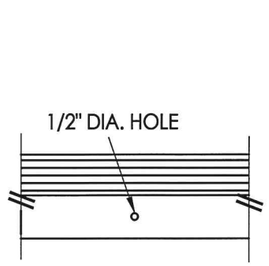


HINGE DETAIL 2

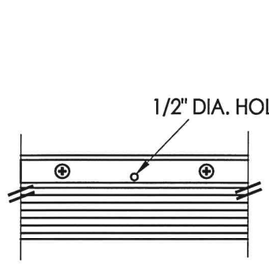
CONCRETE ANCHOR NOTES:

1. *Concrete anchor locations at the corners may be adjusted to maintain the min. edge distance to mortar joints.*
2. *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.*
3. *Concrete anchor table:*

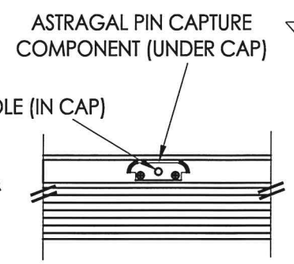
ANCHOR TYPE	ANCHOR SIZE	MIN. EMBEDMENT	MIN. CLEARANCE TO MASONRY EDGE	MIN. CLEARANCE TO ADJACENT ANCHOR
ITW TAPCON®	1/4"	1-3/4"	2-1/2"	3"
ELCO ULTRACON®	1/4"	1-3/4"	1"	3"



DETAIL 2
Outswing

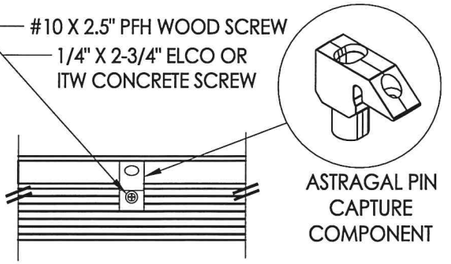


DETAIL 2
Inswing



DETAIL 3
Inswing

NOTE: Max. D.P. = +/- 45 PSF for DETAIL 3



DETAIL 4
Inswing

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

STATE OF TEXAS — LYNDON F. SCHMIDT — 104123 — LICENSED PROFESSIONAL ENGINEER

PRODUCT: ENDURA
PART OR ASSEMBLY: FRAME ANCHORING

NO.	DATE	BY	REVISIONS
2	5/5/15	LFS	ADD NEW ASTRAGAL PIN CAPTURE
1	1/07/14	LFS	ADDED ARTICULATING SILL

DATE: 8/07/12
SCALE: N.T.S.
DWG. BY: JK
CHK. BY: LFS
DRAWING NO.: TX-4205
SHEET 8 OF 8

© 2012 R.W. BUILDING CONSULTANTS INC.

R:\Clients\Endura PERMANENT\Texas Dept of Ins\TDI - 610\Drawings\Current\TX-4204-07.dwg, 8.2