ELITE STORM SYSTEMS

700 S. John Rodes Blvd.
Melbourne, FL 32904
Ph. 321.690.1976

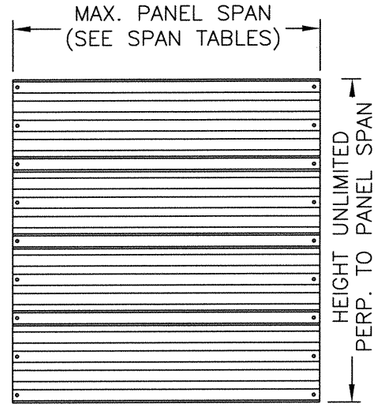
The Ultimate Storm Panel
Aluminum

General Notes:

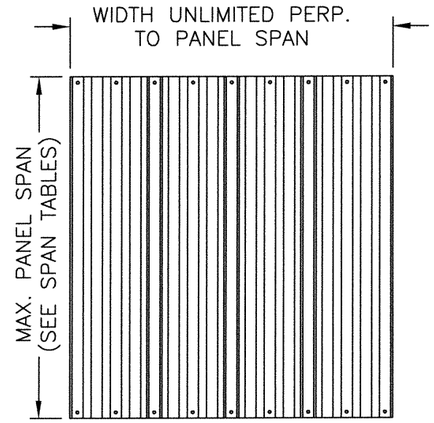
1. *This system has been tested and evaluated as a large missile impact protective system in accordance with the requirements of the 5th Edition (2014) Florida Building Code (FBC) excluding the High Velocity Hurricane Zone. This product meets missile level "D" and includes Wind Zone 4 as defined in ASTM E 1996 and FBC Section 1609.1.2.2.*
2. *Positive and negative design pressures to be used with these drawings shall be determined by others for specific sites in accordance with the local governing code.*
3. *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.*
4. *Product markings shall be rolled into each panel with spacing in between marking no greater than 36" and shall be labeled as follows:*

Elite Storm Systems
Rockledge, FL
FBC Approval FL#10106.1
ASTM E 330-02
ASTM E 1886/1996-02 Missile Level D

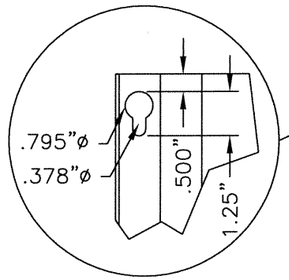
5. *Aluminum storm panels shall be 3004-H34 or 5052-H32, tested thickness 0.050".*
6. *All extrusions shall be 6063-T6 aluminum alloy, unless noted otherwise.*
7. *All bolts & washers shall be zinc coated steel, galvanized steel, stainless steel, or 2024-T4 aluminum alloy with a minimum tensile yield strength of 60 ksi.*
8. *Permit holder shall verify the adequacy of the existing structure to withstand new superimposed loads.*
9. *Storm panels have been designed and tested to the maximum spans and loads shown on these drawings.*
10. *Top & bottom details shown may be interchanged as field conditions dictate. Panels may be mounted horizontally where applicable.*
11. *Panel attachment to studded angle (item #5) mounting hardware is at 12-1/2" o.c. maximum. All other panel attachments to mounting hardware are at 6-1/4" o.c. maximum. Direct mount of panel to structure is at 6-1/4" o.c. maximum.*



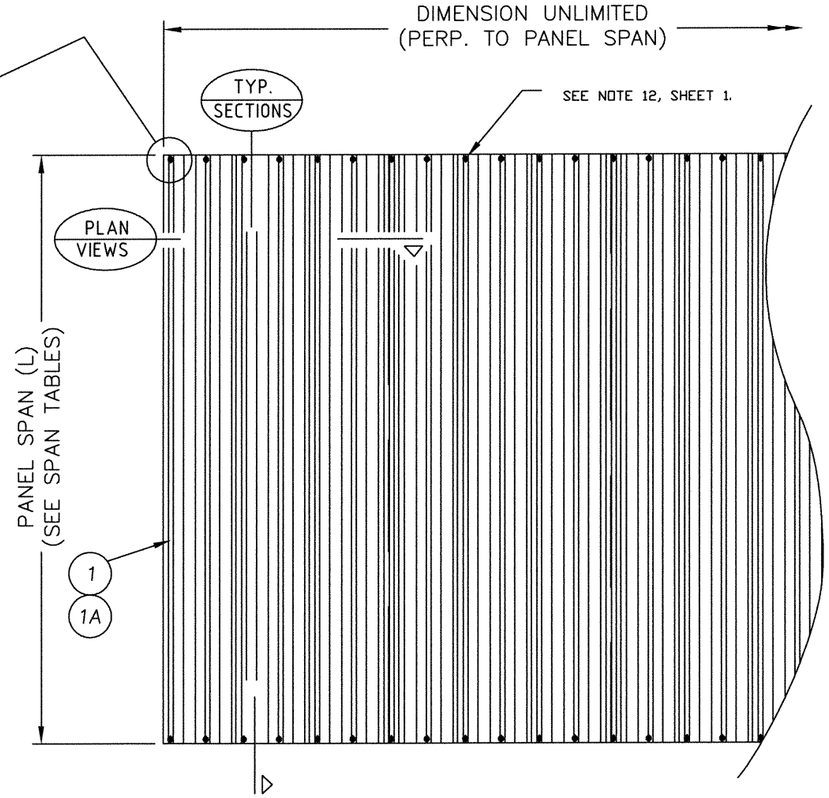
TYPICAL HORIZONTAL INSTALLATION



TYPICAL VERTICAL INSTALLATION



TYP. KEYHOLE PUNCH DETAIL
IN PANEL FOR INSTALLATION



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Documents Prepared By:
Lyndon F. Schmidt
P.E. No. 43409

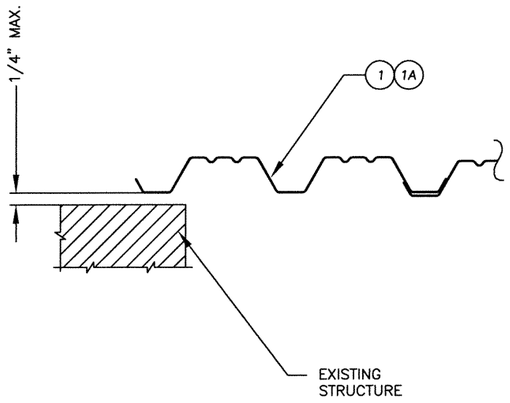
BUILDING CONSULTANTS, INC.
P.O. Box 230, Valrico, FL 33595
Phone No.: 813.659.9197
FBPE C.A. No. 9813

L. F. SCHMIDT LICENSE No. 43409 STATE OF FLORIDA PROFESSIONAL ENGINEER

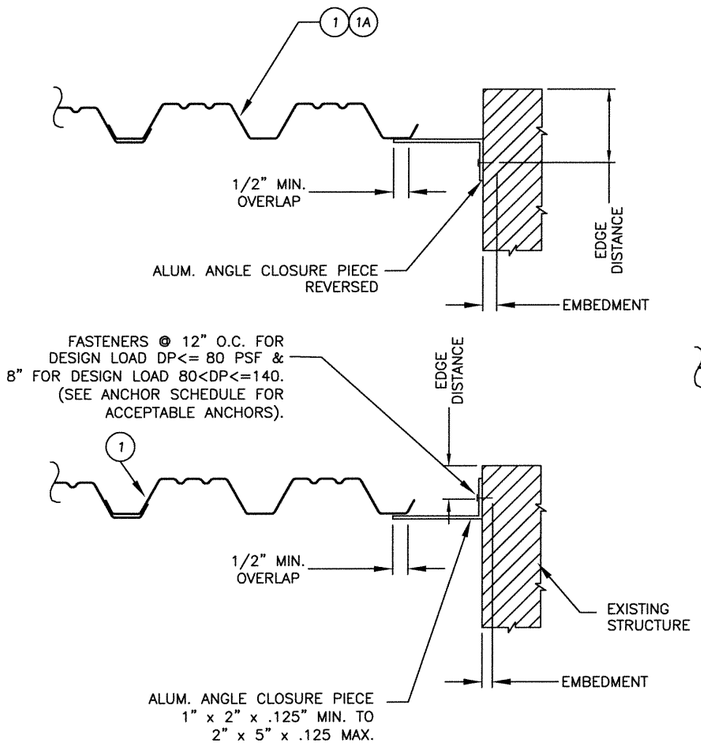
PRODUCT: *ELITE HURRICANE SHUTTERS 0.050" ALUMINUM STORM PANEL*
PART OR ASSEMBLY: *TYPICAL ELEVATIONS AND GENERAL NOTES*

NO.	DATE	REVISIONS	BY
2	4/23/15	UPDATE TO 5TH ED. (2014) FBC	JK
1	05/22/12	UPDATE TO 2010 FBC	LFS

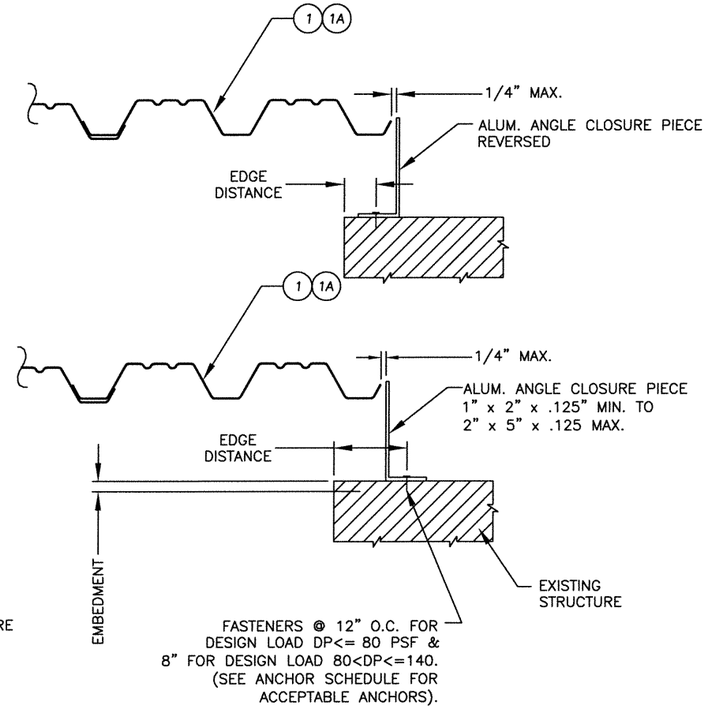
DATE: 11/25/07
SCALE: N.T.S.
DWG. BY: EW
CHK. BY: LFS
DRAWING NO.: FL-10106.1
SHEET 1 OF 10



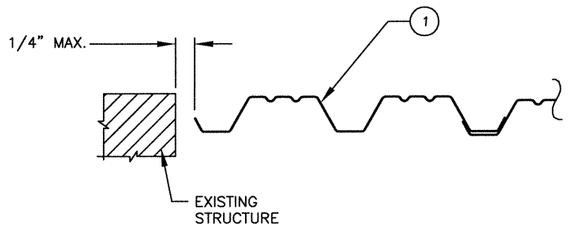
WALL MOUNT



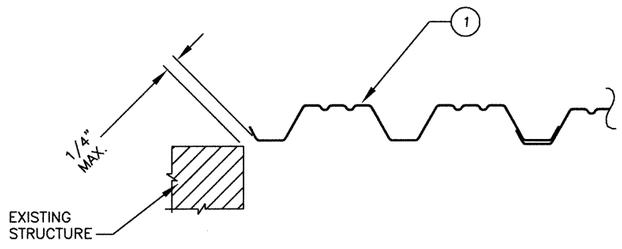
TRAP MOUNT



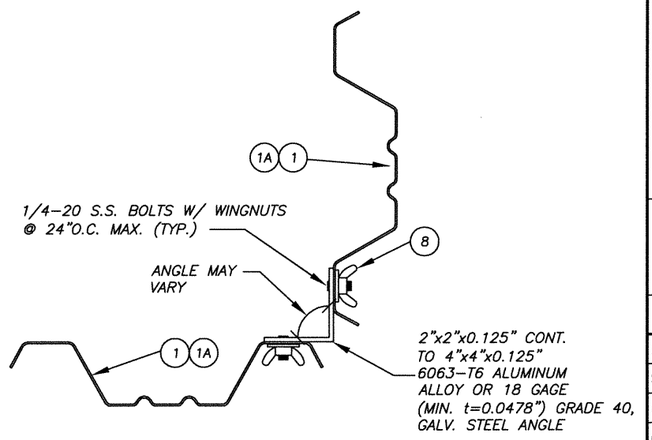
BUILD-OUT



TRAP MOUNT



FACE MOUNT



ALT CORNER DETAIL

TYPICAL CLOSURE DETAILS (PLAN VIEWS)

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Lyndon F. Schmidt
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PART OR ASSEMBLY:
TYPICAL CLOSURE DETAILS

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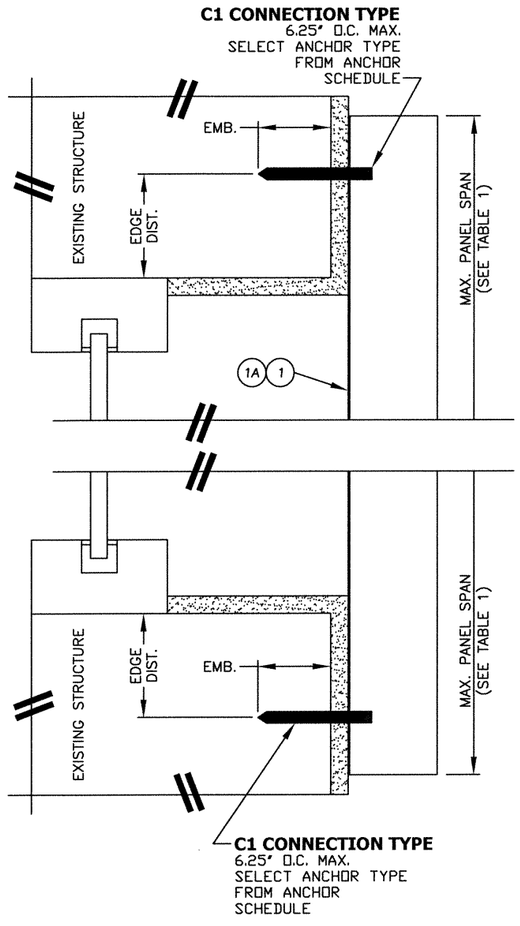
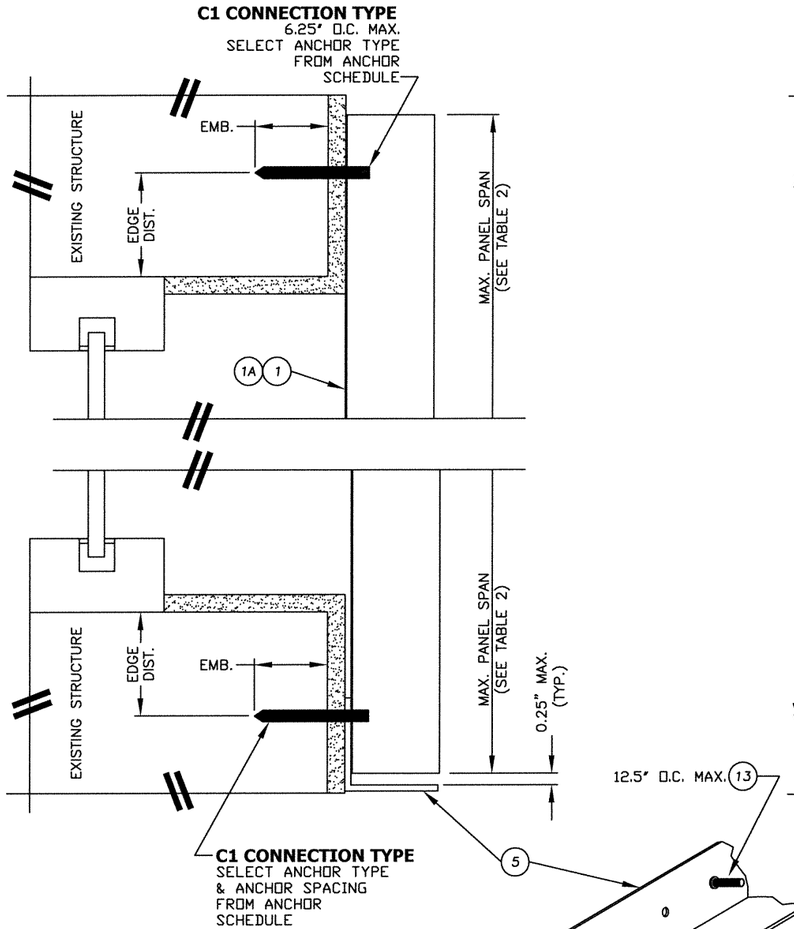
DWG. BY: EW
CHK. BY: LFS
DRAWING NO.: FL-10106.1
SHEET 2 OF 10



1 DIRECT MOUNT SECTION

TABLE 1 - PANEL SPAN
DIRECT MOUNT
ALLOWABLE DESIGN PRESSURES

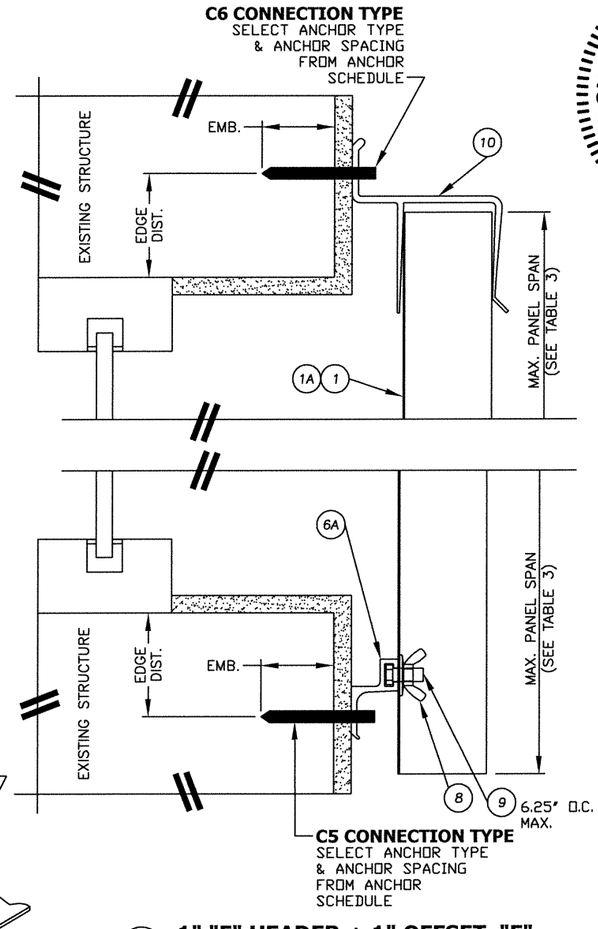
PANEL SPAN (in)	ALLOWABLE DESIGN PRESSURE (+) PSF	(-) PSF
144.0	50.0	50.0
132.0	55.0	55.0
120.0	61.0	61.0
108.0	68.5	68.5
106.0	70.0	70.0
96.0	77.0	77.0
84.0	88.0	88.0
72.0	103.0	103.0
60.0	123.5	123.5
0-53.0	140.0	140.0



2 STUDDED ANGLE MOUNT SECTION

TABLE 2 - PANEL SPAN
STUDDED ANGLE MOUNT
ALLOWABLE DESIGN PRESSURES

PANEL SPAN (in)	ALLOWABLE DESIGN PRESSURE (+) PSF	(-) PSF
106.0	60.0	60.0
96.0	65.0	65.0
84.0	72.0	72.0
72.0	81.0	81.0
60.0	92.5	92.5
0-53.0	100.0	100.0



3 1" "F" HEADER + 1" OFFSET "F" TRACK MOUNT SECTION

TABLE 3 - PANEL SPAN
1" "F" HEADER + 1" OFFSET "F" TRACK MOUNT
ALLOWABLE DESIGN PRESSURES

PANEL SPAN (in)	ALLOWABLE DESIGN PRESSURE (+) PSF	(-) PSF
106.0	50.0	50.0
96.0	55.0	55.0
84.0	63.0	63.0
72.0	73.5	73.5
60.0	88.0	88.0
0-53.0	100.0	100.0

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Lyndon F. Schmidt
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Phone No.: 813.659.9197
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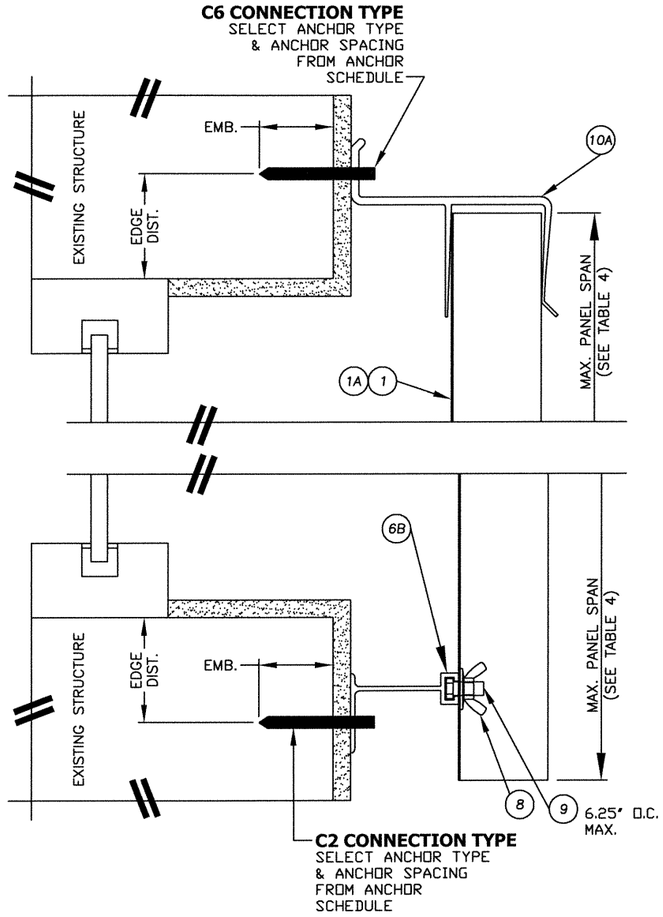
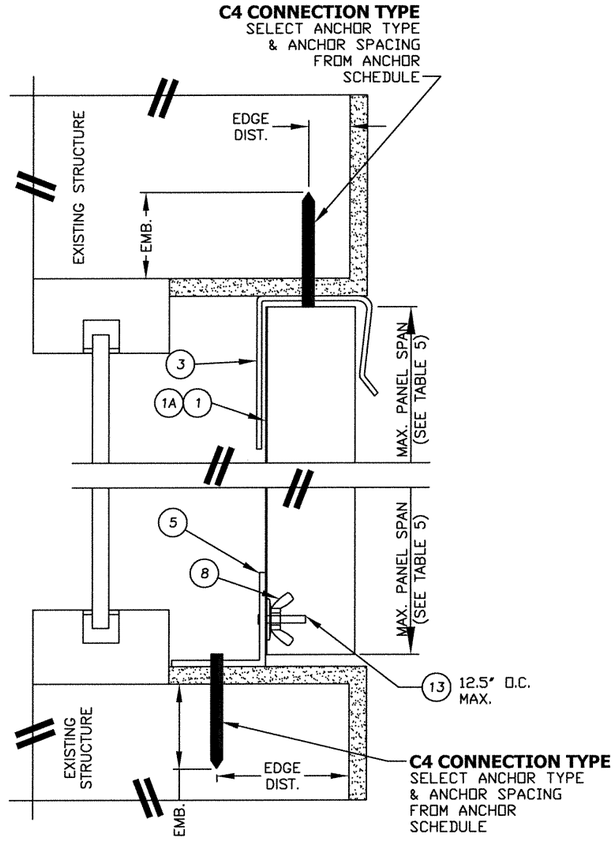
DATE: 11/25/07
SCALE: N.T.S.
DWG. BY: EW
CHK. BY: LFS
DRAWING NO.: FL-10106.1
SHEET 3 OF 10



4 **2" "F" HEADER + 2" OFFSET "F" TRACK MOUNT SECTION**

TABLE 4 - PANEL SPAN
2" "F" HEADER + 2" OFFSET "F" TRACK MOUNT
ALLOWABLE DESIGN PRESSURES

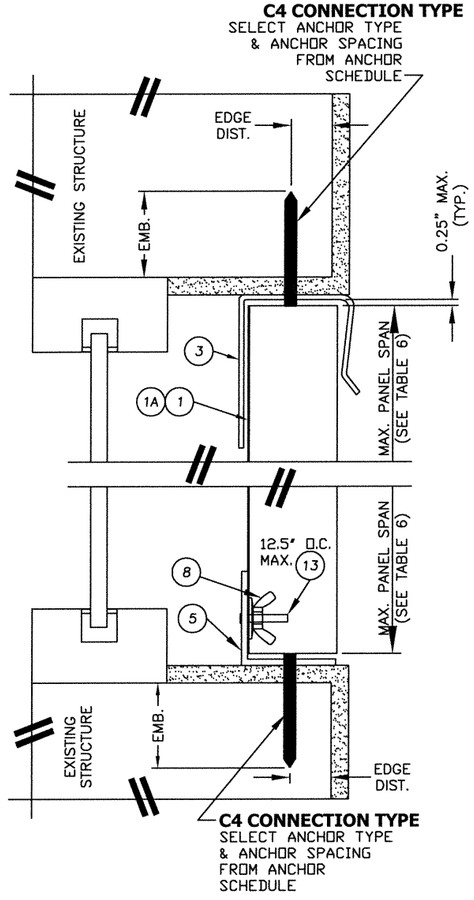
PANEL SPAN (in)	ALLOWABLE DESIGN PRESSURE (+) PSF	(-) PSF
106.0	50.0	50.0
96.0	55.0	55.0
84.0	63.0	63.0
72.0	73.5	73.5
60.0	88.0	88.0
0-53.0	100.0	100.0



5 **"U" HEADER + STUDDED ANGLE MOUNT SECTION**

TABLE 5 - PANEL SPAN
"U" HEADER + STUDDED ANGLE MOUNT
ALLOWABLE DESIGN PRESSURES

PANEL SPAN (in)	ALLOWABLE DESIGN PRESSURE (+) PSF	(-) PSF
106.0	60.0	60.0
96.0	65.0	65.0
84.0	72.0	72.0
72.0	81.0	81.0
60.0	92.5	92.5
0-53.0	100.0	100.0



6 **"U" HEADER + STUDDED ANGLE MOUNT SECTION**

TABLE 6 - PANEL SPAN
"U" HEADER + STUDDED ANGLE MOUNT
ALLOWABLE DESIGN PRESSURES

PANEL SPAN (in)	ALLOWABLE DESIGN PRESSURE (+) PSF	(-) PSF
106.0	60.0	60.0
96.0	65.0	65.0
84.0	72.0	72.0
72.0	81.0	81.0
60.0	92.5	92.5
0-53.0	100.0	100.0

L. F. SCHMIDT LICENSEE No. 43409 STATE OF FLORIDA PROFESSIONAL ENGINEER

Documents Prepared By:
Lyndon F. Schmidt
P.E. No. 43409

R|W BUILDING CONSULTANTS, INC.
P.O. Box 230, Valrico, FL 33595
Phone No.: 813.659.9197
FBPE C.A. No. 9813

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PART OR ASSEMBLY: *VERTICAL CROSS SECTIONS*

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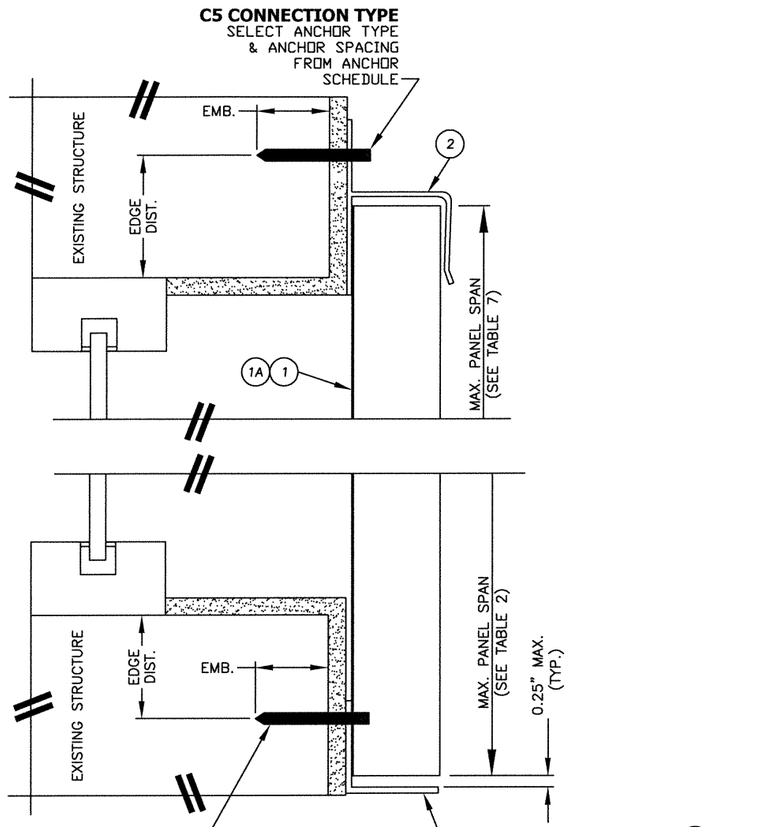
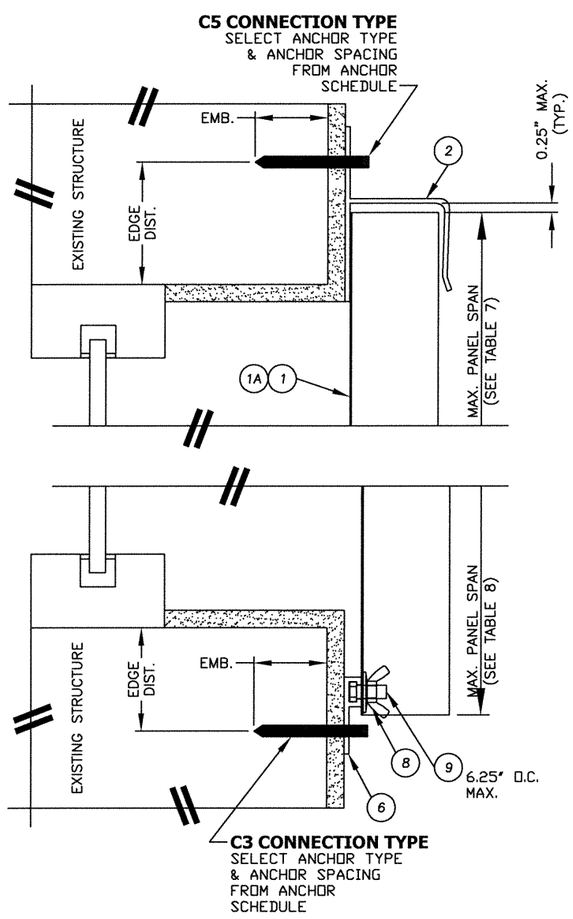
DATE: 11/25/07
SCALE: N.T.S.
DWG. BY: EW
CHK. BY: LFS
DRAWING NO.: FL-10106.1
SHEET 4 OF 10



7 "h" HEADER + STUDDED ANGLE MOUNT SECTION

TABLE 7 - PANEL SPAN
"h" HEADER + STUDDED ANGLE MOUNT
ALLOWABLE DESIGN PRESSURES

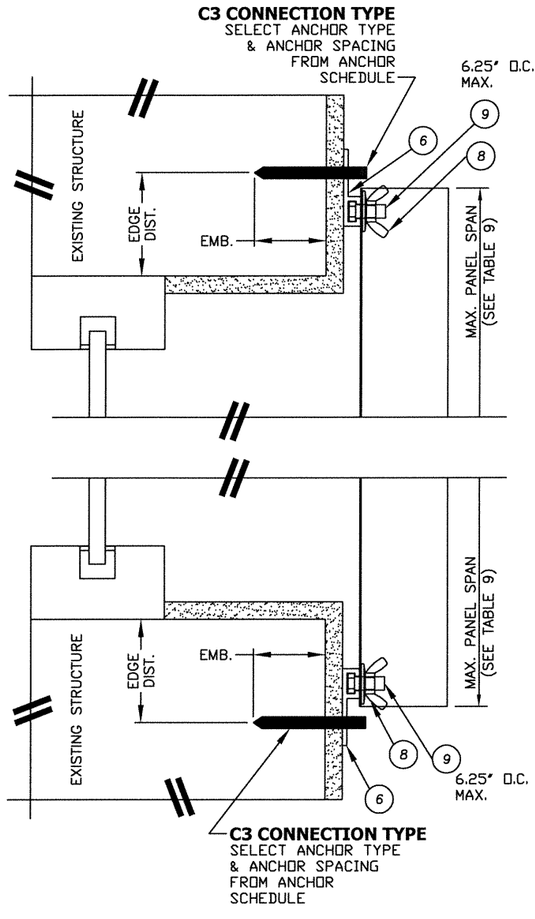
PANEL SPAN (in)	ALLOWABLE DESIGN PRESSURE (+) PSF	(-) PSF
106.0	50.0	50.0
96.0	55.0	55.0
84.0	63.0	63.0
72.0	73.5	73.5
60.0	88.0	88.0
0-53.0	100.0	100.0



8 "h" HEADER + FLUSH "F" TRACK MOUNT SECTION

TABLE 8 - PANEL SPAN
"h" HEADER + FLUSH "F" TRACK MOUNT
ALLOWABLE DESIGN PRESSURES

PANEL SPAN (in)	ALLOWABLE DESIGN PRESSURE (+) PSF	(-) PSF
106.0	50.0	50.0
96.0	55.0	55.0
84.0	63.0	63.0
72.0	73.5	73.5
60.0	88.0	88.0
0-53.0	100.0	100.0



9 "F" TRACK MOUNT SECTION

TABLE 9 - PANEL SPAN
"F" TRACK MOUNT
ALLOWABLE DESIGN PRESSURES

PANEL SPAN (in)	ALLOWABLE DESIGN PRESSURE (+) PSF	(-) PSF
106.0	50.0	50.0
96.0	55.0	55.0
84.0	63.0	63.0
72.0	73.5	73.5
60.0	88.0	88.0
0-53.0	100.0	100.0

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Lyndon F. Schmidt
P.E. No. 43409

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P.O. Box 230, Valrico, FL 33595
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PART OR ASSEMBLY:
VERTICAL CROSS SECTIONS

NO.	DATE	REVISIONS	BY
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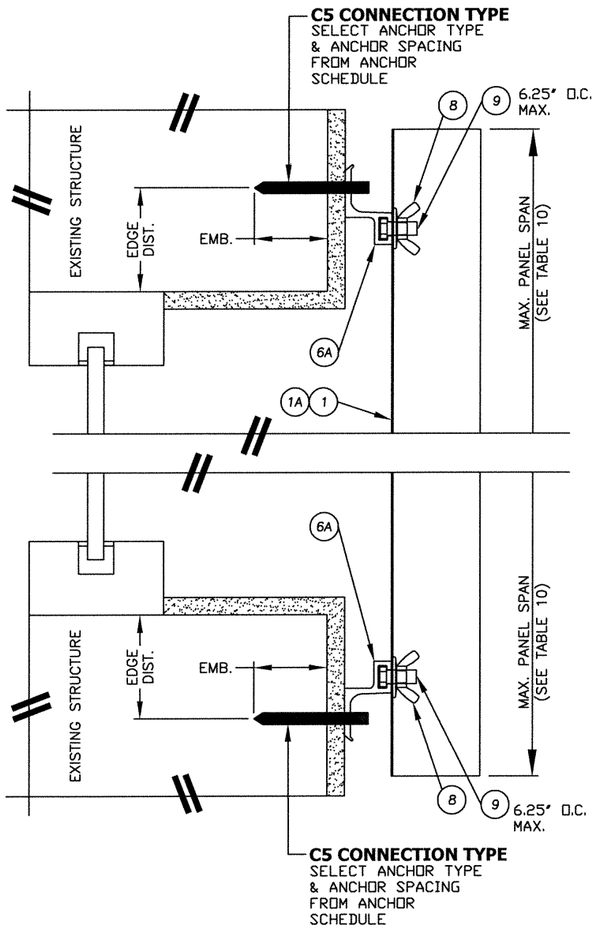
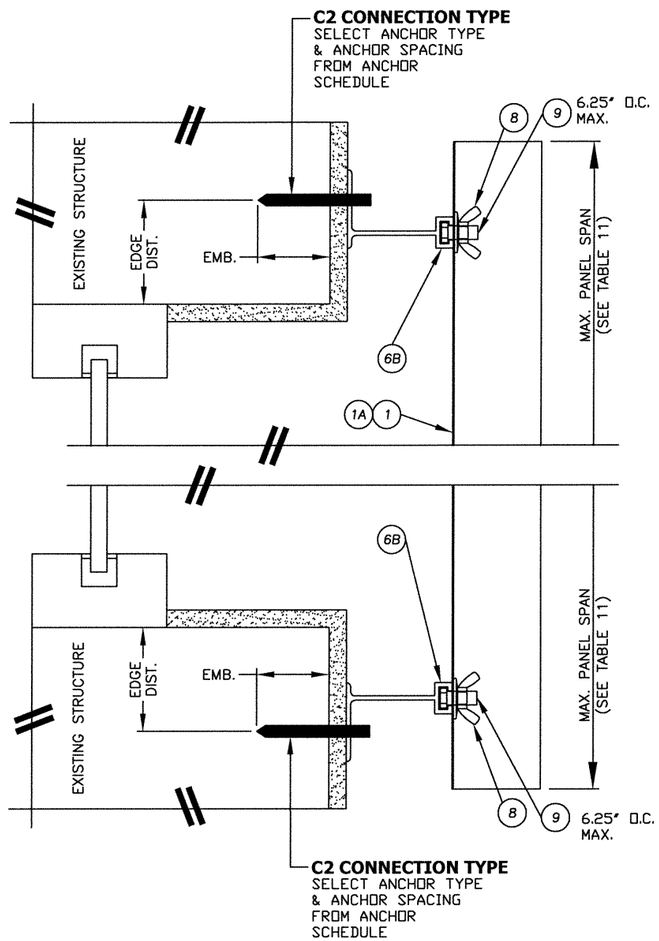
DATE: 11/25/07
SCALE: N.T.S.
DWG. BY: EW
CHK. BY: LFS
DRAWING NO.: FL-10106.1
SHEET 5 OF 10



10 1" OFFSET "F" TRACK MOUNT

TABLE 10 - PANEL SPAN
1" OFFSET "F" TRACK MOUNT
ALLOWABLE DESIGN PRESSURES

PANEL SPAN (in)	ALLOWABLE DESIGN PRESSURE (+) PSF	(-) PSF
106.0	50.0	50.0
96.0	55.0	55.0
84.0	63.0	63.0
72.0	73.5	73.5
60.0	88.0	88.0
0-53.0	100.0	100.0



11 2" OFFSET "F" TRACK MOUNT

TABLE 11 - PANEL SPAN
2" OFFSET "F" TRACK MOUNT
ALLOWABLE DESIGN PRESSURES

PANEL SPAN (in)	ALLOWABLE DESIGN PRESSURE (+) PSF	(-) PSF
106.0	50.0	50.0
96.0	55.0	55.0
84.0	63.0	63.0
72.0	73.5	73.5
60.0	88.0	88.0
0-53.0	100.0	100.0

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PART OR ASSEMBLY: *VERTICAL CROSS SECTIONS*

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CHK. BY: LFS
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SHEET 6 OF 10

ANCHOR SCHEDULE

FASTENER MAX. SPACING (IN.) REQ'D FOR VARIOUS DESIGN LOADS AND SPANS

EXISTING STRUCTURE	ANCHOR TYPE	INSTALLATION DETAILS: EDGE DISTANCE	LOAD PSF MAX. (SEE NOTE 1)	SPANS UP TO 53" (SEE NOTE 1) CONNECTION TYPE						SPANS UP TO 106" (SEE NOTE 1) CONNECTION TYPE						SPANS UP TO 144" (SEE NOTE 1) CONNECTION TYPE					
				C1	C2	C3	C4	C5	C6	C1	C2	C3	C4	C5	C6	C1	C2	C3	C4	C5	C6
CONCRETE	1/4"ø ITW TAPCON EM = 1.75" CL = 4.0" Fc = 3000 PSI	ED = 2.5"	50	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	12.5	13.5	10.7	16.0					
			60	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	14.5	10.4	11.3	8.9	16.0					
			70	16.0	16.0	16.0	16.0	16.0	15.2	16.0	16.0	12.4	8.9	9.6	7.6	16.0					
			85	16.0	16.0	16.0	14.7	15.9	12.5	16.0	13.5	10.2	7.3	7.9	6.2	13.5					
			100	16.0	16.0	16.0	12.5	13.5	10.7	15.6	11.5	8.7	6.2	6.7	5.3	11.5					
			120	16.0	16.0	14.5	10.4	11.3	8.9	13.0	9.5	7.2	5.2	5.6	4.4	9.5					
			140	16.0	16.0	12.4	8.9	9.6	7.6	11.1	8.2	6.2	4.4	4.8		8.2					
	1/4"ø ELCO ULTRACON EM = 1.75" CL = 4.0" Fc = 2846 PSI	ED = 2.5"	50	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	14.4	12.4	11.2	8.8	16.0					
			60	16.0	16.0	16.0	16.0	16.0	14.7	16.0	15.8	12.0	10.4	9.3	7.3	15.8					
			70	16.0	16.0	16.0	16.0	16.0	12.6	16.0	13.5	10.3	8.9	8.0	6.3	13.5					
			85	16.0	16.0	16.0	14.6	13.1	10.4	15.1	11.1	8.4	7.3	6.5	5.2	11.1					
			100	16.0	16.0	14.4	12.4	11.2	8.8	12.9	9.5	7.2	6.2	5.6	4.4	9.5					
			120	16.0	15.8	12.0	10.4	9.3	7.3	10.7	7.9	6.0	5.2	4.6		7.9					
			140	16.0	13.5	10.3	8.9	8.0	6.3	9.2	6.7	5.1	4.4	4.0		6.7					
	1/4"ø ELCO MALE/ FEMALE "PANELMATE" EM = 2.0" CL = 3.0" Fc = 3350 PSI	ED = 2.5"	50	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	14.4	11.4	16.0					
			60	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	15.5	13.3	12.0	9.5	16.0					
			70	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	13.3	11.4	10.3	8.1	16.0					
			85	16.0	16.0	16.0	16.0	16.0	13.4	16.0	14.4	10.9	9.4	8.5	6.7	14.4					
			100	16.0	16.0	16.0	16.0	14.4	11.4	16.0	12.2	9.3	8.0	7.2	5.7	12.2					
			120	16.0	16.0	15.5	13.3	12.0	9.5	13.9	10.2	7.7	6.6	6.0	4.7	10.2					
			140	16.0	16.0	13.3	11.4	10.3	8.1	11.9	8.7	6.6	5.7	5.1	4.0	8.7					
	1/4"ø ITW "SAMMYS SSC" EM = 2.0" CL = 3.0" Fc = 3295 PSI	ED = 2.5"	50	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	14.4	16.0	13.4	16.0					
			60	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	12.0	14.1	11.1	16.0					
			70	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	15.6	10.3	12.1	9.5	16.0					
			85	16.0	16.0	16.0	16.0	16.0	15.7	16.0	16.0	12.8	8.4	10.0	7.8	16.0					
			100	16.0	16.0	16.0	14.4	16.0	13.4	16.0	14.4	10.9	7.2	8.5	6.7	14.4					
			120	16.0	16.0	16.0	12.0	14.1	11.1	16.0	12.0	9.1	6.0	7.0	5.5	12.0					
			140	16.0	16.0	15.6	10.3	12.1	9.5	13.9	10.3	7.8	5.1	6.0	4.7	10.3					
	5/16"ø ITW TAPCON XL EM = 1.75" CL = 3.75" Fc = 3000 PSI	ED = 3.0"	50	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	12.4	15.1	16.0					
			60	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	14.2	13.4	10.3	12.6	16.0					
			70	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	12.1	11.4	8.8	10.8	16.0					
			85	16.0	16.0	16.0	16.0	14.6	16.0	16.0	13.2	10.0	9.4	7.3	8.9	13.2					
			100	16.0	16.0	16.0	16.0	12.4	15.1	15.2	11.2	8.5	8.0	6.2	7.5	11.2					
			120	16.0	16.0	14.2	13.4	10.3	12.6	12.7	9.3	7.1	6.7	5.1	6.3	9.3					
			140	16.0	16.0	12.1	11.4	8.8	10.8	10.9	8.0	6.0	5.7	4.4	5.4	8.0					
	ALL POINTS 1/4"ø SOLID SET EM = 0.875" CL = 3" Fc = 3000 PSI	ED = 2.0"	50	16.0	16.0	16.0	16.0	16.0	15.7	16.0	16.0	12.8	11.4	9.9	7.8	16.0					
			60	16.0	16.0	16.0	16.0	16.0	13.0	16.0	14.0	10.6	9.5	8.3	6.5	14.0					
			70	16.0	16.0	16.0	16.0	14.2	11.2	16.0	12.0	9.1	8.1	7.1	5.6	12.0					
			85	16.0	16.0	15.0	13.4	11.7	9.2	13.4	9.9	7.5	6.7	5.8	4.6	9.9					
			100	16.0	16.0	12.8	11.4	9.9	7.8	11.4	8.4	6.4	5.7	4.9	3.9	8.4					
			120	16.0	14.0	10.6	9.5	8.3	6.5	9.5	7.0	5.3	4.7	4.1	3.2	7.0					
			140	16.0	12.0	9.1	8.1	7.1	5.6	8.1	6.0	4.5	4.0	3.5							

EM = MINIMUM EMBEDMENT (PENETRATION)
CL = MINIMUM CENTER TO CENTER ANCHOR SPACING

MASONRY ANCHOR SCHEDULE NOTES:

1. SPANS AND LOADS SHOWN HERE ARE FOR DETERMINING ANCHOR SPACING ONLY. ALLOWABLE STORM PANEL SPANS FOR SPECIFIC LOADS MUST BE LIMITED TO THOSE SHOWN IN THE SPAN TABLES.
2. SEE MOUNTING SECTION DETAILS FOR IDENTIFICATION OF CONNECTION TYPE.
3. TO USE THE ANCHOR SCHEDULE, FIRST DETERMINE THE DESIGN PRESSURE, SPAN AND CONNECTION TYPE FOR THE SPECIFIC OPENING BEING PROTECTED. ENTER ANCHOR SCHEDULE AT A LOAD EQUAL TO OR GREATER THAN THE REQUIREMENT AND A SPAN EQUAL TO OR GREATER THAN THE REQUIRMENT; USE THE ANCHOR SPACING LISTED FOR THE SPECIFIC CONNECTION TYPE AND ANCHOR SELECTED.
4. LINEAR INTERPOLATION IS ALLOWED FOR INTERMEDIATE FASTENER SPACING AND LOADS.
5. EXISTING STRUCTURE MAY BE CONCRETE, HOLLOW BLOCK OR WOOD FRAMING. REFER TO ANCHOR SCHEDULE FOR PROPER ANCHOR TYPE BASED ON TYPE OF EXISTING STRUCTURE.
6. ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH THE ANCHOR MANUFACTURER'S RECOMMENDATIONS.
7. MINIMUM EMBEDMENT AND EDGE DISTANCE EXCLUDES WALL FINISH, WALL COVERINGS, STUCCO AND SIMILAR MATERIALS.
8. WASHERED WINGNUTS AND LOCKNUTS SHALL BE INSTALLED SUCH THAT THE NUT IS FLUSH WITH THE THREADED STUD OR BOLT, MINIMUM. SIDEWALK SCREWS (WAFER HEAD SCREWS) SHALL HAVE MINIMUM OF 1/2" ENGAGEMENT OF THREADS IN BASE ANCHOR U.O.N.
9. ▨ DESIGNATES ANCHOR CONDITIONS WHICH ARE NOT ACCEPTABLE USES.
10. SEE THE COMPONENT DETAILS SHEET FOR LOCATION OF ANCHOR POINTS ON EACH TYPE OF MOUNTING HARDWARE.

LYNDON F. SCHMIDT LICENSE No. 43409 STATE OF FLORIDA PROFESSIONAL ENGINEER
9-24-15
Documents Prepared By:
Lyndon F. Schmidt
P.E. No. 43409
BUILDING CONSULTANTS, INC.
P.O. Box 230, Valrico, FL 33595
Phone No.: 813.659.9197
FBPE C.A. No. 9813

PRODUCT: ELITE HURRICANE SHUTTERS .050" ALUMINUM STORM PANEL
PART OR ASSEMBLY: ANCHOR SCHEDULE – CONCRETE

NO.	DATE	REVISIONS	BY
2	4/23/15	UPDATE TO 5TH ED. (2014) FBC	JK
1	05/22/12	UPDATE TO 2010 FBC	WH

DATE: 11/20/07
SCALE: N.T.S.
DWG. BY: EW
CHK. BY: LFS
DRAWING NO.: FL-10106.1
SHEET 7 OF 10

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ANCHOR SCHEDULE

FASTENER MAX. SPACING (IN.) REQ'D FOR VARIOUS DESIGN LOADS AND SPANS

INSTALLATION DETAILS

EXISTING STRUCTURE	ANCHOR TYPE	EDGE DISTANCE	LOAD PSF MAX. (SEE NOTE 1)	SPANS UP TO 53" (SEE NOTE 1) CONNECTION TYPE						SPANS UP TO 84" (SEE NOTE 1) CONNECTION TYPE						SPANS UP TO 106" (SEE NOTE 1) CONNECTION TYPE						SPANS UP TO 144" (SEE NOTE 1) CONNECTION TYPE					
				C1	C2	C3	C4	C5	C6	C1	C2	C3	C4	C5	C6	C1	C2	C3	C4	C5	C6	C1	C2	C3	C4	C5	C6
HOLLOW CONCRETE BLOCK	1/4"ø ITW TAPCON EM = 1.25" CL = 4.0"	ED = 2.5"	50	12.8	9.4	7.1	7.4	5.5	4.3	8.0	5.9	4.5	4.6			6.4	4.7					7.8					
			60	10.6	7.8	5.9	6.1	4.6		6.7	4.9					5.3						6.5					
			70	9.1	6.7	5.1	5.2			5.7	4.2					4.5											
			85	7.5	5.5	4.2	4.3			4.7																	
			100	6.4	4.7					4.0																	
			120	5.3																							
			140	4.5																							
	1/4"ø ELCO TAPCON EM = 1.25" CL = 3.0"	ED = 2.5"	50	15.2	11.2	8.5	11.9	6.6	5.2	9.6	7.0	5.3	7.5	4.1	3.2	7.6	5.6	4.2	5.9	3.3							
			60	12.6	9.3	7.0	8.9	5.5	4.3	8.0	5.8	4.4	5.6	3.4		6.3	4.6	3.5	4.4								
			70	10.8	8.0	6.0	8.3	4.7	3.7	6.8	5.0	3.8	5.2			5.4	4.0	3.0	4.1								
			85	8.9	6.5	5.0	6.1	3.8	3.0	5.6	4.1	3.1	3.8			4.4	3.2		3.0								
			100	7.6	5.6	4.2	4.9	3.3		4.8	3.5		3.1			3.8											
			120	6.3	4.6	3.5	3.7			4.0						3.1											
			140	5.4	4.0	3.0	3.2			3.4																	
	1/4"ø ELCO MALE/ FEMALE "PANELMATE" EM = 1.25" CL = 3.0"	ED = 2.0"	50	16.0	16.0	16.0	16.0	12.8	10.1	16.0	13.7	10.4	13.9	8.1	6.3	14.7	10.8	8.2	11.0	6.4	5.0	10.4					
			60	16.0	16.0	13.7	16.0	10.7	8.4	15.5	11.4	8.6	10.4	6.7	5.3	12.3	9.0	6.8	8.2	5.3	4.2	8.7					
			70	16.0	15.5	11.8	15.4	9.1	7.2	13.3	9.8	7.4	9.7	5.7	4.5	10.5	7.7	5.9	7.7	4.5	3.6	7.4					
			85	16.0	12.8	9.7	11.3	7.5	5.9	10.9	8.0	6.1	7.1	4.7	3.7	8.6	6.4	4.8	5.6	3.7							
			100	14.7	10.8	8.2	9.1	6.4	5.0	9.3	6.8	5.2	5.7	4.0	3.1	7.3	5.4	4.1	4.5	3.2							
			120	12.3	9.0	6.8	6.9	5.3	4.2	7.7	5.7	4.3	4.3	3.3		6.1	4.5	3.4	3.4								
			140	10.5	7.7	5.9	6.0	4.5	3.6	6.6	4.9	3.7	3.8			5.2	3.8		3.0								
	1/4"ø ITW DYNABOLT SLEEVE ANCHOR EM = 1.125" CL = 3.0"	ED = 1.5"	50	16.0	16.0	16.0	16.0	13.2	10.4	16.0	14.1	10.7	15.9	8.3	6.5	15.2	11.2	8.5	12.6	6.6	5.2	11.2					
			60	16.0	16.0	16.0	14.1	11.0	8.6	16.0	11.7	8.9	11.9	6.9	5.4	12.6	9.3	7.0	9.4	5.5	4.3	9.3					
			70	16.0	16.0	16.0	12.1	9.4	7.4	13.7	10.0	7.6	11.1	5.9	4.6	10.8	8.0	6.0	8.8	4.7	3.7	8.0					
			85	16.0	13.1	13.1	10.0	7.7	6.1	11.2	8.3	6.3	8.2	4.9	3.8	8.9	6.5	5.0	6.5	3.8	3.0	6.5					
			100	15.2	11.2	11.2	8.5	6.6	5.2	9.6	7.0	5.3	6.5	4.1	3.2	7.6	5.6	4.2	5.2	3.3							
			120	12.6	9.3	9.3	7.0	5.5	4.3	8.0	5.8	4.4	5.0	3.4		6.3	4.6	3.5	3.9								
			140	10.8	8.0	8.0	6.0	4.7	3.7	6.8	5.0	3.8	4.3			5.4	4.0	3.0	3.4								
	ALL POINTS 1/4"ø SOLID SET EM = 0.875" CL = 3"	ED = 2.0"	50	16.0	16.0	16.0	16.0	13.5	10.6	16.0	14.4	10.9	12.1	8.5	6.7	15.5	11.4	8.6	9.6	6.7	5.3	11.4					
			60	16.0	16.0	14.4	14.4	11.2	8.8	16.0	12.0	9.1	9.1	7.0	5.6	12.9	9.5	7.2	7.2	5.6	4.4	9.5					
			70	16.0	16.0	12.4	13.5	9.6	7.6	14.0	10.3	7.8	8.5	6.0	4.8	11.1	8.1	6.2	6.7	4.8	3.8	8.1					
			85	16.0	13.4	10.2	9.9	7.9	6.2	11.5	8.4	6.4	6.2	5.0	3.9	9.1	6.7	5.1	4.9	3.9	3.1	6.7					
			100	15.5	11.4	8.6	7.9	6.7	5.3	9.8	7.2	5.4	5.0	4.2	3.3	7.7	5.7	4.3	3.9	3.3							
			120	12.9	9.5	7.2	6.0	5.6	4.4	8.1	6.0	4.5	3.8	3.5		6.4	4.7	3.6	3.0								
			140	11.1	8.1	6.2	5.3	4.8	3.8	7.0	5.1	3.9	3.3	3.0		5.5	4.0	3.1									

EM = MINIMUM EMBEDMENT (PENETRATION)
CL = MINIMUM CENTER TO CENTER ANCHOR SPACING

MASONRY ANCHOR SCHEDULE NOTES:

1. SPANS AND LOADS SHOWN HERE ARE FOR DETERMINING ANCHOR SPACING ONLY. ALLOWABLE STORM PANEL SPANS FOR SPECIFIC LOADS MUST BE LIMITED TO THOSE SHOWN IN THE SPAN TABLES.
2. SEE MOUNTING SECTION DETAILS FOR IDENTIFICATION OF CONNECTION TYPE.
3. TO USE THE ANCHOR SCHEDULE, FIRST DETERMINE THE DESIGN PRESSURE, SPAN AND CONNECTION TYPE FOR THE SPECIFIC OPENING BEING PROTECTED. ENTER ANCHOR SCHEDULE AT A LOAD EQUAL TO OR GREATER THAN THE REQUIREMENT AND A SPAN EQUAL TO OR GREATER THAN THE REQUIRMENT; USE THE ANCHOR SPACING LISTED FOR THE SPECIFIC CONNECTION TYPE AND ANCHOR SELECTED.
4. LINEAR INTERPOLATION IS ALLOWED FOR INTERMEDIATE FASTENER SPACING AND LOADS.
5. EXISTING STRUCTURE MAY BE CONCRETE, HOLLOW BLOCK OR WOOD FRAMING. REFER TO ANCHOR SCHEDULE FOR PROPER ANCHOR TYPE BASED ON TYPE OF EXISTING STRUCTURE.
6. ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH THE ANCHOR MANUFACTURER'S RECOMMENDATIONS.
7. MINIMUM EMBEDMENT AND EDGE DISTANCE EXCLUDES WALL FINISH, WALL COVERINGS, STUCCO AND SIMILAR MATERIALS.
8. WASHERED WINGNUTS AND LOCKNUTS SHALL BE INSTALLED SUCH THAT THE NUT IS FLUSH WITH THE THREADED STUD OR BOLT, MINIMUM. SIDEWALK SCREWS (WAFER HEAD SCREWS) SHALL HAVE MINIMUM OF 1/2" ENGAGEMENT OF THREADS IN BASE ANCHOR U.O.N.
9. ▨ DESIGNATES ANCHOR CONDITIONS WHICH ARE NOT ACCEPTABLE USES.
10. SEE THE COMPONENT DETAILS SHEET FOR LOCATION OF ANCHOR POINTS ON EACH TYPE OF MOUNTING HARDWARE.

T. F. SCHMIDT LICENSE No. 43409 STATE OF FLORIDA PROFESSIONAL ENGINEER

4/24/15

Documents Prepared By:
Lyndon F. Schmidt
P.E. No. 43409

BUILDING CONSULTANTS, INC.
P.O. Box 230, Valrico, FL 33595
Phone No.: 813.659.9197
FBPE C.A. No. 9813

PRODUCT: ELITE HURRICANE SHUTTERS .050" ALUMINUM STORM PANEL

PART OR ASSEMBLY: ANCHOR SCHEDULE – HOLLOW BLOCK

NO.	DATE	REVISIONS	BY
2	4/23/15	UPDATE TO 5TH ED. (2014) FBC	JK
1	05/22/12	UPDATE TO 2010 FBC	WH

DATE: 11/20/07
SCALE: N.T.S.
DWG. BY: EW
CHK. BY: LFS
DRAWING NO.: FL-10106.1
SHEET 8 OF 10

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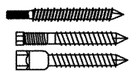
ANCHOR SCHEDULE

FASTENER MAX. SPACING (IN.) REQ'D FOR VARIOUS DESIGN LOADS AND SPANS

EXISTING STRUCTURE	ANCHOR TYPE	INSTALLATION DETAILS																					
		LOAD PSF MAX. (SEE NOTE 1)	SPANS UP TO 53" (SEE NOTE 1)						SPANS UP TO 106" (SEE NOTE 1)						SPANS UP TO 144" (SEE NOTE 1)						
			CONNECTION TYPE						CONNECTION TYPE						CONNECTION TYPE						
			C1	C2	C3	C4	C5	C6	C1	C2	C3	C4	C5	C6	C1	C2	C3	C4	C5	C6
WOOD (G >= 0.55) (SOUTHERN YELLOW PINE)	 1/4"ø ELCO MALE/ FEMALE "PANELMATE" EM = 1.88" CL = 3.0"	50	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	10.8	15.5	12.2	16.0					
		60	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	9.0	12.9	10.2	16.0					
		70	16.0	16.0	16.0	15.5	16.0	16.0	16.0	16.0	14.2	7.7	11.0	8.7	16.0					
		85	16.0	16.0	16.0	12.8	16.0	14.4	16.0	15.4	11.7	6.4	9.1	7.2	15.4					
		100	16.0	16.0	16.0	10.8	15.5	12.2	16.0	13.1	9.9	5.4	7.7	6.1	13.1					
		120	16.0	16.0	16.0	9.0	12.9	10.2	14.8	10.9	8.3	4.5	6.4	5.1	10.9					
		140	16.0	16.0	14.2	7.7	11.0	8.7	12.7	9.4	7.1	3.8	5.5	4.3	9.4					
	 1/4"ø LAG SCREW EM = 1.88" CL = 2.0"	50	16.0	16.0	16.0	12.9	16.0	16.0	16.0	16.0	16.0	6.4	14.6	11.5	16.0					
		60	16.0	16.0	16.0	10.8	16.0	16.0	16.0	16.0	15.7	5.4	12.2	9.6	16.0					
		70	16.0	16.0	16.0	9.2	16.0	16.0	16.0	16.0	13.4	4.6	10.4	8.2	16.0					
		85	16.0	16.0	16.0	7.6	16.0	13.6	16.0	14.6	11.0	3.8	8.6	6.8	14.6					
		100	16.0	16.0	16.0	6.4	14.6	11.5	16.0	12.4	9.4	3.2	7.3	5.7	12.4					
		120	16.0	16.0	15.7	5.4	12.2	9.6	14.0	10.3	7.8	2.7	6.1	4.8	10.3					
		140	16.0	16.0	13.4	4.6	10.4	8.2	12.0	8.8	6.7	2.3	5.2	4.1	8.8					
	 1/4"ø WOOD SCREW EM = 1.88" CL = 2.0"	50	16.0	16.0	16.0	11.6	16.0	14.5	16.0	15.6	11.9	5.8	9.2	7.2	15.6					
		60	16.0	16.0	16.0	9.7	15.4	12.1	16.0	13.0	9.9	4.8	7.7	6.0	13.0					
		70	16.0	16.0	16.0	8.3	13.2	10.4	15.2	11.2	8.5	4.1	6.6	5.2	11.2					
		85	16.0	16.0	14.0	6.8	10.8	8.5	12.5	9.2	7.0	3.4	5.4	4.2	9.2					
		100	16.0	15.6	11.9	5.8	9.2	7.2	10.6	7.8	5.9	2.9	4.6	3.6	7.8					
		120	16.0	13.0	9.9	4.8	7.7	6.0	8.8	6.5	4.9	2.4	3.8	3.0	6.5					
		140	15.2	11.2	8.5	4.1	6.6	5.2	7.6	5.6	4.2	2.0	3.3	2.6						
	 1/4"ø SMS EM = 1.88" CL = 2.0"	50	16.0	16.0	16.0	11.6	16.0	14.5	16.0	15.6	11.9	5.8	9.2	7.2	15.6					
		60	16.0	16.0	16.0	9.7	15.4	12.1	16.0	13.0	9.9	4.8	7.7	6.0	13.0					
		70	16.0	16.0	16.0	8.3	13.2	10.4	15.2	11.2	8.5	4.1	6.6	5.2	11.2					
		85	16.0	16.0	14.0	6.8	10.8	8.5	12.5	9.2	7.0	3.4	5.4	4.2	9.2					
		100	16.0	15.6	11.9	5.8	9.2	7.2	10.6	7.8	5.9	2.9	4.6	3.6	7.8					
		120	16.0	13.0	9.9	4.8	7.7	6.0	8.8	6.5	4.9	2.4	3.8	3.0	6.5					
		140	15.2	11.2	8.5	4.1	6.6	5.2	7.6	5.6	4.2	2.0	3.3	2.6						

EM = MINIMUM EMBEDMENT (PENETRATION)
CL = MINIMUM CENTER TO CENTER ANCHOR SPACING

WOOD ANCHOR SCHEDULE NOTES:

1. SPANS AND LOADS SHOWN HERE ARE FOR DETERMINING ANCHOR SPACING ONLY. ALLOWABLE STORM PANEL SPANS FOR SPECIFIC LOADS MUST BE LIMITED TO THOSE SHOWN IN THE SPAN TABLES.
2. SEE MOUNTING SECTION DETAILS FOR IDENTIFICATION OF CONNECTION TYPE.
3. TO USE THE ANCHOR SCHEDULE, FIRST DETERMINE THE DESIGN PRESSURE, SPAN AND CONNECTION TYPE FOR THE SPECIFIC OPENING BEING PROTECTED. ENTER ANCHOR SCHEDULE AT A LOAD EQUAL TO OR GREATER THAN THE REQUIREMENT AND A SPAN EQUAL TO OR GREATER THAN THE REQUIRMENT; USE THE ANCHOR SPACING LISTED FOR THE SPECIFIC CONNECTION TYPE AND ANCHOR SELECTED.
4. LINEAR INTERPOLATION IS ALLOWED FOR INTERMEDIATE FASTENER SPACING AND LOADS.
5. EXISTING STRUCTURE MAY BE CONCRETE, HOLLOW BLOCK OR WOOD FRAMING. REFER TO ANCHOR SCHEDULE FOR PROPER ANCHOR TYPE BASED ON TYPE OF EXISTING STRUCTURE.
6. ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH THE ANCHOR MANUFACTURER'S RECOMMENDATIONS.
7. MINIMUM EMBEDMENT AND EDGE DISTANCE EXCLUDES WALL FINISH, WALL COVERINGS, STUCCO AND SIMILAR MATERIALS.
8. WASHERED WINGNUTS AND LOCKNUTS SHALL BE INSTALLED SUCH THAT THE NUT IS FLUSH WITH THE THREADED STUD OR BOLT, MINIMUM. SIDEWALK SCREWS (WAFER HEAD SCREWS) SHALL HAVE MINIMUM OF 1/2" ENGAGEMENT OF THREADS IN BASE ANCHOR U.O.N.
9. ▨ DESIGNATES ANCHOR CONDITIONS WHICH ARE NOT ACCEPTABLE USES.
10. SEE THE COMPONENT DETAILS SHEET FOR LOCATION OF ANCHOR POINTS ON EACH TYPE OF MOUNTING HARDWARE.
10. ANCHORS INSTALLED INTO THE 1.5" FACE OF 2X FRAMING SHALL BE IN THE CENTER OF THE 1.5" FACE (.75" EDGE DISTANCE). ANCHORS SHALL BE A MINIMUM OF 2" FROM ENDS OF 2X FRAMING.
11. FOR CONNECTION TYPE "C4", ANCHORS SHALL BE INSTALLED A MINIMUM OF 1" FROM THE LOADED EDGE OF 2X FRAMING AND A MINIMUM OF 2" FROM THE ENDS OF 2X FRAMING.
12. FIELD VERIFY THAT ANCHORS ARE INTO ADEQUATE STRUCTURAL WOOD FRAMING MEMBERS AND NOT INTO PLYWOOD, OSB OR OTHER SIMILAR MATERIALS.
13. SPECIFIC GRAVITY (G = 0.55) IS FOR SOUTHERN YELLOW PINE.

T. F. SCHMIDT LICENSE No. 43409 STATE OF FLORIDA PROFESSIONAL ENGINEER

4245

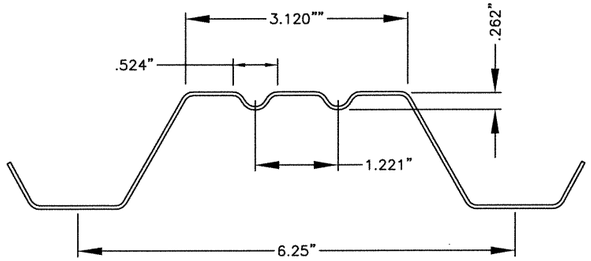
Documents Prepared By:
Lyndon F. Schmidt
P.E. No. 43409

BUILDING CONSULTANTS, INC.
P.O. Box 230, Valrico, FL 33595
Phone No.: 813.659.9197
FBPE C.A. No. 9813

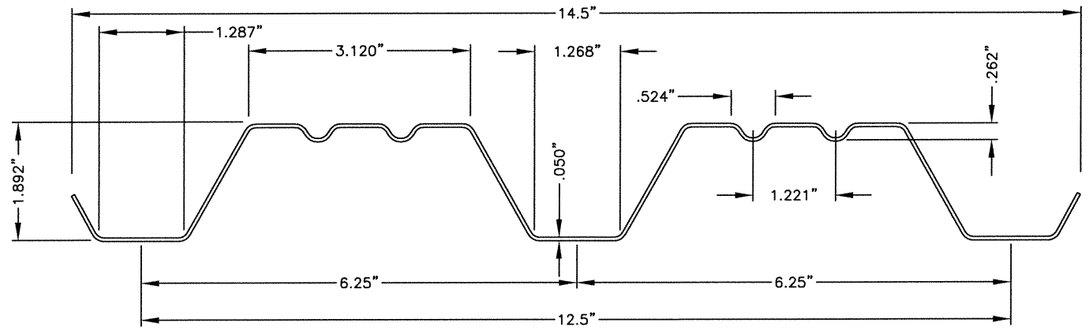
PRODUCT: ELITE HURRICANE SHUTTERS .050" ALUMINUM STORM PANEL
PART OR ASSEMBLY: ANCHOR SCHEDULE - WOOD

NO.	DATE	REVISIONS	BY
2	4/23/15	UPDATE TO 5TH ED. (2014) FBC	JK
1	05/22/12	UPDATE TO 2010 FBC	LFS

DATE: 11/25/07
SCALE: N.T.S.
DWG. BY: EW
CHK. BY: LFS
DRAWING NO.: FL-10106.1
SHEET 9 OF 10

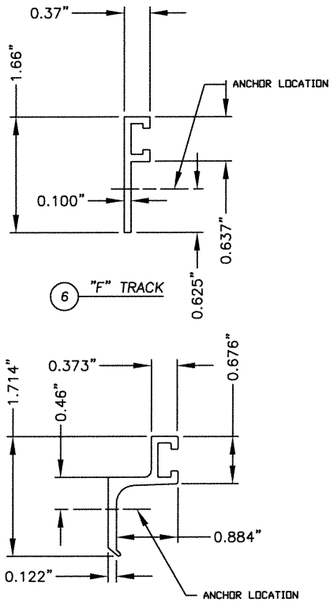


1A ALUMINUM STORM 1/2 PANEL PROFILE



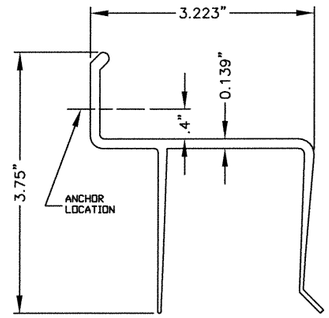
1 ALUMINUM STORM PANEL PROFILE

ITEM	DESCRIPTION	MATERIAL
1	ALUM. STORM PANEL (0.050" THK)	ALUMINUM
1A	ALUM. STORM 1/2 PANEL (0.050" THK)	ALUMINUM
2	"h" HEADER	ALUMINUM
3	EXPANDED "U" HEADER	ALUMINUM
5	2" x 2" ANGLE	ALUMINUM
6	"F" TRACK	ALUMINUM
6A	1" BUILD-OUT "F" TRACK	ALUMINUM
6B	2" BUILD-OUT "F" TRACK	ALUMINUM
8	WASHERED WINGNUT	STEEL
9	1/4-20 x 3/4" H.H. BOLT	S.S.
10	1" BUILD OUT "F" HEADER	ALUMINUM
10A	2" BUILD OUT "F" HEADER	ALUMINUM
13	1/4"-20 x 3/4" KNURLED STUD	S.S.
14	1/4"-20 SIDEWALK BOLT	S.S.

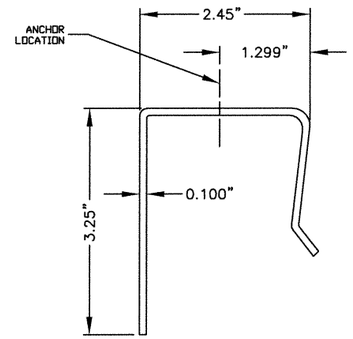


6 "F" TRACK

6A "1" BUILD OUT "F" TRACK

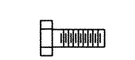


10 "1" BUILD OUT "F" HEADER

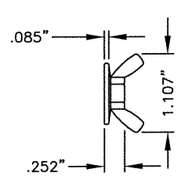


3 EXPANDED "U" HEADER

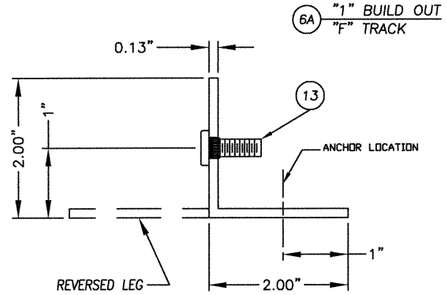
14 SIDEWALK BOLT



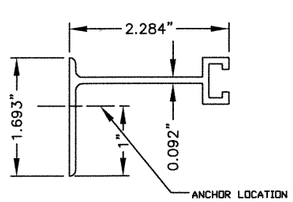
9 H.H. BOLT



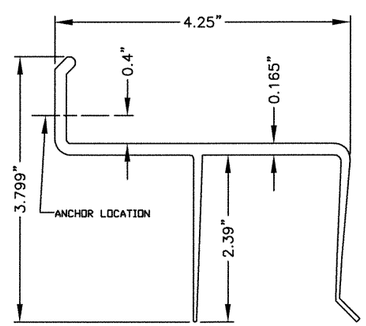
8 WING NUT



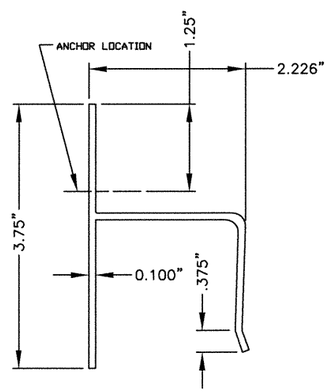
5 ANGLE



6B "2" BUILD OUT "F" TRACK



10A "2" BUILD OUT "F" HEADER



2 "h" HEADER

L.F. SCHMIDT LICENSE No. 43409 STATE OF FLORIDA PROFESSIONAL ENGINEER

4/24/15

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P.E. No. 43409

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PRODUCT:
ELITE HURRICANE SHUTTERS
0.050" ALUMINUM STORM PANEL

PART OR ASSEMBLY:
BILL OF MATERIALS & COMPONENTS

NO.	DATE	BY
2	4/23/15	UPDATE TO 5TH ED. (2014) FBC	JK
1	05/22/12	UPDATE TO 2010 FBC	LFS

REVISIONS

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