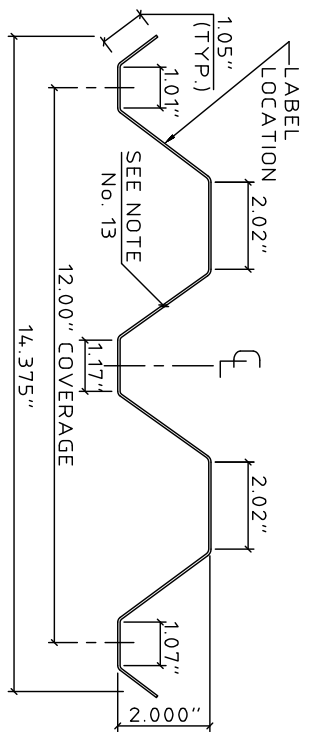
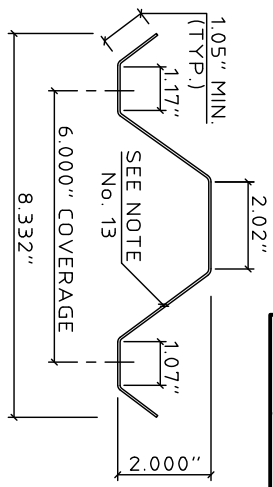


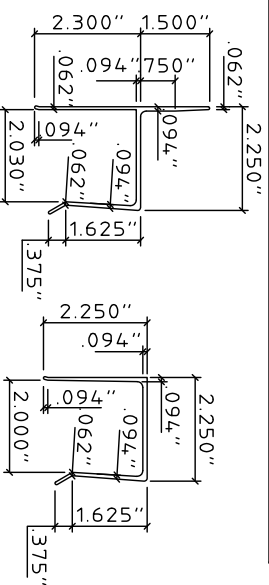
**0.040", 0.050" & 0.060" ALUMINUM STORM PANELS**



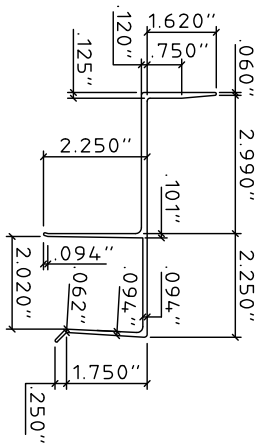
**1** STORM PANEL  
SCALE : 3" = 1'-0"



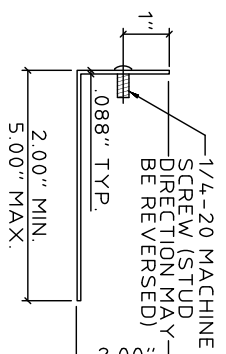
**1a** HALF STORM PANEL  
SCALE : 3" = 1'-0"



**2** U-HEADER  
SCALE : 3" = 1'-0"



**3a** BUILD-OUT "U" HEADER  
SCALE : 3" = 1'-0"



**4** STUD ANGLE  
SCALE : 3" = 1'-0"

**GENERAL NOTES:**  
1. THESE PRODUCT EVALUATION DOCUMENTS REPRESENT A SHUTTER SYSTEM DESIGNED AND TESTED AS A LARGE MISSILE IMPACT PROTECTIVE SYSTEM IN ACCORDANCE WITH THE FLORIDA BUILDING CODE.

2. THIS SHUTTER SYSTEM HAS BEEN TESTED FOR LARGE MISSILE IMPACT RESISTANCE IN CONFORMANCE WITH THE SBCCI STANDARD SSTD 12-99 AND FOR UNIFORM STATIC AIR PRESSURE IN CONFORMANCE WITH ASTM E330-02. REFERENCED TEST REPORTS: 98-010, 98-011, 98-014, 99-014, 00-041, 00-022, 01-037 AND 02-012.

3. AN ALLOWABLE STRESS INCREASE HAS NOT BEEN USED IN THE DESIGN OF THIS PRODUCT.

4. DETERMINE THE POSITIVE AND NEGATIVE DESIGN LOADS TO USE WHEN REFERENCING THESE DOCUMENTS IN ACCORDANCE WITH THE GOVERNING CODE AND GOVERNING WIND VELOCITY.

5. USE OF THESE PRODUCT EVALUATION DOCUMENTS ARE PREPARED BY THE PRODUCT ENGINEER AND ARE GENERIC. THEY DO NOT INCLUDE INFORMATION PREPARED FOR A SPECIFIC SITE.

6. USE OF THESE APPROVAL DOCUMENTS SHALL COMPLY WITH CHAPTER 61G15-23 OF THE FLORIDA ADMINISTRATIVE CODE.

7. THESE PRODUCT EVALUATION DOCUMENTS ARE SUITABLE TO BE APPLIED BY THE CONTRACTOR PROVIDED THE CONTRACTOR DOES NOT DEVIATE FROM THE CONDITIONS DETAILED HEREIN AND THE CONTRACTOR VERIFIES THE EXISTING STRUCTURE IS CAPABLE OF SUPPORTING THE SUPERIMPOSED LOADS.

8. ALTERATIONS OR ADDITIONS TO THIS DOCUMENT ARE NOT PERMITTED.

9. WHEN THE SITE CONDITIONS DEVIATE FROM THESE PRODUCT EVALUATION DOCUMENTS, THE SITE SPECIFIC DOCUMENTS SHALL BE PREPARED BY A DULY LICENSED AND REGISTERED ENGINEER OR ARCHITECT. SAID DOCUMENTS SHALL BEAR THE DATE, SIGNATURE AND EMBOSSED SEAL OF THE DELEGATED ENGINEER OR ARCHITECT AND SHALL BE SUBMITTED TO THE PRODUCT ENGINEER FOR REVIEW.

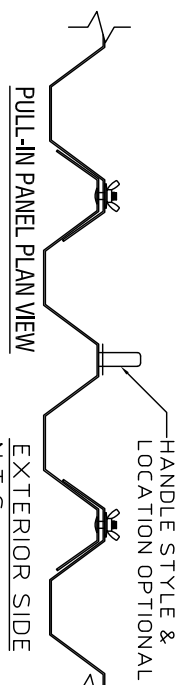
10. WHERE COMPLIANCE WITH SSTD 12-99 IS REQUIRED, PANELS SHALL BE PERMANENTLY LABELED WITH A MINIMUM OF ONE LABEL PER OPENING OR THE MANUFACTURER AND INSTALLER SHALL PROVIDE A CERTIFICATE OF COMPLIANCE. WHERE LABELS ARE USED, THE LABEL SHALL READ AS FOLLOWS:  
TOWN & COUNTRY INDUSTRIES  
FORT LAUDERDALE, FL

11. ALL SCREWS, BOLTS AND WASHERS SHALL BE 2024-T4 ALUMINUM ALLOY, STAINLESS STEEL OR GALVANIZED STEEL WITH A MINIMUM TENSILE STRENGTH OF 60 KSI, U.O.N.

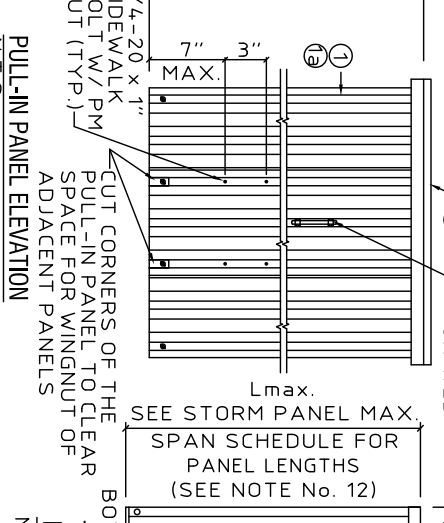
12. TOP & BOTTOM DETAILS SHOWN MAY BE INTERCHANGED AS FIELD CONDITIONS DICTATE. PANELS MAY BE MOUNTED HORIZONTALLY IF C-TRACK, BUILD-OUT F-TRACK, F-TRACK, F-ANGLE, STUD ANGLE OR DIRECT MOUNT IS USED.

13. STORM PANELS SHALL BE ALUMINUM ALLOY WITH THE FOLLOWING METAL THICKNESS:  
0.040" (3004-H134)  
0.050" (5052-H32)  
0.060" (3004-H134)

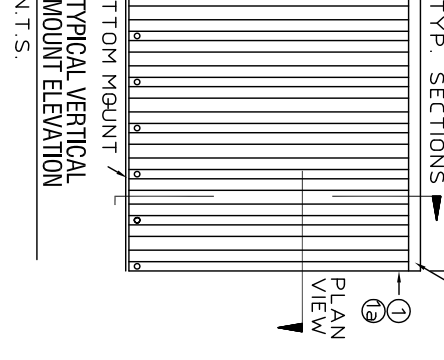
14. ALL EXTRUSIONS SHALL BE 6063-T6 ALUMINUM ALLOY, U.O.N.



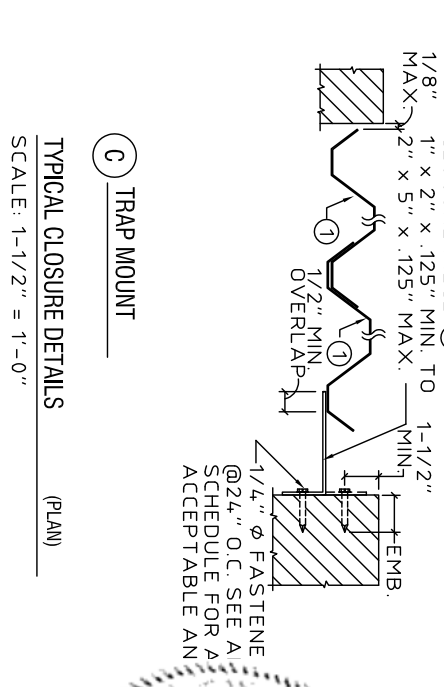
MAX. PANEL SPAN = 5'-0" @ 60.0 P.S.F. MAX.  
MAX. PANEL SPAN = 6'-0" @ 50.0 P.S.F. MAX.  
MAX. PANEL SPAN = 7'-6" @ 40.0 P.S.F. MAX.



**9** WING NUT (WVN)  
SCALE : HALF SIZE



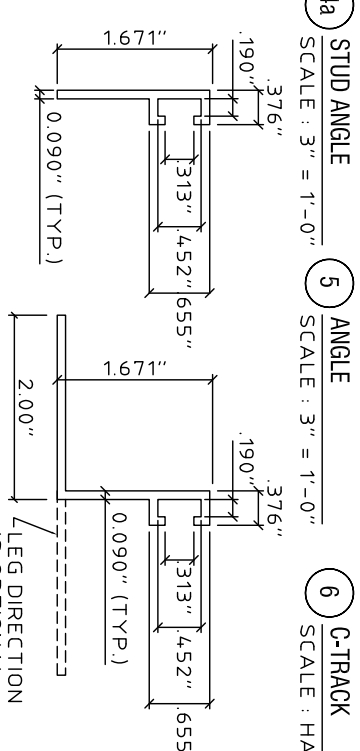
**8** F-TRACK  
SCALE : HALF SIZE



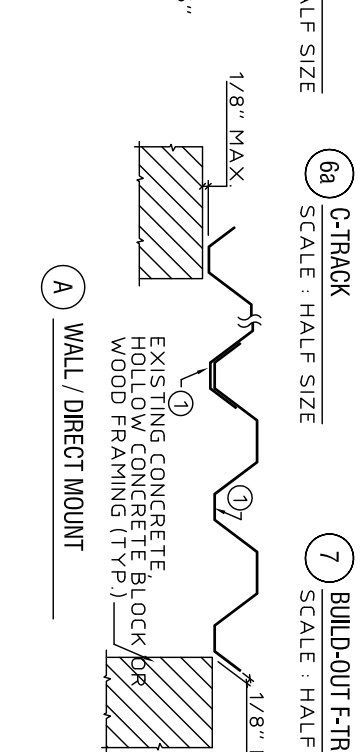
**8a** F-ANGLE-TRACK  
SCALE : HALF SIZE



**10** KEYHOLE WASHER  
SCALE : HALF SIZE



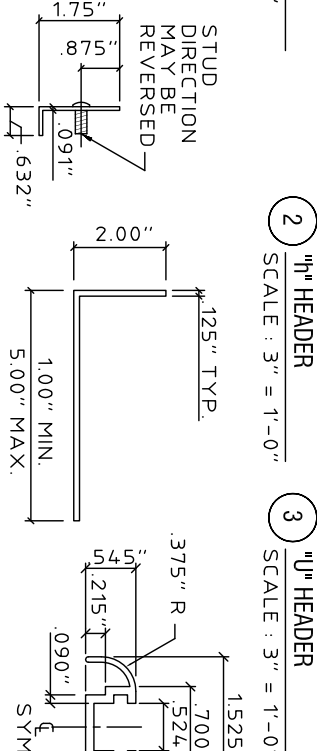
**4a** STUD ANGLE  
SCALE : 3" = 1'-0"



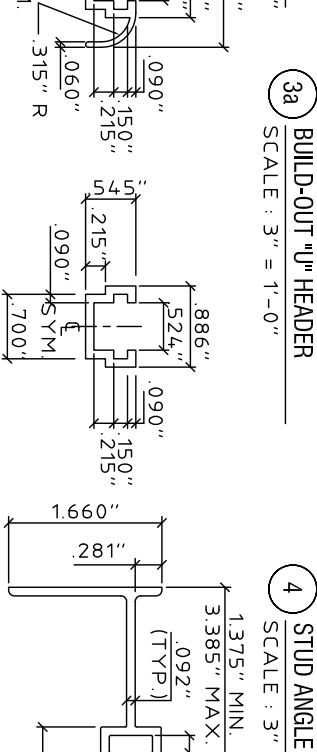
**5** ANGLE  
SCALE : 3" = 1'-0"



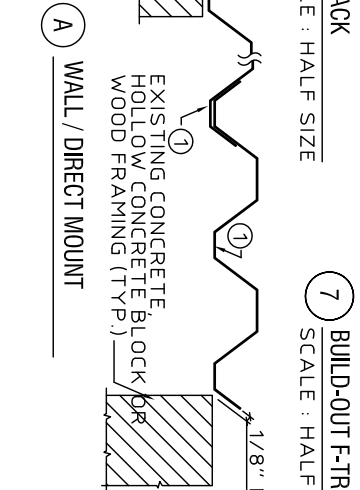
**6** C-TRACK  
SCALE : HALF SIZE



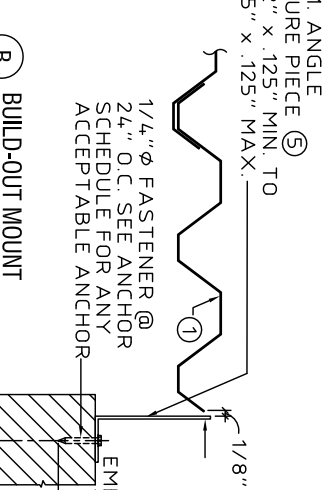
**6a** C-TRACK  
SCALE : HALF SIZE



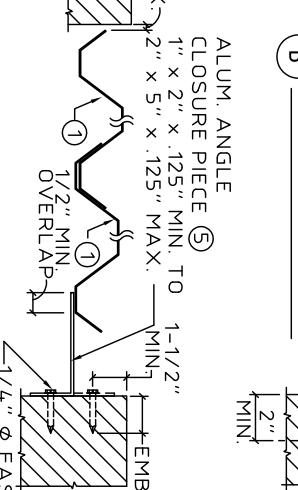
**7** BUILD-OUT F-TRACK  
SCALE : HALF SIZE



**A** WALL / DIRECT MOUNT



**B** BUILD-OUT MOUNT



**C** TRAP MOUNT



TYPICAL VERTICAL MOUNT ELEVATION  
N.T.S.



TYPICAL CLOSURE DETAILS  
SCALE: 1-1/2" = 1'-0"  
(PLAN)

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no	date	by	description

**Town & Country INDUSTRIES**  
Wholesale Aluminum and Building Products  
400 WEST McNAB ROAD  
FORT LAUDERDALE, FL 33309  
PHONE 954.970.9999 FAX 954-970-9988

**KNEZEVICH ASSOCIATES**  
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website: www.Knezevich.com \* email: VJK@Knezevich.com

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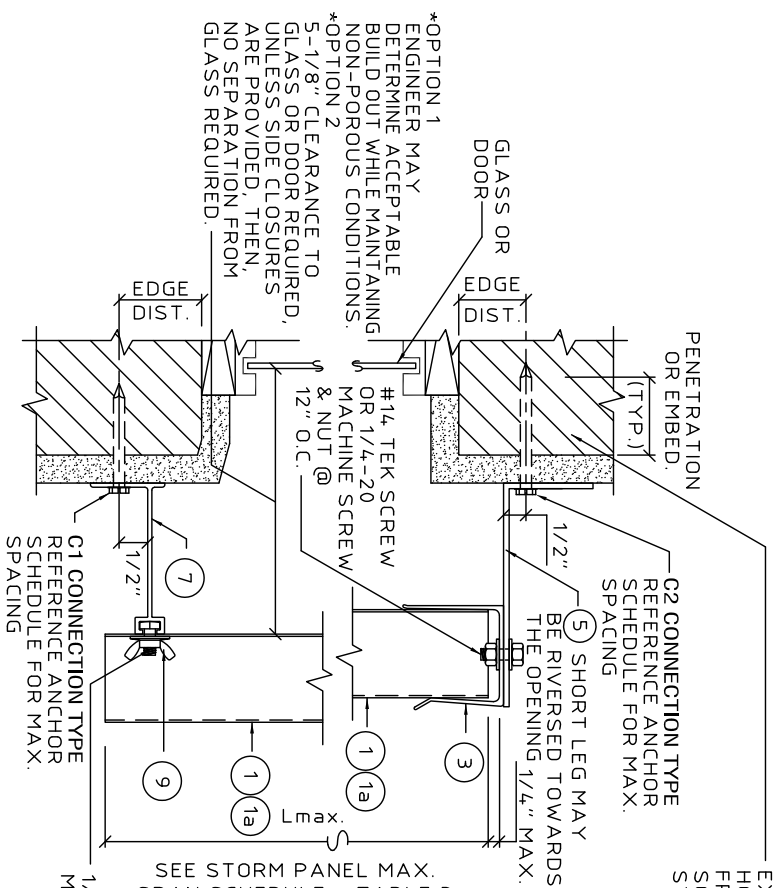
Professional Engineer  
V.J. Knezevich  
Florida License No. 10983  
Florida Exp. Date: 12/31/2008  
Florida Seal No. 27989

Drawn by: [Signature]  
Scale: AS NOTED  
Date: 09/10/2008  
Project no.: 08-353

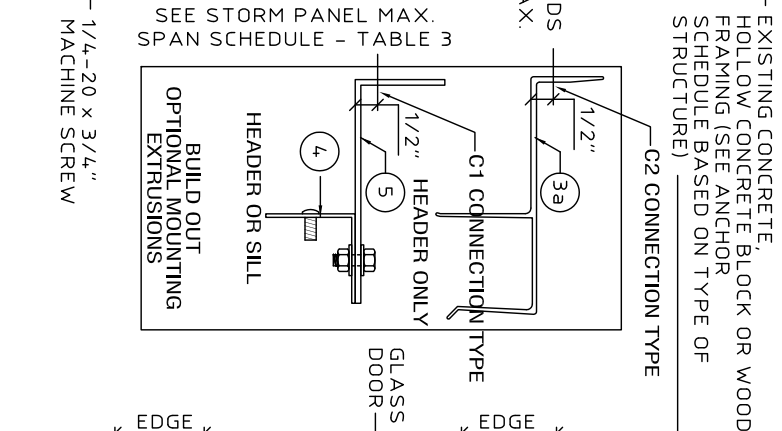
September 2008

PAGE 1 of 6

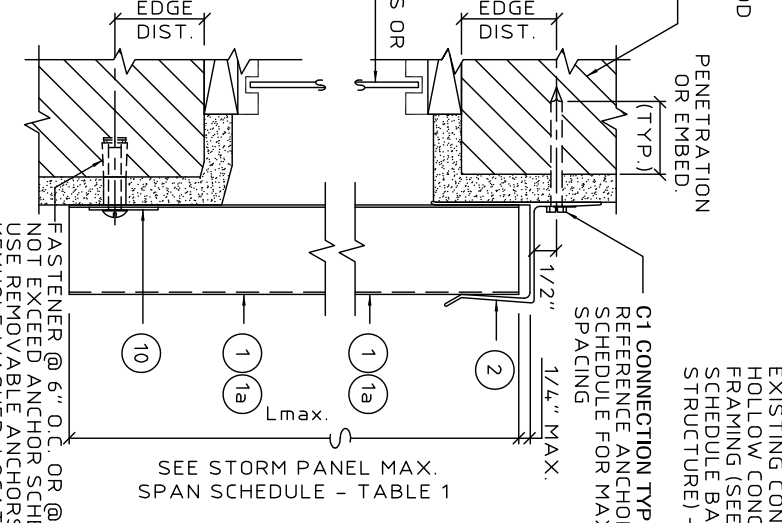
**0.040", 0.050" & 0.060" ALUMINUM STORM PANELS**



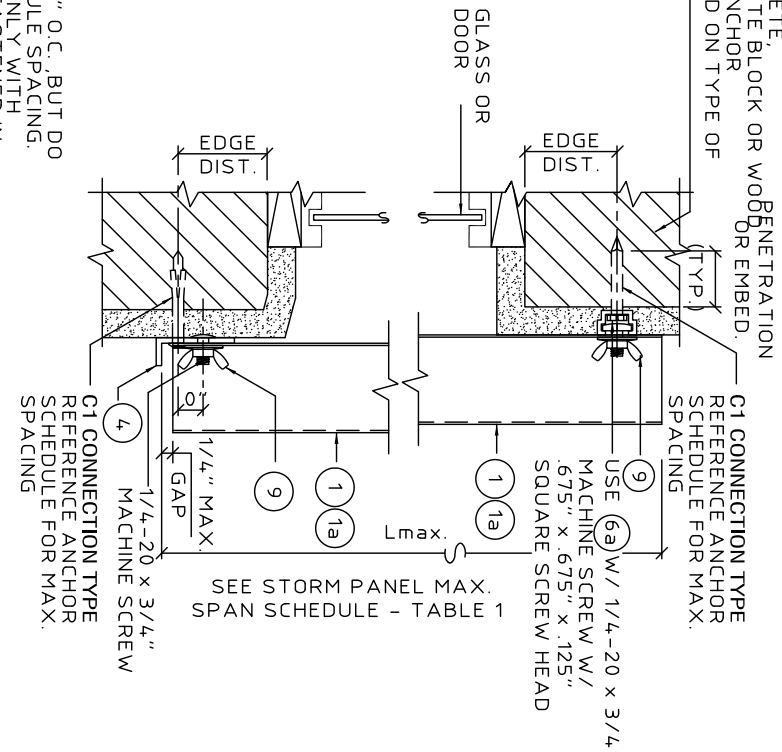
**D BUILD-OUT MOUNT SECTION**  
SCALE : 3" = 1'-0"



**E WALL MOUNT SECTION**  
SCALE : 3" = 1'-0"



**F WALL MOUNT SECTION**  
SCALE : 3" = 1'-0"



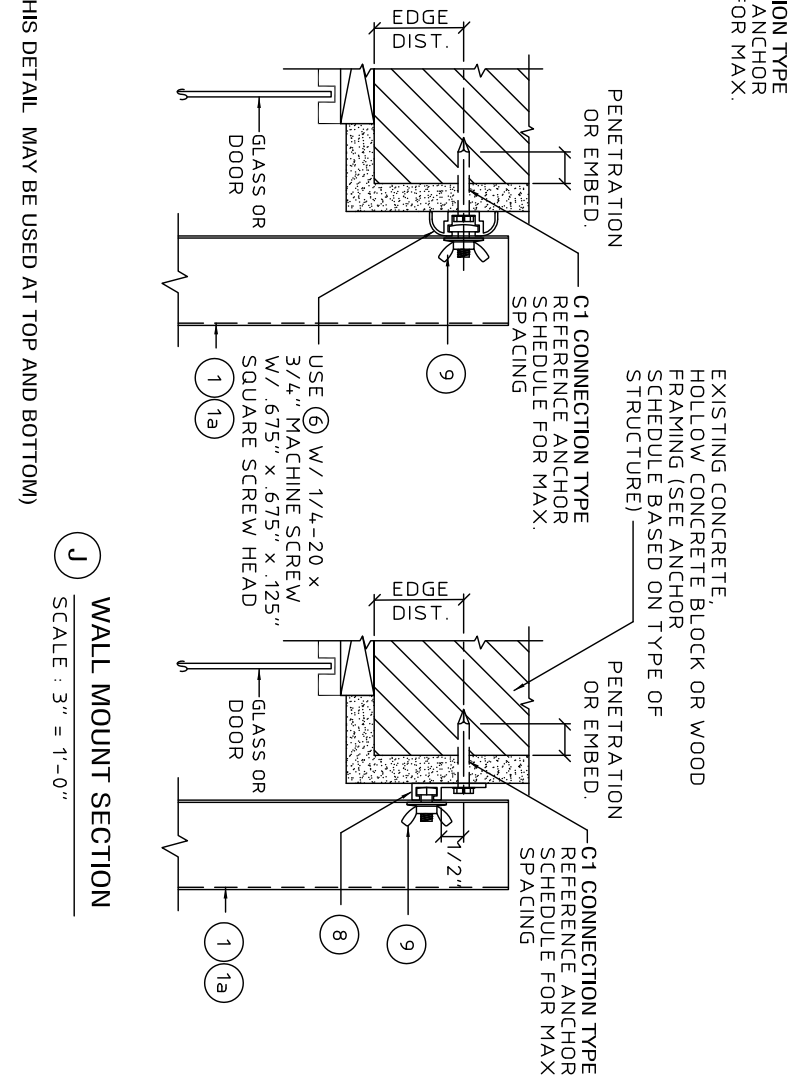
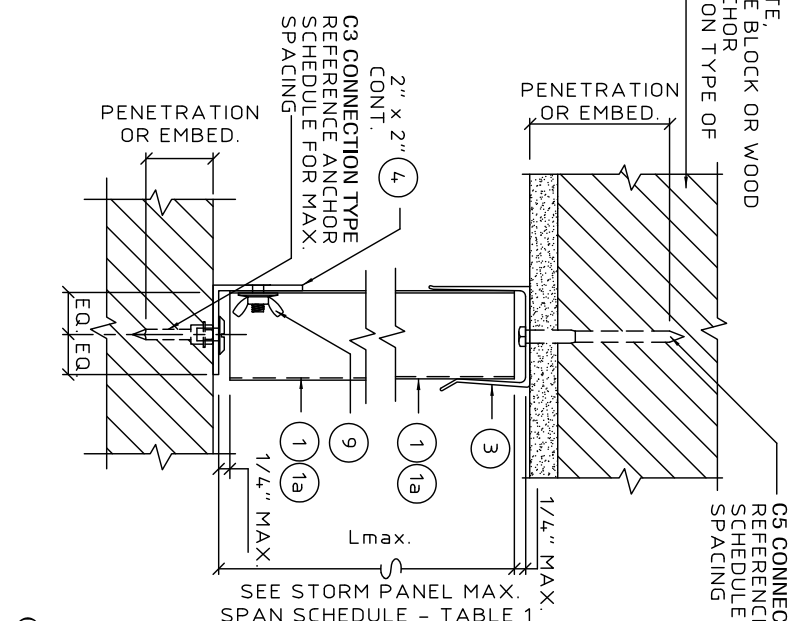
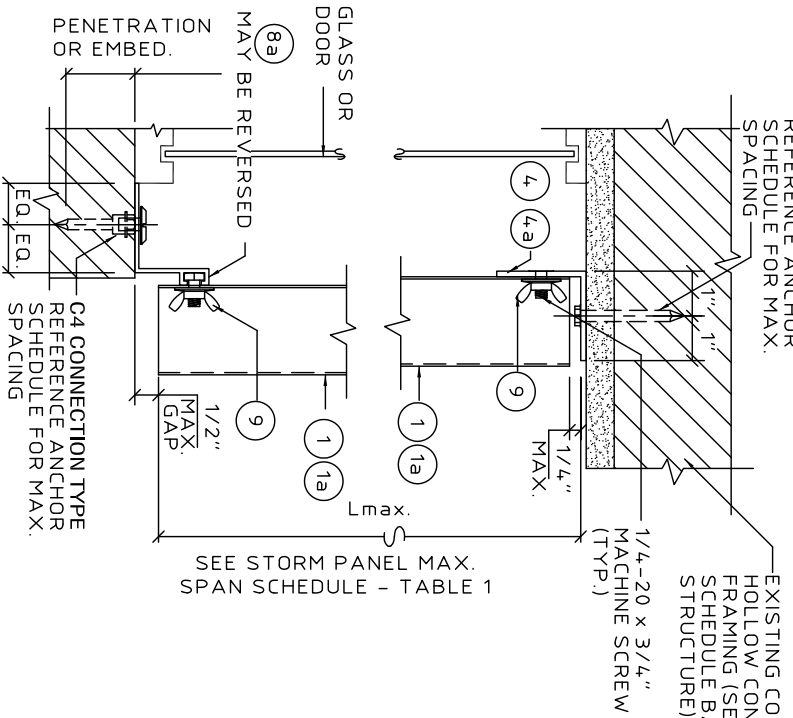
**G CEILING/FLOOR MOUNT SECTION**  
SCALE : 3" = 1'-0"

**H CEILING/FLOOR MOUNT SECTION**  
SCALE : 3" = 1'-0"

**I WALL MOUNT SECTION**  
SCALE : 3" = 1'-0"

**J WALL MOUNT SECTION**  
SCALE : 3" = 1'-0"

(THIS DETAIL MAY BE USED AT TOP AND BOTTOM)



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revisions			
no	date	by	description

**Town & Country INDUSTRIES**  
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website: www.Knezevich.com \* email: VJK@Knezevich.com

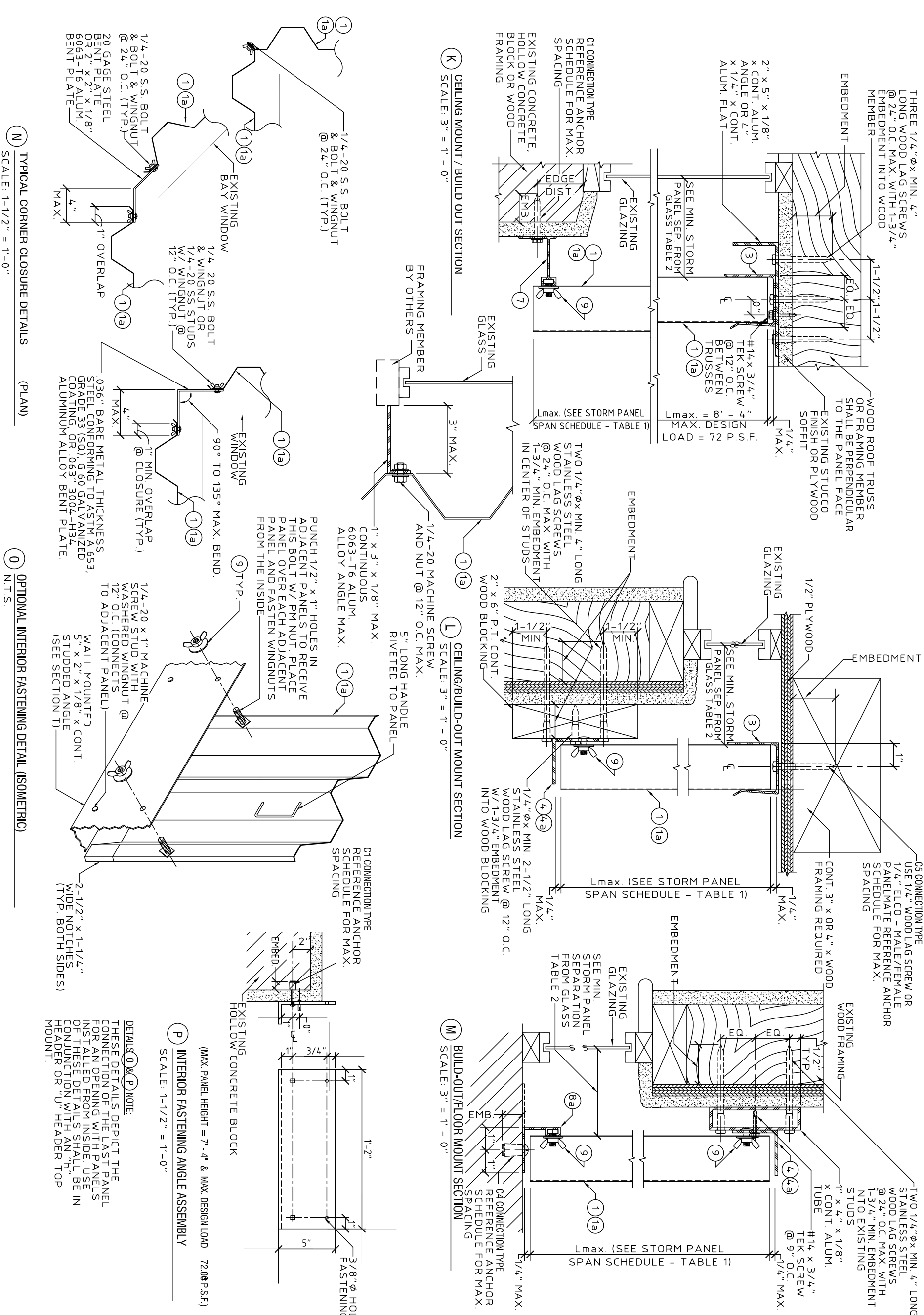
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Professional Engineer  
V. J. Knezevich  
Florida License No. 10983  
Professional Seal No. 27989

Drawn by: [Signature]  
Date: 09/10/2008  
Project no.: 08-353

September 2008

**0.040", 0.050" & 0.060" ALUMINUM STORM PANELS**



THREE 1/4" φ x MIN. 4" LONG WOOD LAG SCREWS @ 24" O.C. MAX. WITH 1-3/4" EMBEDMENT INTO WOOD MEMBER

OR WOOD ROOF TRUSS OR FRAMING MEMBER SHALL BE PERPENDICULAR TO THE PANEL FACE

C5 CONNECTION TYPE USE 1/4" WOOD LAG SCREW OR 1/4" ELCO - MALE/FEMALE PANELMATE REFERENCE ANCHOR SCHEDULE FOR MAX.

TWO 1/4" φ x MIN. 4" LONG STAINLESS STEEL WOOD LAG SCREWS @ 24" O.C. MAX. WITH 1-3/4" MIN. EMBEDMENT INTO EXISTING STUDS

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**revisions**

no	date	by	description

V. J. Knezevich  
Professional Engineer  
Florida No. 10983  
Expiration 09/30/2008

Designed by: [Signature]  
Checked by: [Signature]  
Date: 09/10/2008  
Project no.: 08-353

September 2008

**Town & Country INDUSTRIES**  
Wholesale Aluminum and Building Products

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0.040", 0.050" & 0.060" ALUMINUM STORM PANELS

**ANCHOR SCHEDULE**  
 FASTENER MAXIMUM SPACING (INCHES) REQUIRED FOR VARIOUS DESIGN LOADS AND SPANS

EXIST. STRUC.	ANCHOR TYPE	EDGE DISTANCE	LOAD (W) P.S.F. MAX. (SEE NOTE 1)	SHORTER EDGE DISTANCES					LONGER EDGE DISTANCES											
				SPANS UP TO 5'-0" (SEE NOTE 1)	SPANS UP TO 8'-9" (SEE NOTE 1)	SPANS UP TO 12'-0" (SEE NOTE 1)	SPANS UP TO 15'-0" (SEE NOTE 1)	CONNECTION TYPE (SEE NOTE 3)	SPANS UP TO 5'-0" (SEE NOTE 1)	SPANS UP TO 8'-9" (SEE NOTE 1)	SPANS UP TO 12'-0" (SEE NOTE 1)	SPANS UP TO 15'-0" (SEE NOTE 1)	CONNECTION TYPE (SEE NOTE 3)							
CONCRETE	1/4" Φ ELCO MALE/FEMALE "PANELMATE" W/ 1-7/8" MIN. EMBED. & 1/4-20 MACHINE SCREW WITH NUT	ED = 1.0"	33.0	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
			44.2	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
CONCRETE	1/4" Φ ELCO ULTRACON WITH 1/4" Φ W/ 1-3/4" MIN. EMBEDMENT	ED = 1.0"	33.0	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
			44.2	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
CONCRETE	1/4" Φ POWERS ZAMAC NAIL-IN W/ 1-1/8" MIN. EMBEDMENT	ED = 2.0"	33.0	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
			44.2	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
CONCRETE	5/16" Φ ELCO ULTRACON WITH 1-3/4" MIN. EMBEDMENT	ED = 2.187"	33.0	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
			44.2	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
CONCRETE	1/4" Φ ALL-POINTS SOLID-SET ANCHOR W/ 7/8" EMBEDMENT & 1/4-20 STAINLESS STEEL MACHINE SCREW	ED = 1.25"	33.0	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
			44.2	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18

SEE PAGE 6 OF 6 FOR COMPLETE ANCHOR NOTES.

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Professional Engineer  
 V. J. Knezevich  
 No. 10983  
 State of Florida  
 Exp. 12/31/2008

Drawn by: [Signature]  
 Date: 09/10/2008  
 Project no.: 08-353

revisions  

no	date	by	description

**Town & Country INDUSTRIES**  
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0.040", 0.050" & 0.060" ALUMINUM STORM PANELS

ANCHOR SCHEDULE

FASTENER MAXIMUM SPACING (INCHES) REQUIRED FOR VARIOUS DESIGN LOADS AND SPANS

EXIST. STRUC.	ANCHOR TYPE	EDGE DISTANCE	LOAD (W) P.S.F. MAX. (SEE NOTE 1)	SHORTER EDGE DISTANCES					LONGER EDGE DISTANCES														
				SPANS UP TO 5'-0" (SEE NOTE 1)		SPANS UP TO 8'-9" (SEE NOTE 1)		SPANS UP TO 12'-0" (SEE NOTE 1)		SPANS UP TO 15'-0" (SEE NOTE 1)		SPANS UP TO 5'-0" (SEE NOTE 1)		SPANS UP TO 8'-9" (SEE NOTE 1)		SPANS UP TO 12'-0" (SEE NOTE 1)		SPANS UP TO 15'-0" (SEE NOTE 1)					
				CONNECTION TYPE (SEE NOTE 3)	C1 C2 C3 C4 C5	CONNECTION TYPE (SEE NOTE 3)	C1 C2 C3 C4 C5	CONNECTION TYPE (SEE NOTE 3)	C1 C2 C3 C4 C5	CONNECTION TYPE (SEE NOTE 3)	C1 C2 C3 C4 C5	CONNECTION TYPE (SEE NOTE 3)	C1 C2 C3 C4 C5	CONNECTION TYPE (SEE NOTE 3)	C1 C2 C3 C4 C5	CONNECTION TYPE (SEE NOTE 3)	C1 C2 C3 C4 C5	CONNECTION TYPE (SEE NOTE 3)	C1 C2 C3 C4 C5				
HOLLOW CONCRETE BLOCK	1/4" Ø ITW TAPCON W/ 1-1/4" MIN. EMBEDMENT	ED = 1.0"	33.0	18	18	12	10	10	14	7	6	5	10	10	5	4	8	8	4	3	3		
				44.2	18	18	9	8	7	10	10	5	4	4	7	7	3	3	7	5	3	3	
				47.2	17	17	8	7	7	10	10	5	4	4	7	6	3	3	7	5	3	3	
				64.0	13	13	6	5	5	7	7	3	3	3	7	5	3	3	7	5	3	3	
				80.0	10	10	5	4	4	7	5	3	3	3	7	5	3	3	7	5	3	3	
				80.0	5	5	5	5	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
	ELCO ULTRACON WITH 1/4" Ø W/ 1-1/4" MIN. EMBEDMENT	ED = 1.0"	33.0	18	18	18	16	15	18	18	10	9	8	15	15	7	6	12	12	6	5	5	
				44.2	18	18	14	12	11	16	16	8	6	6	11	11	5	5	10	8	5	4	4
				47.2	18	18	13	11	10	15	15	7	6	6	11	10	5	4	10	8	5	4	4
				64.0	18	18	9	8	7	11	10	5	4	4	10	8	5	4	10	8	5	4	4
				80.0	15	15	7	6	6	10	8	5	4	4	10	8	5	4	10	8	5	4	4
				80.0	8	8	4	3	3	5	4	4	4	4	5	4	4	4	5	4	4	4	4
1/4" Ø MALE/FEMALE "PANELMATE" W/ 1-1/4" MIN. EMBED & 1/4-20 MACHINE SCREW WITH NUT	ED = 2.0"	33.0	18	18	10	8	8	11	11	5	4	4	8	8	4	3	6	6	3	3	3		
			44.2	15	15	7	6	6	8	8	4	3	3	6	6	3	3	5	4	4	4	4	
			47.2	14	14	7	6	5	8	8	4	3	3	5	5	5	5	5	4	4	4	4	
			64.0	10	10	5	4	4	6	5	3	3	3	5	4	4	4	5	4	4	4	4	
			80.0	8	8	4	3	3	5	4	4	4	4	5	4	4	4	5	4	4	4	4	
			80.0	8	8	4	3	3	5	4	4	4	4	5	4	4	4	5	4	4	4	4	
1/4" Ø POWERS ZAMAC NAIL-IN W/ 1-1/8" MIN. EMBEDMENT	ED = 2.0"	33.0	18	18	15	13	12	18	18	8	7	7	15	15	6	5	12	12	5	4	4		
			44.2	18	18	11	9	9	15	15	6	5	5	11	11	4	4	10	8	4	3	3	
			47.2	18	18	10	9	8	14	14	6	5	5	10	9	4	3	10	8	4	3	3	
			64.0	18	18	7	6	6	10	10	4	3	3	10	8	4	3	10	8	4	3	3	
			80.0	15	15	6	5	5	10	8	4	3	3	10	8	4	3	10	8	4	3	3	
			80.0	15	15	6	5	5	10	8	4	3	3	10	8	4	3	10	8	4	3	3	
5/16" Ø ELCO ULTRACON WITH 1-1/4" MIN. EMBEDMENT	ED = 1.563"	33.0	18	18	12	11	10	17	17	7	6	6	12	12	5	4	10	10	4	3	3		
			44.2	18	18	9	8	8	12	12	5	4	4	9	9	3	3	8	6	3	3	3	
			47.2	18	18	8	7	7	12	12	5	4	4	8	8	3	3	8	6	3	3	3	
			64.0	15	15	6	5	5	10	10	4	3	3	10	8	4	3	10	8	4	3	3	
			80.0	15	15	6	5	5	10	8	4	3	3	10	8	4	3	10	8	4	3	3	
			80.0	15	15	6	5	5	10	8	4	3	3	10	8	4	3	10	8	4	3	3	
1/4" Ø ALL-POINTS SOLID-SET ANCHOR W/ 7/8" EMBEDMENT & 1/4-20 STAINLESS STEEL MACHINE SCREW	ED = 1.25"	33.0	18	18	12	11	10	17	17	7	6	6	12	12	5	4	10	10	4	3	3		
			44.2	18	18	9	8	8	12	12	5	4	4	9	9	3	3	8	6	3	3	3	
			47.2	18	18	8	7	7	12	12	5	4	4	8	8	3	3	8	6	3	3	3	
			64.0	15	15	6	5	5	10	10	4	3	3	10	8	4	3	10	8	4	3	3	
			80.0	15	15	6	5	5	10	8	4	3	3	10	8	4	3	10	8	4	3	3	
			80.0	15	15	6	5	5	10	8	4	3	3	10	8	4	3	10	8	4	3	3	
HOLLOW CONCRETE BLOCK	ED = 2.0"	33.0	18	18	18	18	18	18	18	13	11	10	17	17	9	8	13	13	7	6	6		
			44.2	18	18	17	14	13	17	17	9	8	7	12	12	7	6	11	11	9	6	5	
			47.2	18	18	16	13	13	16	16	9	7	7	12	11	6	5	11	11	9	6	5	
			64.0	18	18	12	10	9	12	11	6	5	5	11	9	6	5	11	9	6	5	5	
			80.0	17	17	9	8	7	11	9	6	5	5	11	9	6	5	11	9	6	5	5	
			80.0	17	17	9	8	7	11	9	6	5	5	11	9	6	5	11	9	6	5	5	
HOLLOW CONCRETE BLOCK	ED = 3.0"	33.0	18	18	15	12	12	14	14	8	7	7	10	10	6	5	8	8	5	4	4		
			44.2	18	18	11	9	9	10	10	6	5	5	7	7	4	4	7	5	4	3	3	
			47.2	17	17	10	9	8	10	10	6	5	4	7	6	4	3	7	5	4	3	3	
			64.0	13	13	8	6	6	7	7	4	3	3	7	5	4	3	7	5	4	3	3	
			80.0	10	10	6	5	5	7	5	4	3	3	7	5	4	3	7	5	4	3	3	
			80.0	10	10	6	5	5	7	5	4	3	3	7	5	4	3	7	5	4	3	3	
HOLLOW CONCRETE BLOCK	ED = 3.0"	33.0	18	18	18	17	16	18	18	12	10	9	15	15	8	7	12	12	7	5	5		
			44.2	18	18	15	13	12	16	16	9	7	7	11	11	6	5	10	8	5	4	4	
			47.2	18	18	14	12	11	15	15	8	7	6	11	10	6	5	10	8	5	4	4	
			64.0	18	18	10	9	8	11	10	6	5	4	10	8	5	4	10	8	5	4	4	
			80.0	15	15	8	7	6	10	8	5	4	4	10	8	5	4	10	8	5	4	4	
			80.0	15	15	8	7	6	10	8	5	4	4	10	8	5	4	10	8	5	4	4	
HOLLOW CONCRETE BLOCK	ED = 2.5"	33.0	18	18	17	14	13	14	14	9	8	7	10	10	7	5	8	8	5	4	4		
			44.2	18	18	12	10	9	10	10	7	5	5	7	7	5	4	7	5	4	3	3	
			47.2	17	17	12	9	9	10	10	6	5	5	7	6	5	4	7	5	4	3	3	
			64.0	13	13	8	7	6	7	7	5	4	3	7	5	4	3	7	5	4	3	3	
			80.0	10	10	7	5	5	7	5	4	3	3	7	5	4	3	7	5	4	3	3	
			80.0	10	10	7	5	5	7	5	4	3	3	7	5	4	3	7	5	4	3	3	
HOLLOW CONCRETE BLOCK	ED = 2.5"	33.0	18	18	14	11	11	12	12	8	6	6	9	9	5	4	7	7	4	3	3		
			44.2	16	16	10	8	8	9	9	6	4	4	6	6	4	3	6	4	3	3	3	
			47.2	15	15	9	8	7	8	8	5	4	4	6	5	4	3	6	4	3	3	3	
			64.0	11	11	7	5	5	6	6	4	3	3	6	4	3	3	6	4	3	3	3	
			80.0	9	9	5	4	4	6	4	3	3	3	6	4	3	3	6	4	3	3	3	
			80.0	9	9	5	4	4	6	4	3	3	3	6	4	3	3	6	4	3	3	3	

SEE PAGE 6 OF 6 FOR COMPLETE ANCHOR NOTES.

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no	date	by	description

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**ANCHOR SCHEDULE**

FASTENER MAXIMUM SPACING (INCHES) REQUIRED FOR VARIOUS DESIGN LOADS AND SPANS

**0.040", 0.050" & 0.060" ALUMINUM STORM PANELS**

EXIST. STRUC.	ANCHOR TYPE	EDGE DISTANCE	LOAD (W) P.S.F. MAX. (SEE NOTE 1)	SPANS UP TO		
				5'-0"	8'-9"	12'-0"
WOOD	 1/4" Ø WOOD LAG W/ 1-27/32" MIN. THREAD PENETRATION SHEAR PARALLEL OR PERP. TO WOOD GRAIN	ED = 0.75"	33.0	C1 C2 C3 C4 C5	C1 C2 C3 C4 C5	C1 C2 C3 C4 C5
			44.2	18 18 18 18 17	18 18 11 10 10	18 18 8 7 7
			47.2	18 18 18 16 16	18 18 10 9 9	18 18 7 6 6
			64.0	18 18 13 12 12	18 18 7 7 7	18 18 7 6 6
			80.0	18 18 10 10 9	18 18 7 6 6	18 18 7 6 6
			33.0	18 18 18 18 18	18 18 15 13 13	18 18 8 8 7
			44.2	18 18 18 18 17	18 18 11 10 10	18 18 7 6 6
			47.2	18 18 18 16 16	18 18 10 9 9	18 18 7 6 6
			64.0	15 15 15 15 15	8 8 8 8 8	8 8 8 8 8
			80.0	12 12 12 12 12	8 8 8 8 8	8 8 8 8 8

TABLE 1	STORM PANEL MAXIMUM SPAN SCHEDULE		
	THICKNESS	THICKNESS	THICKNESS
NEGATIVE DESIGN LOAD W (P.S.F.)	0.040"	0.050"	0.060"
	30	11' - 1"	11' - 9"
	33	10' - 7"	11' - 2"
	35.8	10' - 2"	10' - 9"
	38.3	9' - 10"	10' - 4"
	40.7	9' - 6"	10' - 1"
	44.2	9' - 1"	9' - 8"
	47.2	8' - 10"	9' - 4"
	50.9	8' - 6"	9' - 0"
	52.4	8' - 4"	8' - 10"

TABLE 3	STORM PANEL WITH "F" ANGLE TRACK (TOP OR BOTTOM) MAX. SPAN SCHED.		
	THICKNESS	THICKNESS	THICKNESS
NEGATIVE DESIGN LOAD W (P.S.F.)	0.040"	0.050"	0.060"
	30	11' - 1"	11' - 9"
	33	10' - 7"	11' - 2"
	35.8	10' - 2"	10' - 9"
	38.3	9' - 10"	10' - 4"
	40.7	9' - 6"	10' - 1"
	44.2	9' - 1"	9' - 8"
	47.2	8' - 10"	9' - 4"
	50.9	8' - 6"	9' - 0"
	52.4	8' - 4"	8' - 10"

**ANCHOR NOTES:**

- 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 TABLE 1.
- ENTER ANCHOR SCHEDULE BASED ON THE EXISTING STRUCTURE MATERIAL, ANCHOR TYPE AND EDGE DISTANCE. SELECT DESIGN LOAD GREATER THAN OR EQUAL TO NEGATIVE DESIGN LOAD ON SHUTTER AND SELECT SPAN GREATER THAN OR EQUAL TO SHUTTER SPAN.
- EXISTING STRUCTURE MAY BE CONCRETE, HOLLOW CONCRETE BLOCK OR WOOD FRAMING. REFERENCE ANCHOR SCHEDULE FOR PROPER ANCHOR TYPE BASED ON TYPE OF EXISTING STRUCTURE AND APPROPRIATE CONNECTION TYPE. SEE MOUNTING SECTION DETAILS FOR IDENTIFICATION OF CONNECTION TYPE.
- ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS.
- MINIMUM EMBEDMENT AND EDGE DISTANCE EXCLUDES WALL FINISH OR STUCCO.
- WHERE EXISTING STRUCTURE IS WOOD FRAMING, WOOD FRAMING CONDITIONS VARY. FIELD VERIFY THAT FASTENERS ARE INTO ADEQUATE WOOD FRAMING MEMBERS, NOT PLYWOOD. FASTENERS TO PLYWOOD IS ACCEPTABLE ONLY FOR SIDE CLOSURE PIECES.
- WHERE LAG SCREWS FASTEN TO NARROW FACE OF STUD FRAMING, FASTENER SHALL BE LOCATED IN CENTER OF NOMINAL 2" x 4" (MIN.) WOOD STUD. 3/4" EDGE DISTANCE IS ACCEPTABLE FOR WOOD FRAMING. WOOD STUD SHALL BE SOUTHERN PINE, G-0.55 OR GREATER DENSITY. LAG SCREWS SHALL HAVE PHILLIPS PAN HEAD OR HEX HEAD.
- MACHINE SCREWS SHALL HAVE MINIMUM OF 1/2" ENGAGEMENT OF THREADS IN BASE ANCHOR AND MAY HAVE EITHER A PAN HEAD, TRUSS HEAD, OR WAFER HEAD (SIDEWALK BOLT), UNO.
- DESIGNATES ANCHOR CONDITIONS WHICH ARE NOT ACCEPTABLE USES.
- DESIGNATES ANCHORS WHICH ARE REMOVABLE BY REMOVING MACHINE SCREW, NUT OR WASHERED WINGNUT.
- FOR LOADS GREATER THAN THOSE SPECIFIED (ANCHOR SCHEDULE), SITE SPECIFIC FASTENER ANALYSIS SHALL BE PREPARED BY KNEZEVICH ASSOCIATES.
- SEE THE APPROPRIATE SBCCI PST & EST OR NCS EVALUATION REPORT ON REQUIRED AS WELL AS FOR INSTALLATION, LIMITATIONS & IDENTIFICATION PURPOSES.
- FASTENER MAXIMUM SPACING ARE BASED ON FACTOR OF SAFETY OF 4.1 ON TENSION AND SHEAR VALUES WITH THE EXCEPTION OF THE 1/4" Ø WOOD LAG SCREW AND THE 7/16" Ø WOOD BUSHING WHICH ARE BASED ON NDS REQUIREMENTS AND SBCCI TESTING REQUIREMENTS RESPECTIVELY.
- ALL POINTS SOLID SET AND POWERS CALK-IN ANCHORS MAY ONLY BE USED IN CONCRETE WALLS, HOLLOW CONCRETE BLOCK WALLS OR CONCRETE SLABS ON GRADE.
- FOR ELCO CRETEFLEX SS4, CONCRETE STRENGTH, Fc=3.5 KSI. FOR ITW TAPCON, CONCRETE STRENGTH, Fc=3.2 KSI. FOR ALL OTHERS CONCRETE STRENGTH, Fc=3 KSI.

**TABLE 2 MINIMUM PANEL LENGTH SCHEDULE**

MOUNTING CONDITIONS	MINIMUM PANEL LENGTH - (IN)			
	TOP	DIRECT MOUNT OR RECESSED C-TRACK	2" x 2" STUD ANGLE	C-TRACK (6 OR 6a)
2" x 2" STUD ANGLE	36	30	30	31
F-ANGLE TRACK	57	31	90	62
C-TRACK (6 OR 6a)	64	55	110	90
F-TRACK	57	49	90	31
C-TRACK (6 OR 6a) W/ SIDE CLOSURE PIECES	-	-	-	52

**TABLES 1 & 3 NOTE:**

ENTER TABLE WITH NEGATIVE DESIGN LOAD TO DETERMINE MAX. PANEL SPAN (Lmax). POSITIVE LOADS LESS THAN OR EQUAL TO THE NEGATIVE LOAD ARE ACCEPTABLE. FOR DESIGN LOADS BETWEEN TABULATED VALUES, USE NEXT HIGHER LOAD OR LINEAR INTERPOLATION MAY BE USED TO DETERMINE ALLOWABLE SPANS.

**TABLE 2 NOTE:**

THIS SHUTTER SYSTEM IS DESIGNED SUCH THAT THERE IS NO SEPARATION FROM GLASS REQUIRED PROVIDED MINIMUM PANEL LENGTHS AS NOTED. PANEL LENGTHS LESS THAN THOSE NOTED IN TABLE ARE NOT ACCEPTABLE, UNLESS SITE SPECIFIC POROSITY CALCULATIONS ARE PERFORMED BY A PROFESSIONAL ENGINEER.

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 08-353  
 PAGE 6 of 6

no	date	by	description

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