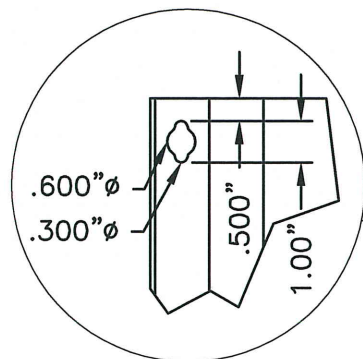
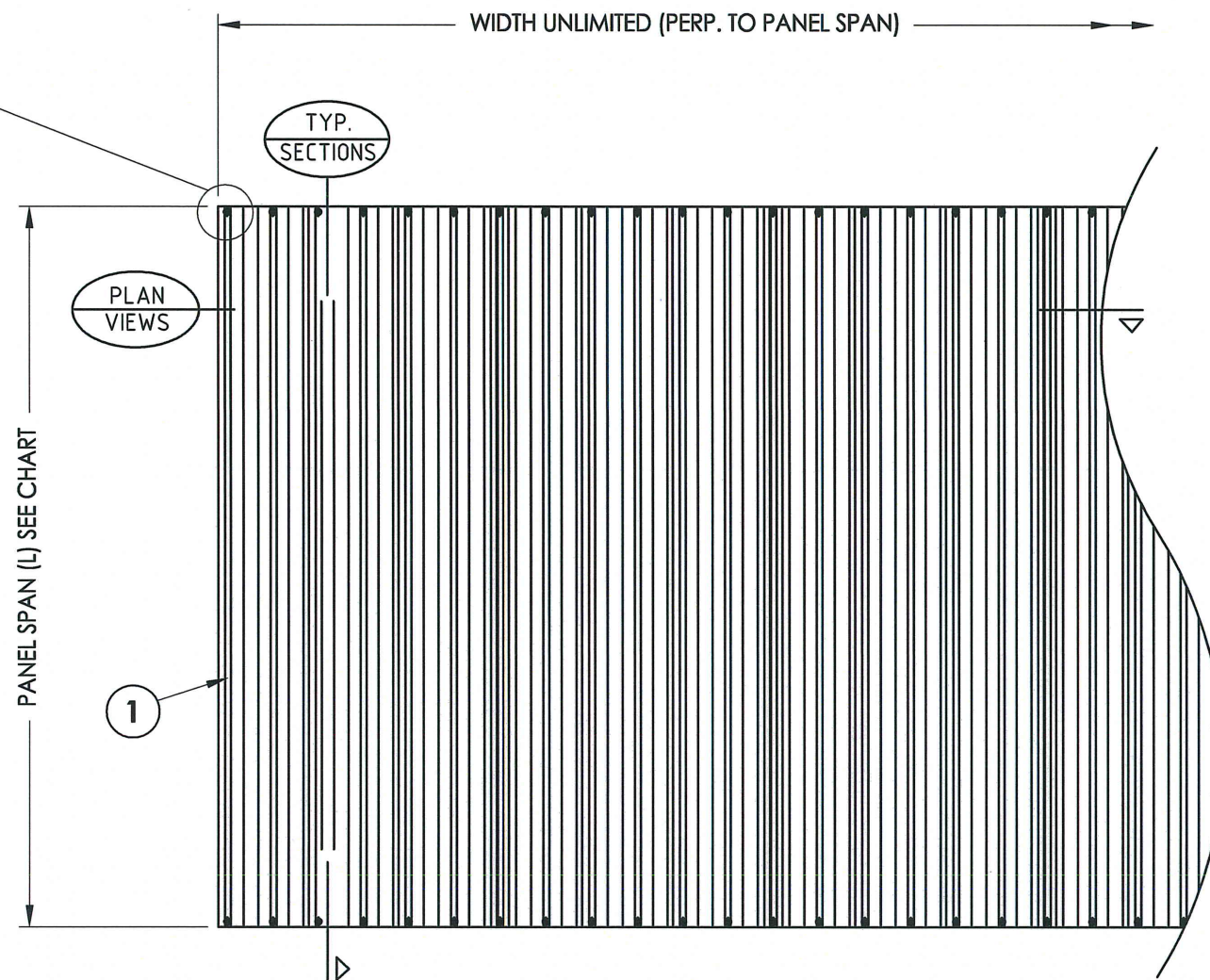


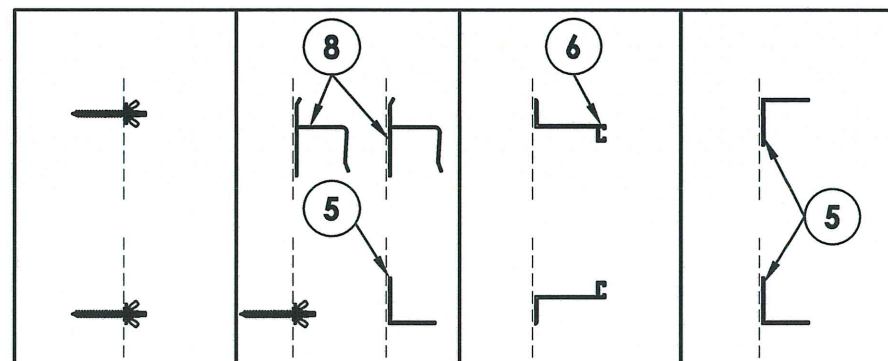
**24 GAUGE GALV. STEEL  
 STORM PANEL**



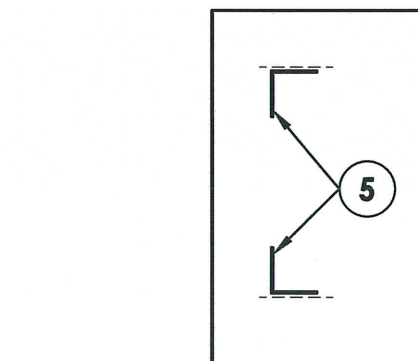
TYP. KEYHOLE PUNCH DETAIL  
 IN PANEL FOR INSTALLATION



- Steel storm panels shall be ASTM A792 CS B steel, 0.024" thickness.
- This product has been evaluated and is in compliance with the 2007 Florida Building Code (FBC) structural requirements excluding the "High Velocity Hurricane Zone" (HVHZ). When used in areas requiring wind borne debris protection this product complies with Section 1609.1.2 of the FBC and does not require an impact resistant covering. This product meets missile level "D" and excludes Wind Zone 4 as defined in ASTM E1996.
- Product markings shall be rolled into each panel with spacing in between marking no greater than 36".
- Positive and negative design pressures to be used with these drawings shall be determined by others for specific jobs in accordance with the governing code.
- The system detailed herein is generic and does not provide information for a specific site. If site conditions deviate from the conditions detailed herein, a licensed engineer or registered architect shall prepare site specific documents to be used in conjunction with this document.
- Permit holder shall verify the adequacy of the existing structure to withstand new superimposed loads.
- All aluminum extrusions shall be 6063-T6 aluminum alloy, unless noted otherwise.
- Top & bottom details shown may be interchanged as field conditions dictate. Panels may be mounted horizontally where applicable.
- All bolts & washers shall be zinc coated steel, galvanized steel or stainless steel.
- Anchors shall be installed in accordance with anchor manufacturer's recommendations. Embedment lengths and edge distances shall be as recommended by the anchor manufacturer but in no instance shall they be less than as shown on these approved drawings. Embedment and edge distances shall not include stucco or other finishes.



PANEL SPAN (L)	DIRECT MOUNT DESIGN PRESSURE (PSF)	"h" MOUNT DESIGN PRESSURE (PSF)	"F" BUILD-OUT MOUNT DESIGN PRESSURE (PSF)	WALL MOUNT DESIGN PRESSURE (PSF)
12" < L <= 53"	+105.0 -105.0	+70.0 -70.0	+105.0 -105.0	+105.0 -105.0
53" < L <= 70"	+70.0 -70.0	N/A	+70.0 -70.0	+70.0 -70.0
70" < L <= 88"	+51.0 -51.0	N/A	+51.0 -51.0	+51.0 -51.0
88" < L <= 106"	+40.0 -40.0	N/A	+40.0 -40.0	+40.0 -40.0



PANEL SPAN (L)	TRAP MOUNT DESIGN PRESSURE (PSF)
0" < L <= 46"	+105.0 -105.0
46" < L <= 63"	+70.0 -70.0
63" < L <= 81"	+51.0 -51.0
81" < L <= 99"	+40.0 -40.0

TABLE OF CONTENTS	
SHEET #	DESCRIPTION
1	Typical elevation, general notes & details
2	Bill of materials & components
3	Typical closure details
4	Typical cross sections
5	Typical cross sections
6	Anchoring schedule - concrete
7	Anchoring schedule - block
8	Anchoring schedule - wood

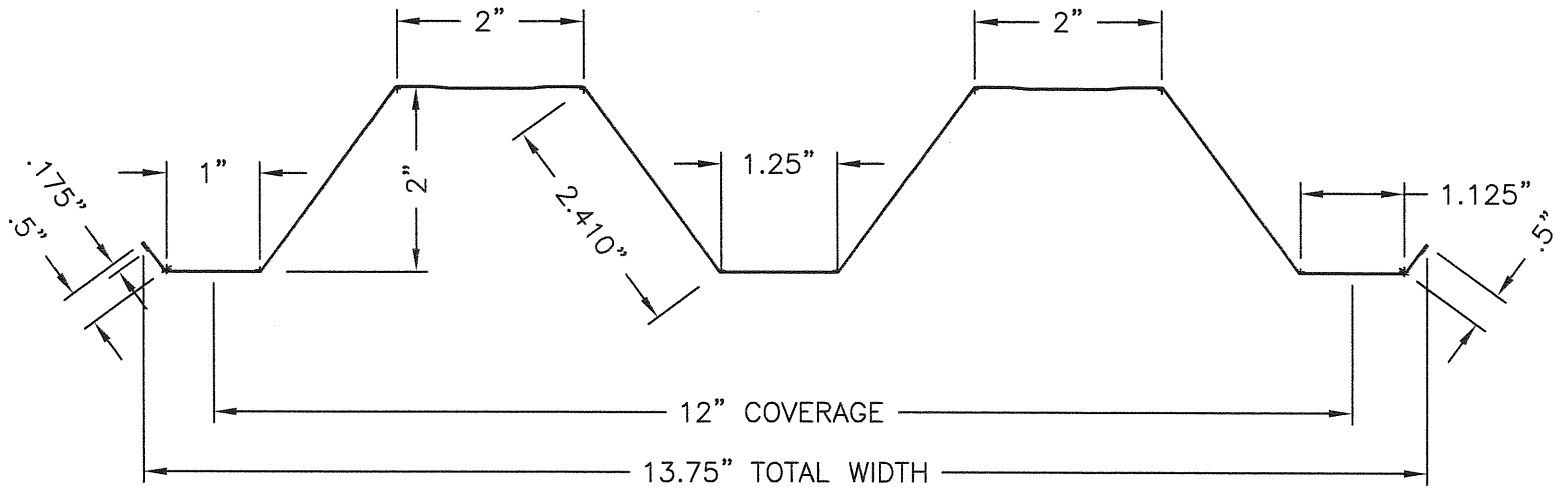
Documents Prepared By:  
**RW** BUILDING CONSULTANTS, INC.  
 P.O. Box 230 Vairico FL 33595  
 Phone No.: 813.659.9197  
 Florida Board of Professional Engineers  
 Certificate Of Authorization No. 9813  
 Lyndon F. Schmidt, P.E. No. 43409

PRODUCT:  
 ASI ANCHOR SAFE  
 PANEL SHUTTER SYSTEM  
 24 GAUGE GALV. STEEL PANEL  
 PART OR ASSEMBLY:  
 TYPICAL ELEVATIONS,  
 GENERAL NOTES & DETAILS

NO.	DATE	BY	REVISIONS

DATE: 3/4/09  
 SCALE: N.T.S.  
 DWG. BY: AL  
 CHK. BY: LFS  
 DRAWING NO.: FL-7989.2  
 SHEET 1 OF 8

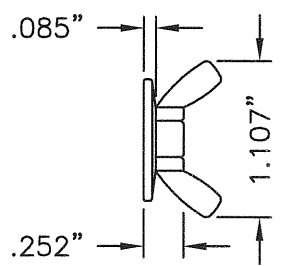
ITEM	DESCRIPTION	MATERIAL
1	STEEL STORM PANEL (24 GAUGE - .024" GALV. STEEL)	STEEL
2	NOT USED	-
3	1/4"-20 x 3/4" H.H. BOLT	S.S.
4	1/4"-20 x 3/4" KNURLED STUD	S.S.
5	2" x 2" STUDDED ANGLE	ALUMINUM
6	BUILD-OUT "F" TRACK	ALUMINUM
7	WASHERED WINGNUT	STEEL
8	"h" HEADER	ALUMINUM



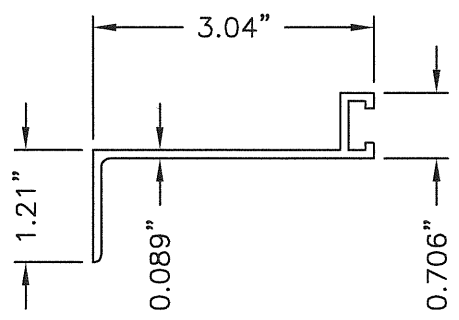
3 H. H. BOLT

4 KNURLED STUD

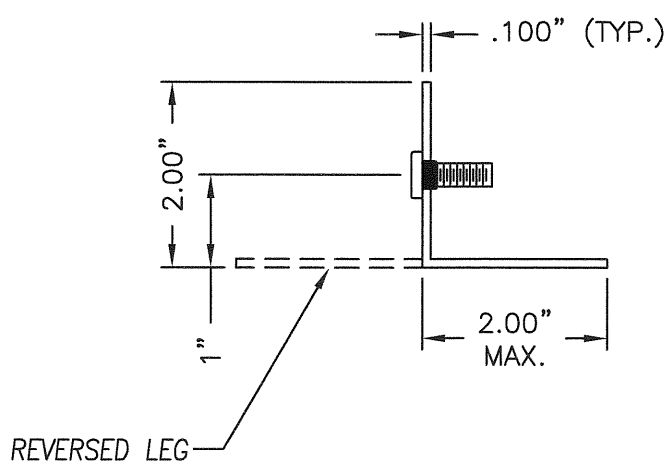
1 STEEL STORM PANEL PROFILE



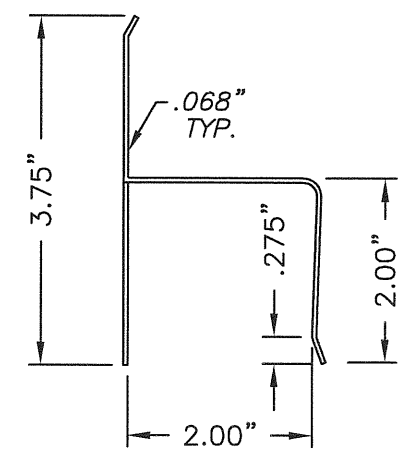
7 WING NUT



6 BUILD-OUT "F" TRACK



5 ANGLE



8 "h" HEADER

Documents Prepared By: **RW** BUILDING CONSULTANTS, INC.  
P.O. Box 230 Vairico FL 33595  
Phone No.: 813.659.9197  
Florida Board of Professional Engineers  
Certificate of Authorization No. 9813  
*LFS* 3.5.09  
Lyndon F. Schmidt, P.E. No. 43409

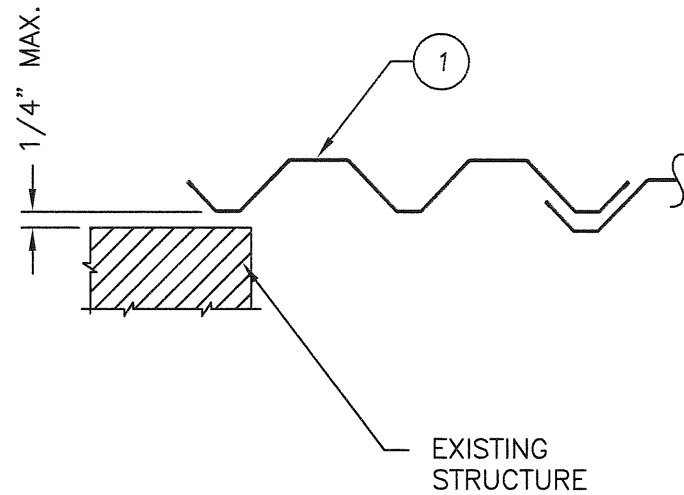
PRODUCT: ASI ANCHOR SAFE  
PANEL SHUTTER SYSTEM  
24 GAUGE GALV. STEEL PANEL  
PART OR ASSEMBLY: BILL OF MATERIALS & COMPONENTS

NO.	DATE	BY	REVISIONS

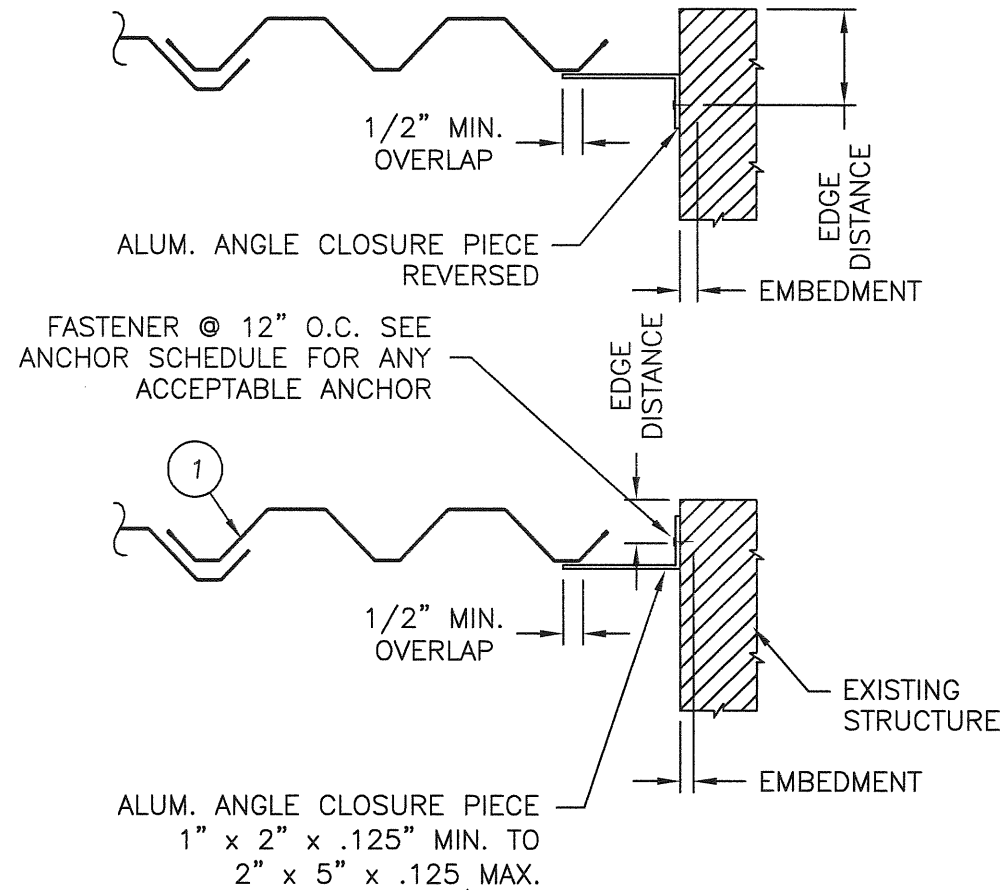
DATE: 3/4/09  
SCALE: N.T.S.  
DWG. BY: AL  
CHK. BY: LFS  
DRAWING NO.: FL-7989.2  
SHEET 2 OF 8

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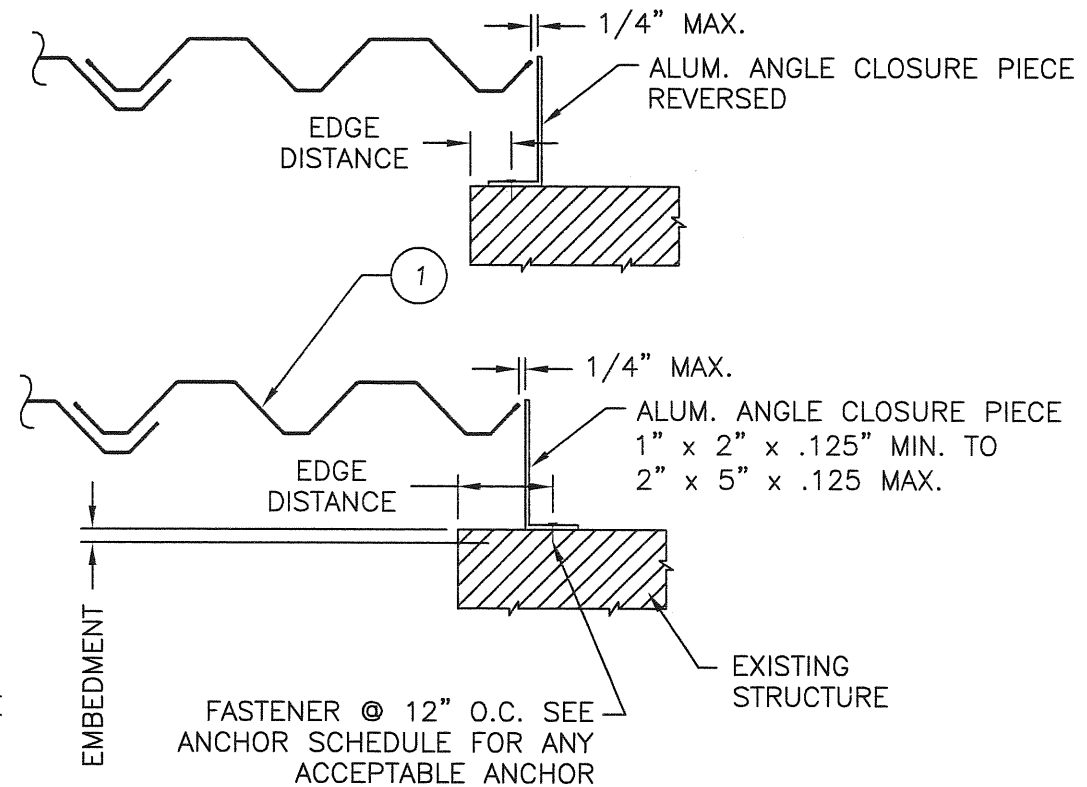
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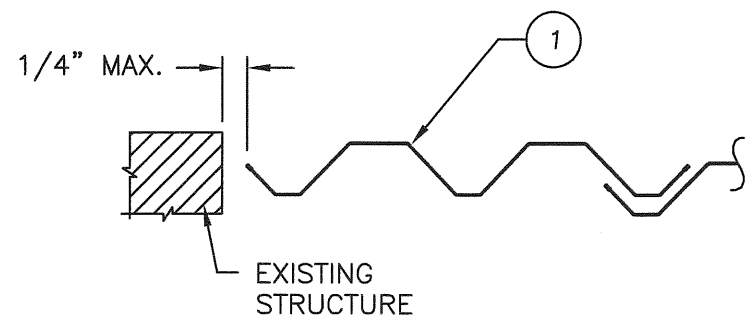
WALL MOUNT



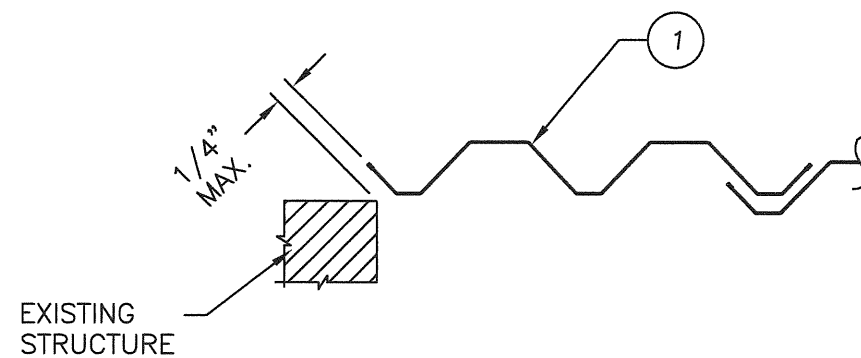
TRAP MOUNT



BUILD-OUT

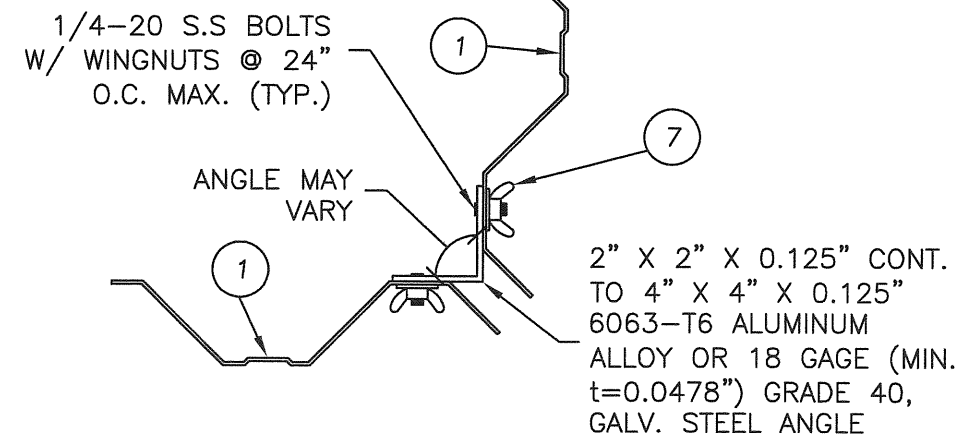


TRAP MOUNT



FACE MOUNT

TYPICAL CLOSURE DETAILS  
(PLAN VIEWS)



ALT CORNER DETAIL

Documents Prepared By:

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Florida Board of Professional Engineers  
Certificate of Authorization No. 9813  
*LF 3-5-09*  
Lyndon F. Schmidt, P.E. No. 43409

PRODUCT: ASI ANCHOR SAFE  
PANEL SHUTTER SYSTEM  
24 GAUGE GALV. STEEL PANEL  
PART OR ASSEMBLY:  
TYPICAL CLOSURE  
DETAILS

NO. DATE BY REVISIONS

DATE: 3/4/09

SCALE: N.T.S.

DWG. BY: AL

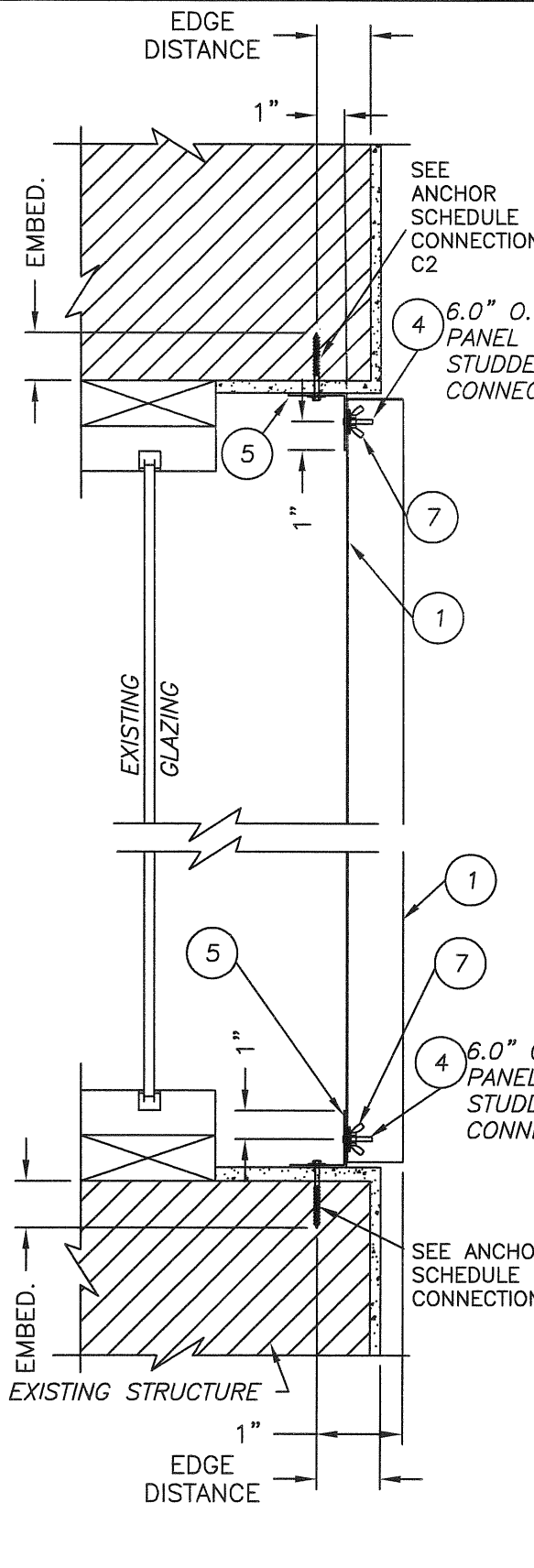
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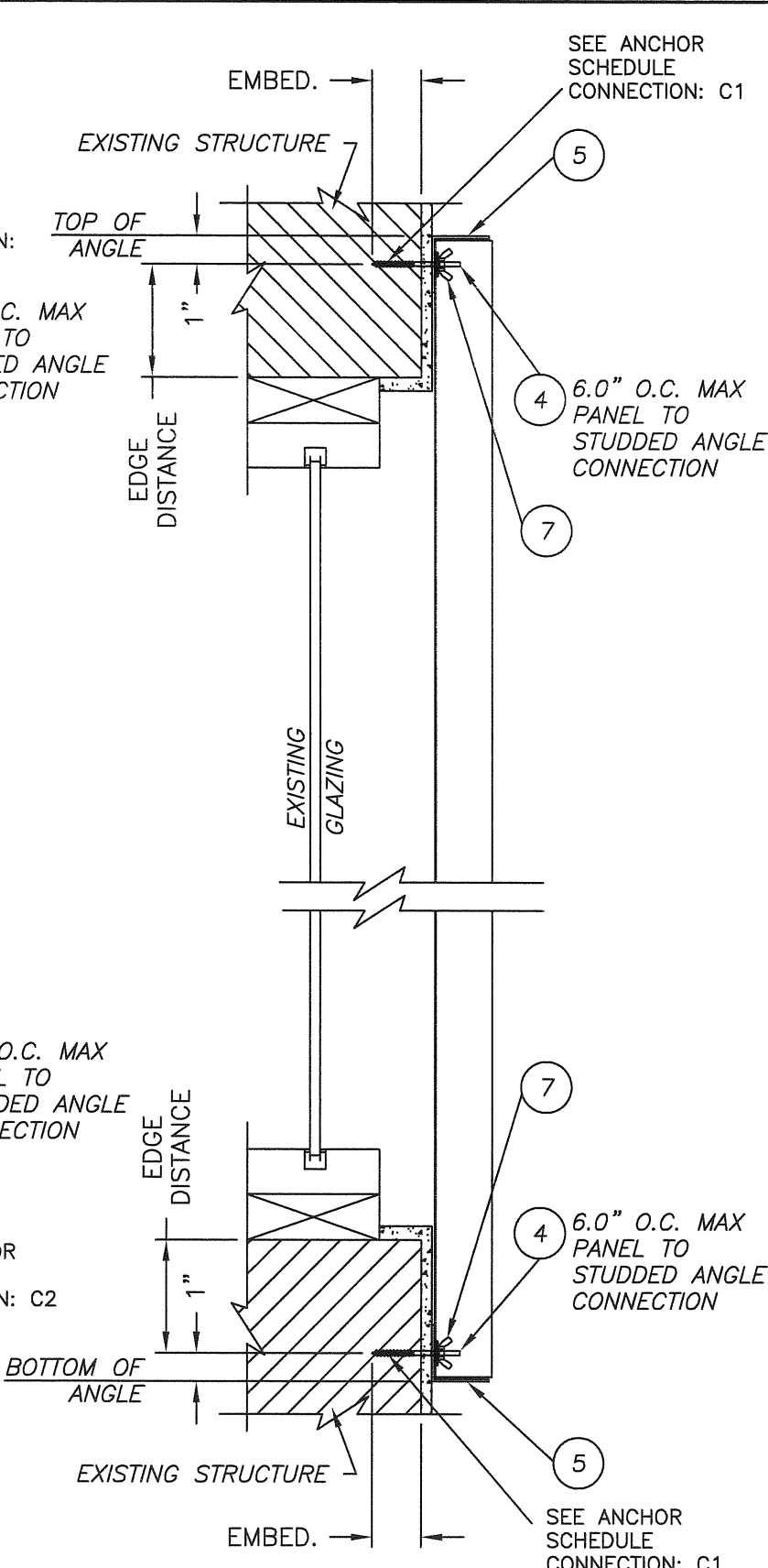
FL-7989.2

SHEET 3 OF 8

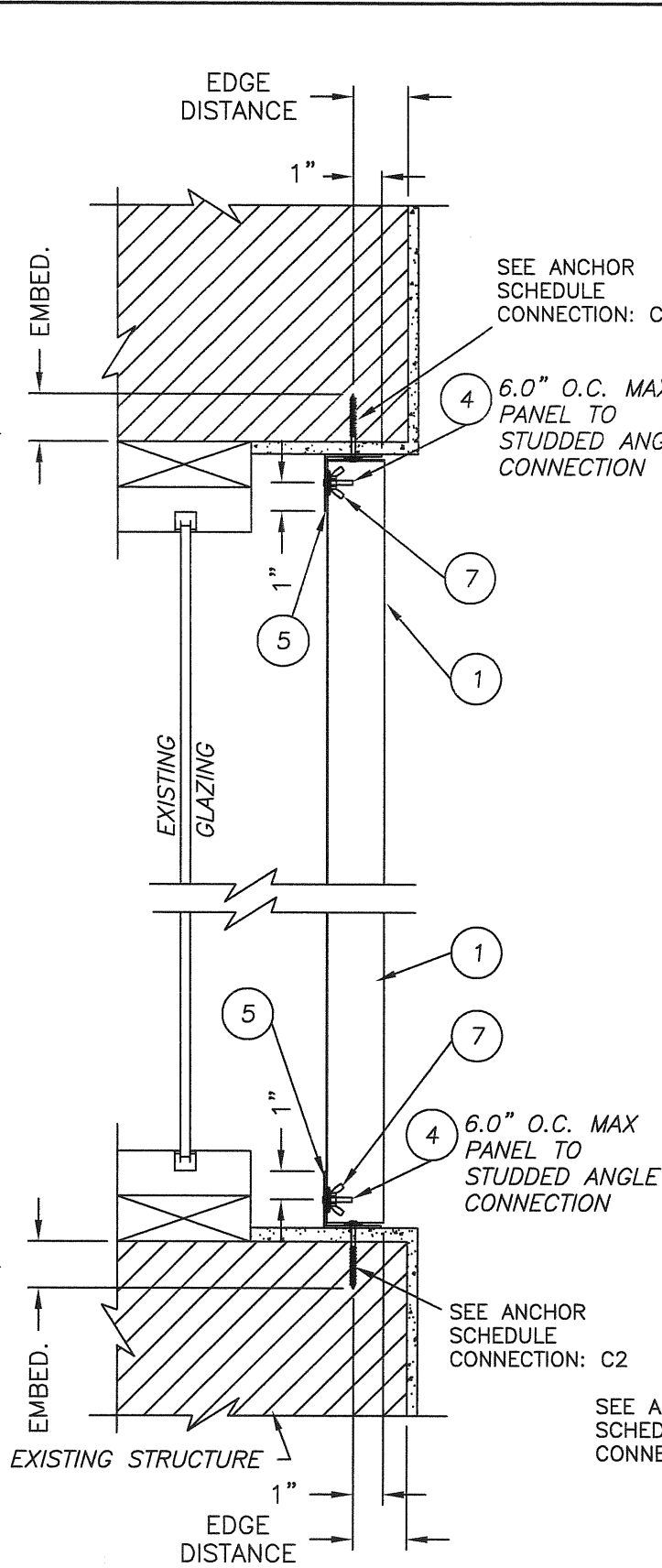




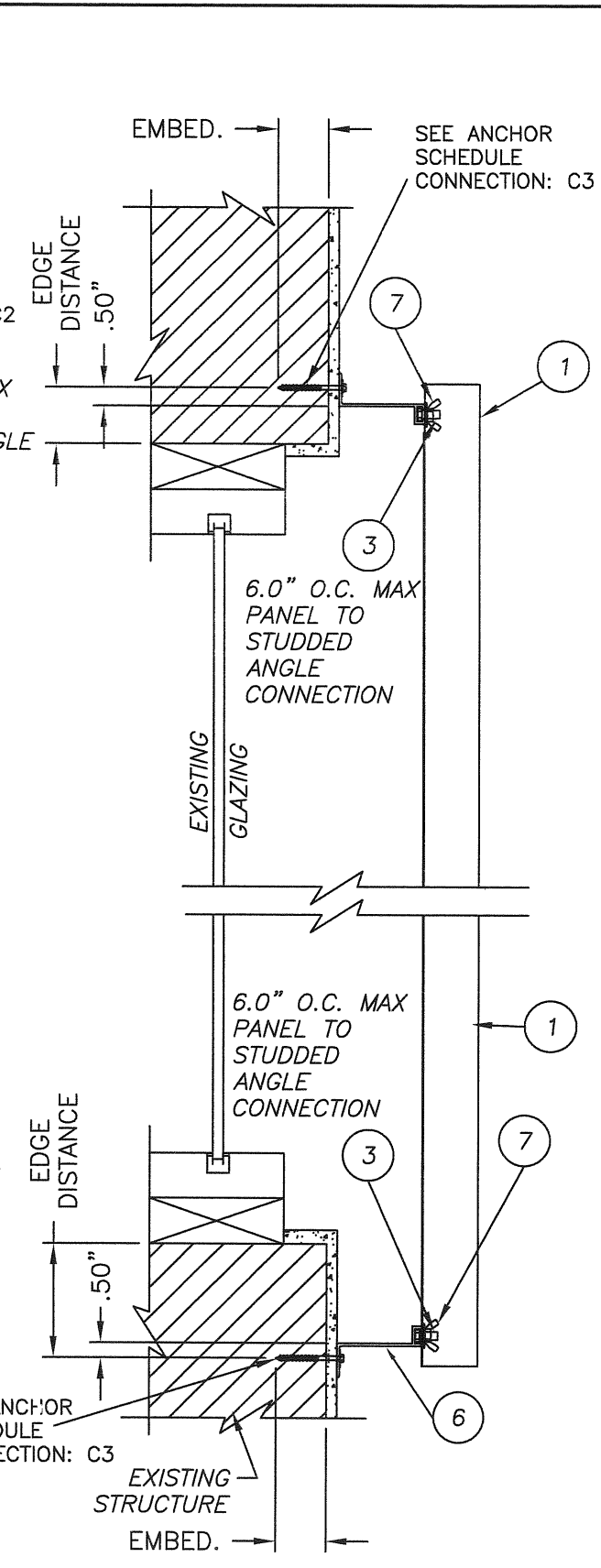
**2"x2" ANGLE TRAP MOUNT  
REVERSED ANGLE**



**WALL MOUNT SECTION**



**2"x2" ANGLE TRAP MOUNT**



**"F" TRACK BUILD-OUT**

Documents Prepared By:  
**R.W. BUILDING CONSULTANTS, INC.**  
 P.O. Box 230 Valrico FL 33595  
 Phone No.: 813.659.9197  
 Florida Board of Professional Engineers  
 Certificate of Authorization No. 9813  
 Lyndon F. Schmidt, P.E. No. 45409

---

PRODUCT: ASI ANCHOR SAFE  
 PANEL SHUTTER SYSTEM  
 24 GAUGE GALV. STEEL PANEL

PART OR ASSEMBLY: TYPICAL CROSS SECTIONS

NO.	DATE	REVISIONS	BY

DATE: 3/4/09  
 SCALE: N.T.S.  
 DWG. BY: AL  
 CHK. BY: LFS  
 DRAWING NO.: FL-7989.2  
 SHEET 5 OF 8

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# ANCHOR SCHEDULE

ANCHOR	CONNECTION TYPE												
	LOAD (psf)	C1**			C2			C3			C4		
		Spans Up to 53"	Spans Up to 106"	Spans Up to 106"	Spans Up to 53"	Spans Up to 106"	Spans Up to 106"	Spans Up to 53"	Spans Up to 106"	Spans Up to 106"	Spans Up to 53"	Spans Up to 106"	Spans Up to 53"
<p>1/4" ELCO OR ITW TAPCON EM = 1.75" CL = 3" (ITW) 4" (ELCO) ED = 2.5"</p>	30	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"
	35	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"
	40	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"
	50	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"
	60	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"
	70	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"
	105	11.2"	5.4"	5.4"	5.4"	5.4"	5.4"	5.4"	5.4"	5.4"	5.4"	5.4"	5.4"
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	35	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"
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70	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	
105	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	

HOLLOW BLOCK

ED = MINIMUM EDGE DISTANCE.  
CL = MINIMUM SPACING OF ANCHOR CENTERLINE TO CENTERLINE.  
EM = MINIMUM EMBEDMENT OF ANCHOR INTO STRUCTURAL SUBSTRATE.

\*\*NOTE:  
FOR DIRECT MOUNT CONDITIONS, ANCHOR SPACING MUST NOT EXCEED 6" MAXIMUM ON CENTER REGARDLESS OF THE ANCHOR SPACING SHOWN IN THESE SCHEDULES.




DATE: 3/4/09  
SCALE: N.T.S.  
DWG. BY: AL  
CHK. BY: LFS  
DRAWING NO.: FL-7989.2  
SHEET 7 OF 8

NO.	DATE	REVISIONS	BY

PRODUCT:  
ASI ANCHOR SAFE  
PANEL SHUTTER SYSTEM  
24 GAUGE GALV. STEEL PANEL  
PART OR ASSEMBLY:  
ANCHORING SCHEDULE  
- BLOCK

Documents Prepared By:  
**RW** BUILDING CONSULTANTS, INC.  
P.O. Box 230 Vairico FL 33595  
Phone No.: 813.659.9197  
Florida Board of Professional Engineers  
Certificate of Authorization No. 9813  
*LFS* 3-5-09  
Lyndon F. Schmidt, P.E. No. 43409

## ANCHOR SCHEDULE

ANCHOR	LOAD (psf)	CONNECTION TYPE											
		C1**		C2		C3		C4					
		Spans Up to 53"	Spans Up to 106"	Spans Up to 53"	Spans Up to 106"	Spans Up to 53"	Spans Up to 106"	Spans Up to 53"	Spans Up to 106"				
 1/4" PANELMATE (PLUS OR FEMALE) EM = 2" CL = 3" ED = 2.5"	30	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"
	35	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"
	40	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"
	50	12.0"	12.0"	12.0"	10.8"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"
	60	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"
 1/4" LAG SCREW EM = 2.0" CL = 2.1" ED = 0.75"	70	12.0"	12.0"	12.0"	7.7"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"
	105	12.0"	12.0"	10.3"	11.5"	11.5"	11.5"	11.5"	11.5"	11.5"	11.5"	11.5"	11.5"
	30	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"
	35	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"
	40	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"
 #14 WOOD SCREW EM = 2.34" CL = 2.1" ED = 0.75"	50	12.0"	12.0"	12.0"	11.1"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"
	60	12.0"	12.0"	12.0"	9.2"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"
	70	12.0"	12.0"	12.0"	7.9"	9.8"	9.8"	9.8"	9.8"	9.8"	9.8"	9.8"	9.8"
	105	12.0"	12.0"	5.2"	6.5"	6.5"	6.5"	6.5"	6.5"	6.5"	6.5"	6.5"	6.5"
	30	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"
WOOD	35	12.0"	12.0"	12.0"	7.7"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"
	40	12.0"	12.0"	12.0"	6.7"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"
	50	12.0"	12.0"	12.0"	5.5"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"
	60	12.0"	12.0"	12.0"	10.8"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"
	70	12.0"	12.0"	12.0"	9.3"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"
105	12.0"	12.0"	5.1"	4.5"	4.5"	4.5"	4.5"	4.5"	4.5"	4.5"	4.5"	4.5"	

**NOTES:**

1. THE DESIGN PRESSURES AND SPANS LISTED IN THE ANCHOR SCHEDULE TABLES ARE FOR DETERMINING ANCHOR SPACING ONLY; SEE SHEET 1 FOR THE DESIGN PRESSURE RATING AT VARIOUS SPANS FOR THE STORM PANELS.
2. MINIMUM EMBEDMENT SHALL BE AS NOTED IN ANCHOR SCHEDULE. MINIMUM EMBEDMENT AND EDGE DISTANCE EXCLUDES STUCCO, FOAM, BRICK, AND OTHER WALL FINISHES.
3. ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH ANCHOR MANUFACTURERS' RECOMMENDATIONS.
4. WHERE EXISTING STRUCTURE IS WOOD FRAMING, EXISTING CONDITIONS MAY VARY. FIELD VERIFY THAT FASTENERS ARE INTO ADEQUATE WOOD FRAMING MEMBERS. NOT PLYWOOD.
5. WHERE ANCHORS FASTEN TO NARROW FACE OF STUD FRAMING, ANCHOR SHALL BE LOCATED IN CENTER OF NOMINAL 2X4 (MIN) WOOD STUDS. WOOD STUDS SHALL BE "SOUTHERN PINE" SG=0.55 OR GREATER DENSITY). MACHINE SCREWS SHALL HAVE MINIMUM OF 6. 1/2" ENGAGEMENT OF THREADS IN BASE ANCHOR AND MAY HAVE EITHER A PAN HEAD, TRUSS HEAD, OR WAFER HEAD ("SIDEWALK BOLT") U.N.O.
7. MASONRY - 3,000 PSI MIN. CONCRETE CONFORMING TO ACI 301 OR HOLLOW BLOCK CONFORMING TO ASTM C90


ED = MINIMUM EDGE DISTANCE.  
 CL = MINIMUM SPACING OF ANCHOR CENTERLINE TO CENTERLINE.  
 EM = MINIMUM EMBEDMENT OF ANCHOR INTO STRUCTURAL SUBSTRATE.

**\*\*NOTE:**  
 FOR DIRECT MOUNT CONDITIONS, ANCHOR SPACING MUST NOT EXCEED 6" MAXIMUM ON CENTER REGARDLESS OF THE ANCHOR SPACING SHOWN IN THE THESE SCHEDULES.

DATE: 3/4/09  
 SCALE: N.T.S.  
 DWG. BY: AL  
 CHK. BY: LFS  
 DRAWING NO.: FL-7989.2  
 SHEET 8 OF 8

NO.	DATE	BY	REVISIONS

PRODUCT:  
 ASI ANCHOR SAFE  
 PANEL SHUTTER SYSTEM  
 24 GAUGE GALV. STEEL PANEL  
 PART OR ASSEMBLY:  
 ANCHORING SCHEDULE  
 - WOOD

Documents Prepared By:  
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