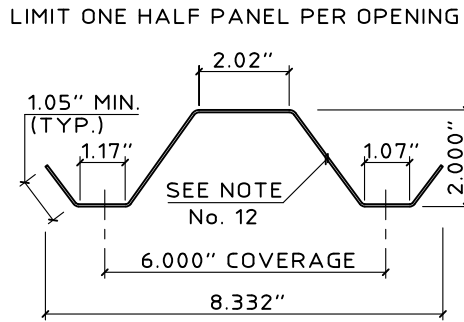
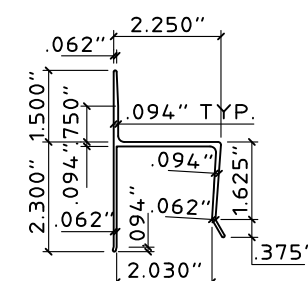


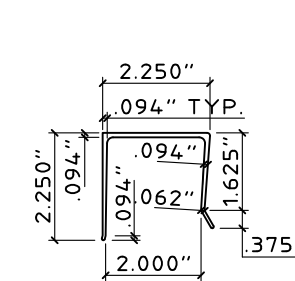
**1 STORM PANEL**  
SCALE : 3" = 1'-0"



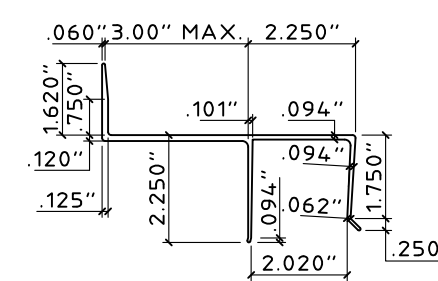
**1a HALF STORM PANEL**  
SCALE : 3" = 1'-0"



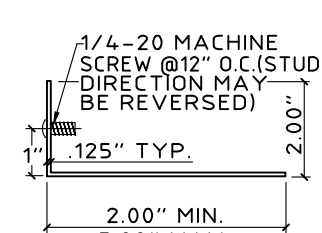
**2 "h" HEADER**  
SCALE : 3" = 1'-0"



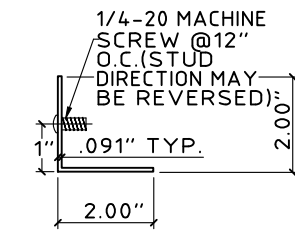
**3 "U" HEADER**  
SCALE : 3" = 1'-0"



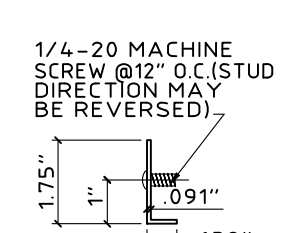
**3a BUILD-OUT "U" HEADER**  
SCALE : 3" = 1'-0"



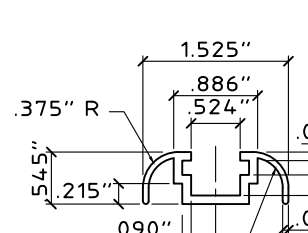
**4 STUD ANGLE**  
SCALE : 3" = 1'-0"



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



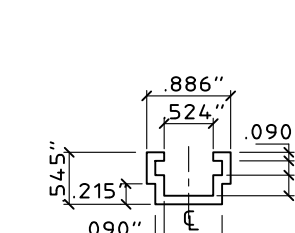
**4b STUD ANGLE**  
SCALE : 3" = 1'-0"



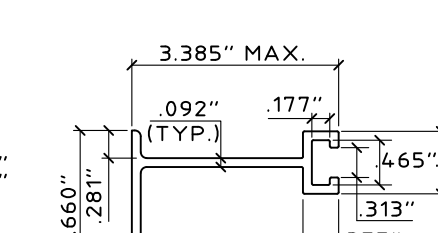
**5 ANGLE**  
SCALE : 3" = 1'-0"



**6 C-TRACK (FINISH)**  
SCALE : HALF SIZE



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

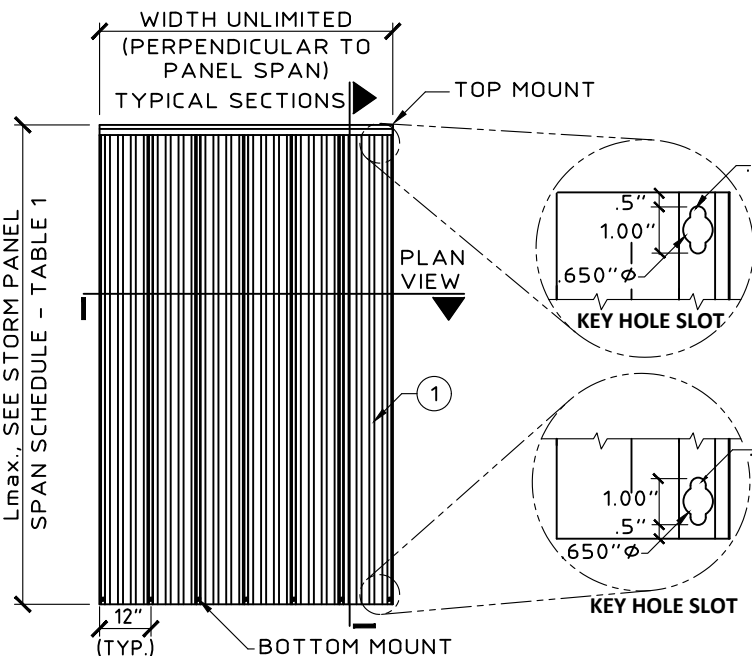


**7 BUILD-OUT F-TRACK**  
SCALE : HALF SIZE

- GENERAL NOTES:**
- THESE PRODUCT EVALUATION DOCUMENTS REPRESENT A SHUTTER SYSTEM ANALYZED AND TESTED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE FOR USE WITHIN AND OUTSIDE OF THE HIGH VELOCITY HURRICANE ZONE (HVHZ). REFERENCE KC EVALUATION REPORT NO. 150107, REV 1 FOR APPLICABLE CODE EDITIONS.
  - PRODUCT PERFORMANCE TESTING WAS CONDUCTED IN ACCORDANCE WITH TAS 201, TAS 202, & TAS 203 AND THE SYSTEM IS LARGE MISSILE IMPACT RESISTANT.
  - DETERMINE THE POSITIVE AND NEGATIVE DESIGN LOADS TO USE WHEN REFERENCING THESE DOCUMENTS IN ACCORDANCE WITH ASCE 7-10 ALLOWABLE STRESS DESIGN. CALCULATED WIND LOADS SHALL BE MULTIPLIED BY THE LOAD FACTOR 0.6 BEFORE REFERENCING THESE DOCUMENTS.
  - FOR WIND LOAD CALCULATION IN ACCORDANCE WITH ASCE 7-10, A DIRECTIONALITY FACTOR OF KD=0.85 MAY BE USED.
  - NO ALLOWABLE STRESS INCREASE IS UTILIZED IN THE DESIGN OF THIS SYSTEM; HOWEVER, A WIND LOAD DURATION FACTOR OF CD = 1.33 IS USED FOR SCREWS DESIGNED PER NDS.
  - THESE EVALUATION DOCUMENTS ARE GENERIC AND DO NOT INCLUDE INFORMATION PREPARED FOR APPLICATION OF THIS SYSTEM TO A SPECIFIC SITE.
  - THESE EVALUATION DOCUMENTS ARE THE INSTALLATION INSTRUCTIONS PORTION OF A PRODUCT EVALUATION AND SHALL ONLY BE USED WITH THE CORRESPONDING PRODUCT EVALUATION REPORT. USE OF THESE APPROVAL DOCUMENTS SHALL COMPLY WITH CHAPTER 61G15-23 OF THE FLORIDA ADMINISTRATIVE CODE.
  - THESE 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 THAT THE EXISTING STRUCTURE DOES NOT DEVIATE IN EITHER FORM OR MATERIAL FROM THE STRUCTURAL SUBSTRATES DETAILED HEREIN.
  - ANY MODIFICATIONS OR ADDITIONS TO THESE EVALUATION DOCUMENTS WILL VOID THE EVALUATION DOCUMENTS.
  - WHEN SITE CONDITIONS DEVIATE FROM THE EVALUATION DOCUMENTS, THE BUILDING OFFICIAL MAY REQUIRE THAT SITE SPECIFIC DOCUMENTS JUSTIFYING THE DEVIATION BE PREPARED, SIGNED, DATED AND SEALED BY A LICENSED ENGINEER OR REGISTERED ARCHITECT.
  - EACH PANEL OF THE ASSEMBLY SHALL BE PERMANENTLY LABELED AT A SPACING NO GREATER THAN 36" ON THE EXTERIOR FACE WITH THE FOLLOWING MINIMUM INFORMATION:

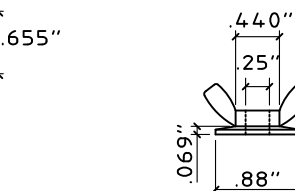
**TOWN & COUNTRY IND.**  
FORT LAUDERDALE, FL  
TAS 201, 202, & 203  
9 LB LARGE MISSILE  
FBC APPROVAL NUMBER

- ALUMINUM STORM PANELS SHALL BE 3004-H34 OR 5052-H34 ALUMINUM ALLOY WITH MINIMUM THICKNESS AS SPECIFIED IN THE APPLICABLE SPAN TABLES.
- ALL EXTRUSION SHOWN SHALL BE 6063-T6 ALUMINUM ALLOY, U.O.N.
- ALL BOLTS, STUDS, AND WASHERS, EXCLUDING INSTALLATION FASTENERS, SHALL BE STAINLESS STEEL WITH A MINIMUM TENSILE STRENGTH OF 60 KSI, U.O.N.
- TOP AND BOTTOM DETAILS MAY BE INTERCHANGED AS FIELD CONDITIONS REQUIRE. PANELS MAY BE MOUNTED HORIZONTALLY WHERE APPLICABLE. H & U HEADERS MAY NOT BE USED FOR HORIZONTAL MOUNTING CONDITIONS.
- TRACKS MAY BE REMOVABLE PROVIDED REMOVABLE ANCHORS ARE USED.
- IF PANEL OVERLAPS OPENING BY 1.5 TIMES THE GAP BETWEEN THE WALL AND PANEL, NO SIDE CLOSURES ARE REQUIRED.
- PROVIDE SEALANT AROUND PERIMETER OF COMPONENTS IN CONTACT WITH STRUCTURE TO PREVENT WATER INTRUSION BEHIND COMPONENTS.

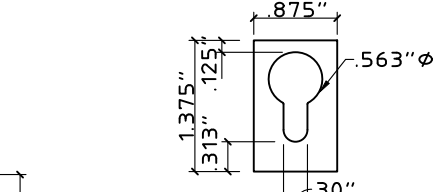


**8 "F" TRACK**  
SCALE : HALF SIZE

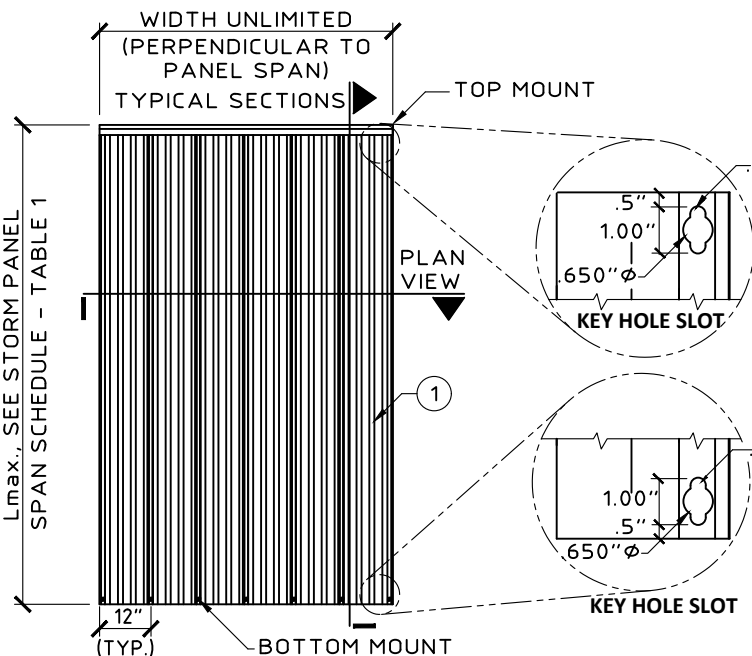
**8a "F" ANGLE - TRACK**  
SCALE : HALF SIZE



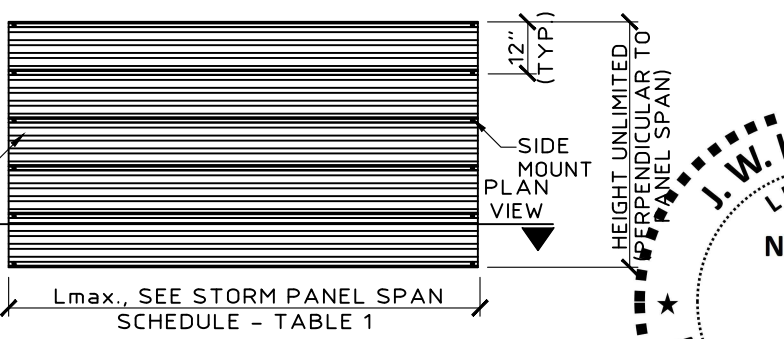
**9 WING NUT**  
SCALE : HALF SIZE



**10 KEYHOLE WASHER**  
SCALE : HALF SIZE



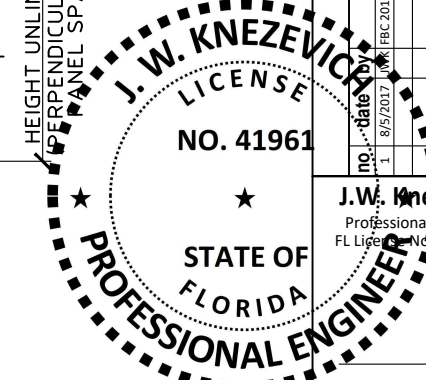
**TYPICAL VERTICAL ELEVATION**  
SCALE: 1/4" = 1' - 0"



**TYPICAL HORIZONTAL ELEVATION**  
SCALE: 1/4" = 1' - 0"

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no.	date	description
1	8/5/2017	17K FBC 2017 Update

J.W. Knezevich  
Professional Engineer  
FL License No. PE 41961

Scale: AS NOTED  
Drawn by: ARV  
Date: 04/10/2015  
Drawing No. **KC15-0107**  
sheet 1 of 8

TABLE 1: PANEL SPAN SCHEDULES					
0.050 ALUMINUM PANELS			0.0615 ALUMINUM PANELS		
POSITIVE OR NEGATIVE ASD WINDLOAD 'W' (PSF)	L max. FOR POSITIVE ASD WINDLOAD	L max. FOR NEGATIVE ASD WINDLOAD	POSITIVE OR NEGATIVE ASD WINDLOAD 'W' (PSF)	L max. FOR POSITIVE ASD WINDLOAD	L max. FOR NEGATIVE ASD WINDLOAD
23	144"	144"	27.5	144"	144"
25	141"	144"	30	143"	144"
30	135"	144"	35	138"	144"
35	130"	144"	40	133"	144"
40	126"	143"	45	129"	144"
45	122"	135"	50	126"	139"
50	119"	128"	55	123"	132"
55	116"	122"	60	120"	127"
60	111"	117"	65	118"	122"
65	107"	112"	70	116"	117"
70	103"	108"	75	113"	113"
75	96"	104"	80	109"	109"
80	90"	99"	85	106"	106"
85	84"	93"	90	102"	102"
90	80"	88"	95	96"	96"
95	75"	83"	100	91"	91"
100	72"	79"	110	83"	83"
110	65"	72"	120	76"	76"
120	60"	66"	130	N.A.	70"
130	N.A.	61"	140	N.A.	65"
140	N.A.	56"	150	N.A.	61"
150	N.A.	52"			

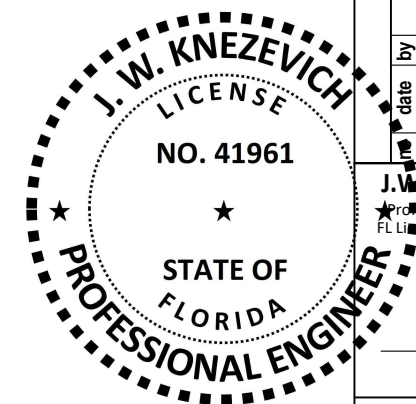
TABLE 2: MINIMUM SEPARATION FROM GLASS SCHEDULES								
0.050 ALUMINUM PANELS			0.0615 ALUMINUM PANELS					
POSITIVE ASD WINDLOAD 'W' (PSF)	SHUTTER SPAN 'L'	MINIMUM SEPARATION FROM GLASS		POSITIVE ASD WINDLOAD 'W' (PSF)	SHUTTER SPAN 'L'	MINIMUM SEPARATION FROM GLASS		
		INSTALLATIONS ≤ 30' ABOVE GRADE	INSTALLATIONS > 30' ABOVE GRADE			INSTALLATIONS ≤ 30' ABOVE GRADE	INSTALLATIONS > 30' ABOVE GRADE	
30	72"	3"	1-3/8"	27.5	72"	3"	1-1/2"	
	104"	3"	2"		104"	3"	1-7/8"	
	135"	5"	3-1/4"		144"	4-1/8"	3-1/8"	
40	72"	3"	1-1/2"	40	72"	3"	1-1/2"	
	104"	3"	2-1/8"		104"	3"	2"	
	126"	5"	3-1/4"		133"	4-1/8"	3-1/4"	
50	72"	3"	1-1/2"	50	72"	3"	1-1/2"	
	104"	3"	2-3/8"		104"	3"	2-1/4"	
	119"	5"	3-1/4"		126"	4-1/8"	3-1/4"	
60	72"	3"	1-5/8"	60	72"	3"	1-5/8"	
	104"	3"	2-5/8"		104"	3"	2-3/8"	
	111"	5"	3"		120"	4-1/8"	3-1/4"	
70	72"	3"	1-5/8"	70	72"	3"	1-5/8"	
	103"	3"	2-3/4"		104"	3"	2-5/8"	
	72"	3"	1-5/8"		116"	4-1/8"	3-1/4"	
80	90"	3"	2-1/4"	80	72"	3"	1-5/8"	
	60"	3"	1-1/2"		104"	3"	2-3/4"	
	80"	3"	2"		109"	4-1/8"	3-1/8"	
100	60"	3"	1-1/2"	90	60"	3"	1-1/2"	
	72"	3"	1-3/4"		102"	3"	2-7/8"	
	48"	3"	1-3/8"		100	60"	3"	1-1/2"
110	65"	3"	1-5/8"	100	91"	3"	2-3/8"	
	48"	3"	1-3/8"		110	48"	3"	1-3/8"
	60"	3"	1-1/2"		83"	3"	2-1/8"	
120	48"	3"	1-3/8"	110	48"	3"	1-3/8"	
	60"	3"	1-1/2"		76"	3"	2"	

**TABLE 1 & 2 NOTES:**

- SEE SECTIONS FOR SHUTTER SPAN DEFINITION.
- FOR TABLE 1, DETERMINE BOTH THE POSITIVE AND NEGATIVE ASD WIND LOAD. CHECK THE MAX SPAN FOR EACH AND USE THE LESSER OF THE TWO VALUES.
- FOR DESIGN LOADS BETWEEN TABULATED VALUES, USE NEXT HIGHER LOAD TO DETERMINE ALLOWABLE SPAN.
- FOR TABLE 2, ENTER AT A POSITIVE LOAD ≥ PROJECT POSITIVE LOAD AND SPAN ≥ PROJECT SPAN TO DETERMINE MINIMUM SHUTTER SEPARATION FROM GLASS.

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0.050 & .0615 ALUMINUM STORM PANEL

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Wholesale Aluminum and Building Products

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PHONE 954-970-9999 \* FAX 954-970-9988

Revisions description

1 8/5/2017 JWK/FBC 2017 Update

J. W. Knezevich  
Professional Engineer  
FL License No.: PE 41961

Scale: AS NOTED

Drawn by: ARV

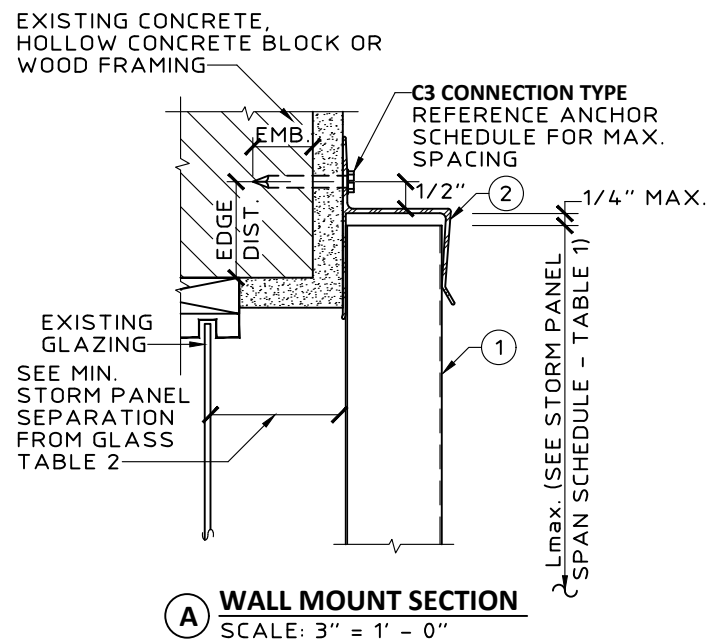
Date: 04/10/2015

Drawing No.

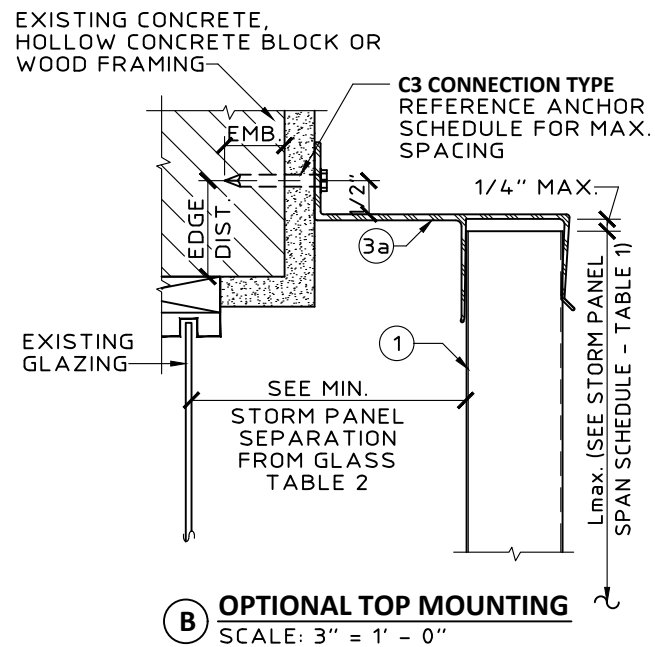
**KC15-0107**

sheet 2 of 8

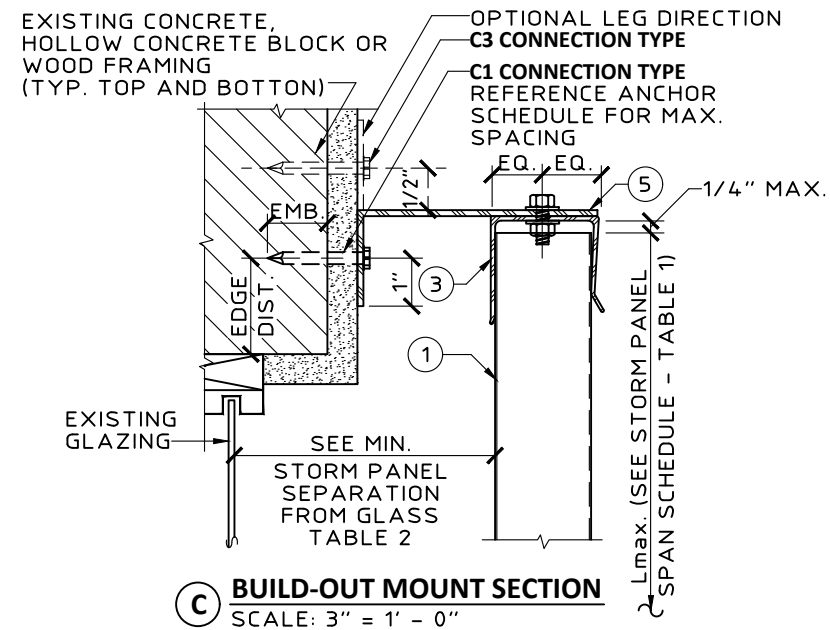
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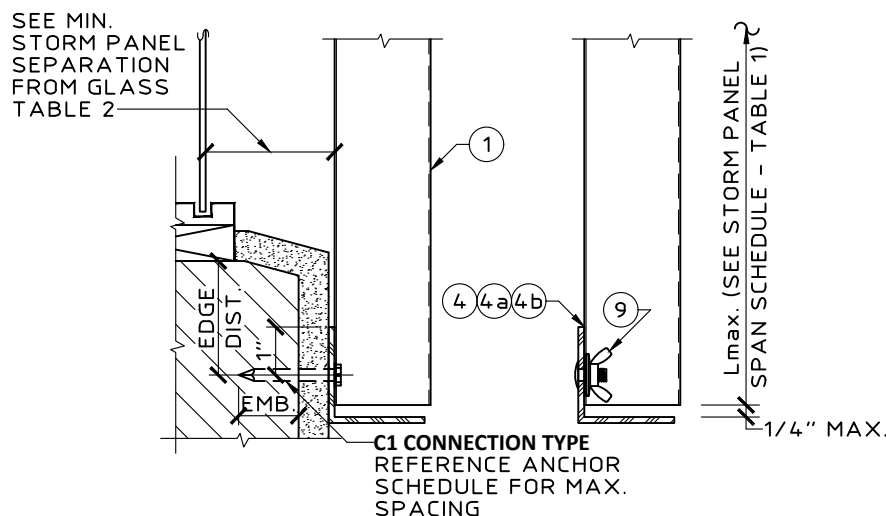
**A WALL MOUNT SECTION**  
SCALE: 3" = 1' - 0"



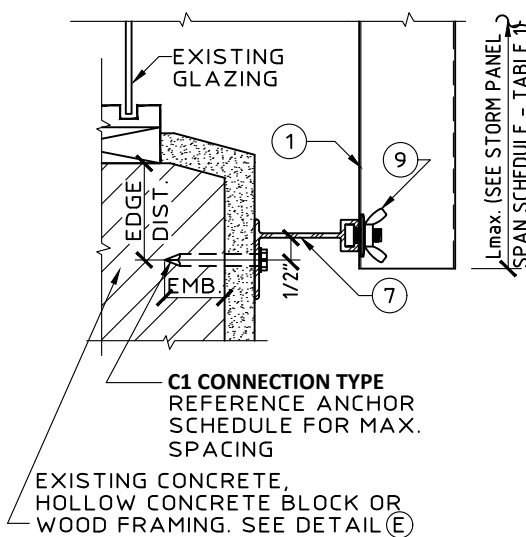
**B OPTIONAL TOP MOUNTING**  
SCALE: 3" = 1' - 0"



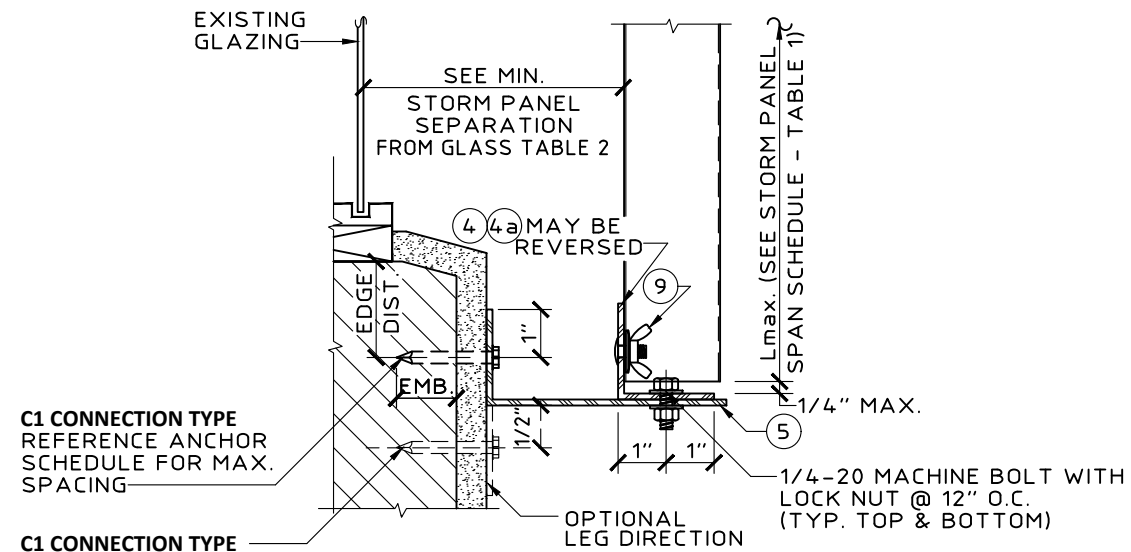
**C BUILD-OUT MOUNT SECTION**  
SCALE: 3" = 1' - 0"



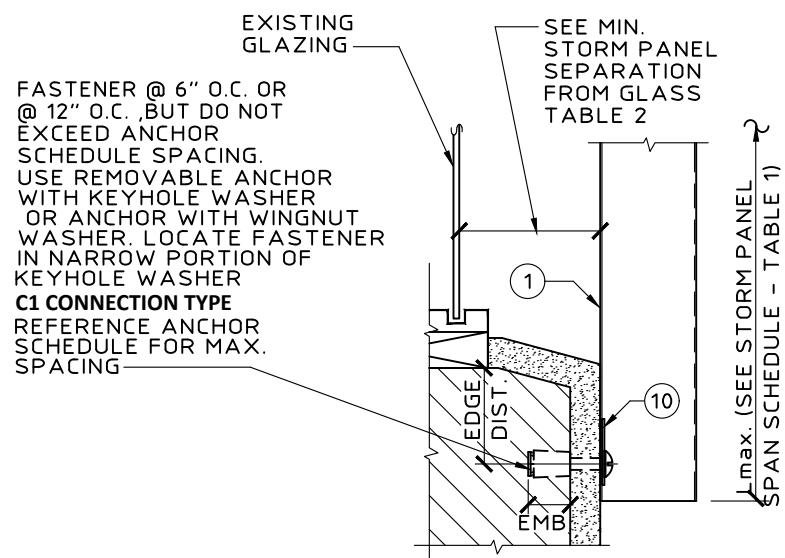
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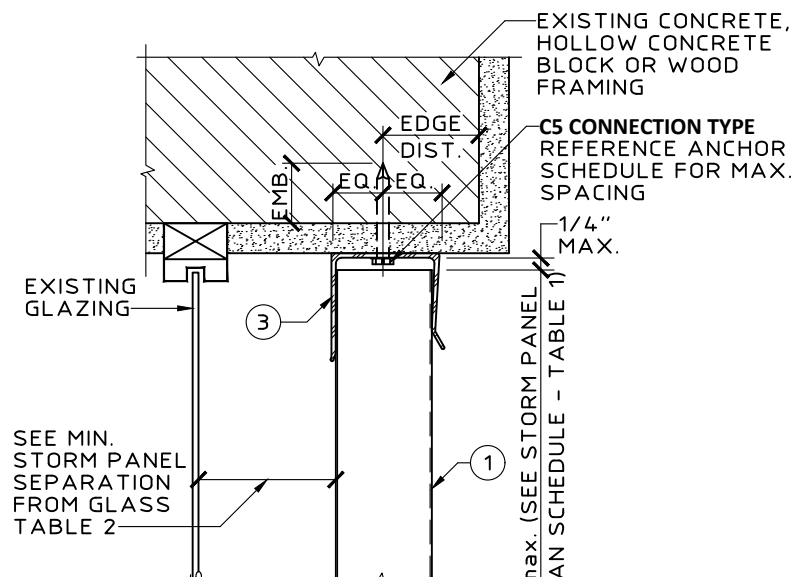
**E BUILD OUT SECTION**  
SCALE: 3" = 1' - 0"



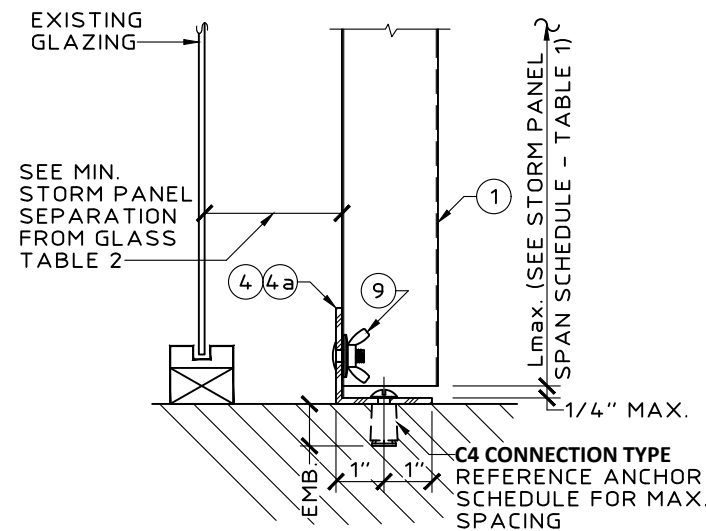
**F BUILD-OUT MOUNT SECTION**  
SCALE: 3" = 1' - 0"



**G DIRECT MOUNT SECTION**  
SCALE: 3" = 1' - 0"

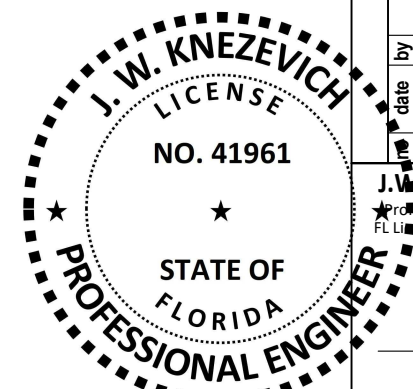


**H CEILING MOUNT SECTION**  
SCALE: 3" = 1' - 0"



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

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.050 & .0615 ALUMINUM STORM PANEL

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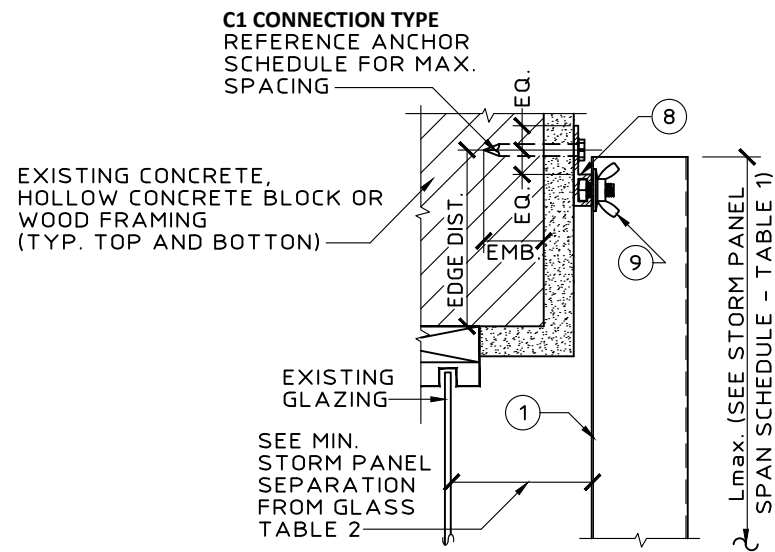
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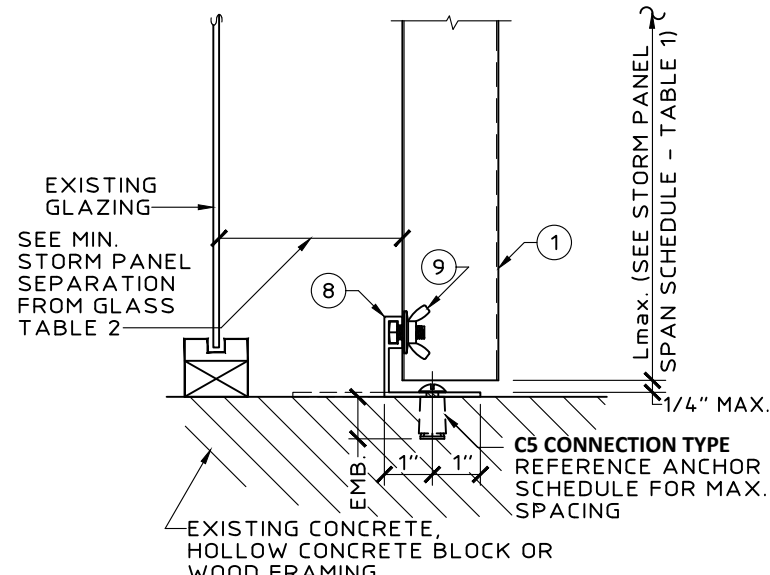
Revisions	description
1	8/5/2017 JWK/FBC 2017 Update

Scale: AS NOTED  
Drawn by: ARV  
Date: 04/10/2015  
Drawing No. **KC15-0107**  
sheet 3 of 8

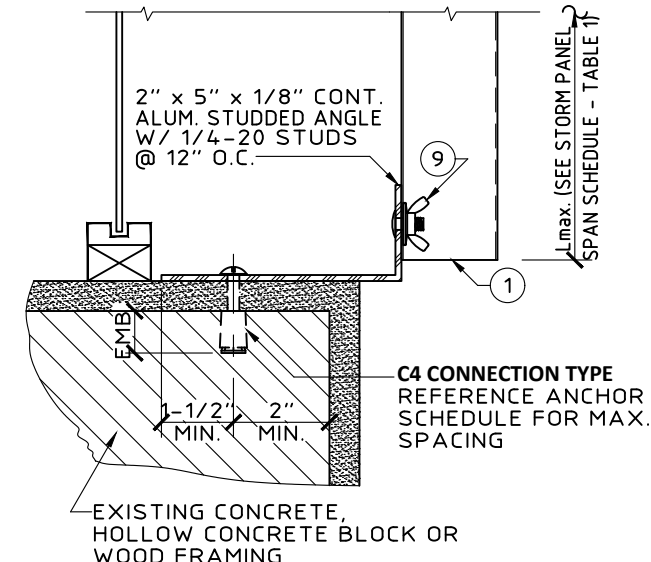




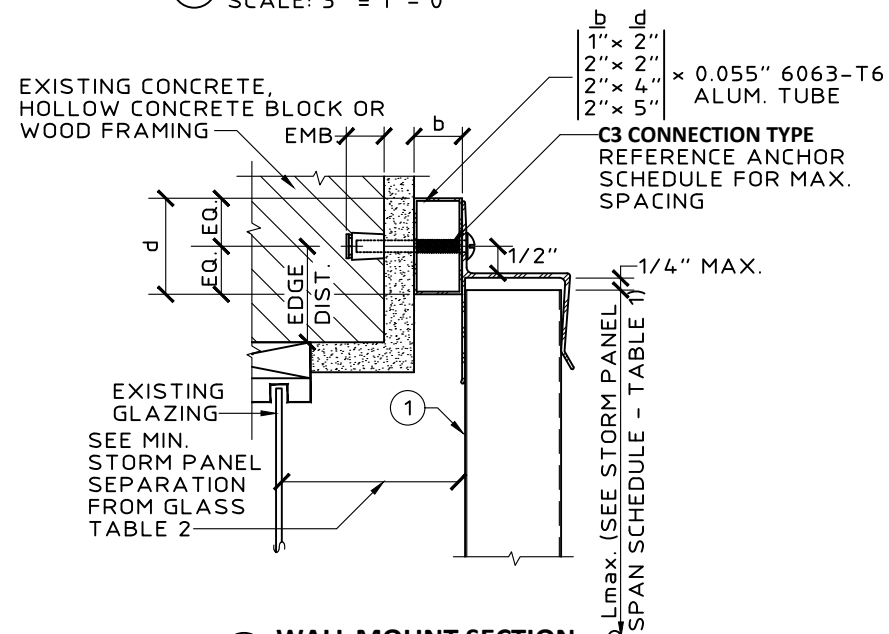
**J "F" TRACK MOUNT SECTION**  
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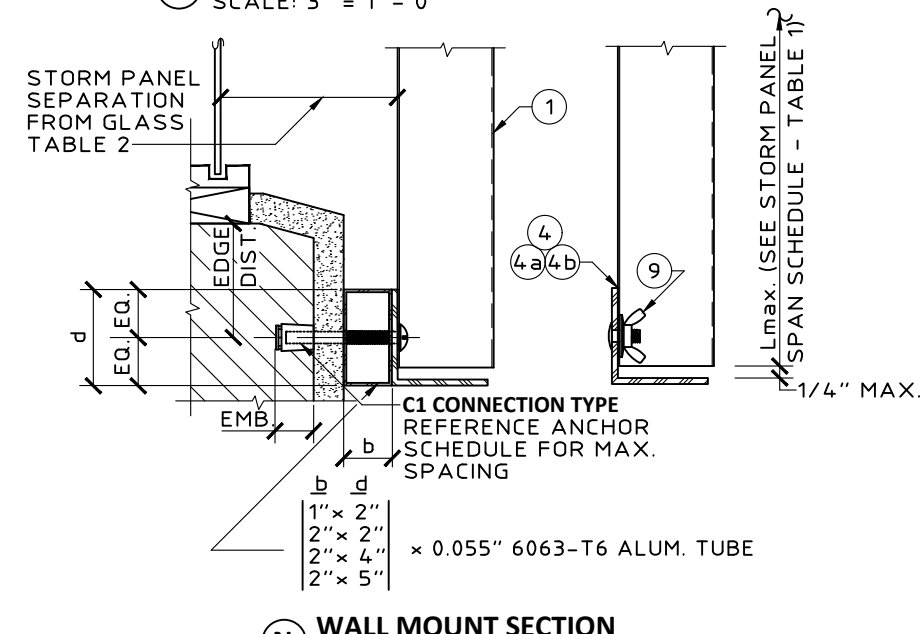
**K FLOOR MOUNT SECTION**  
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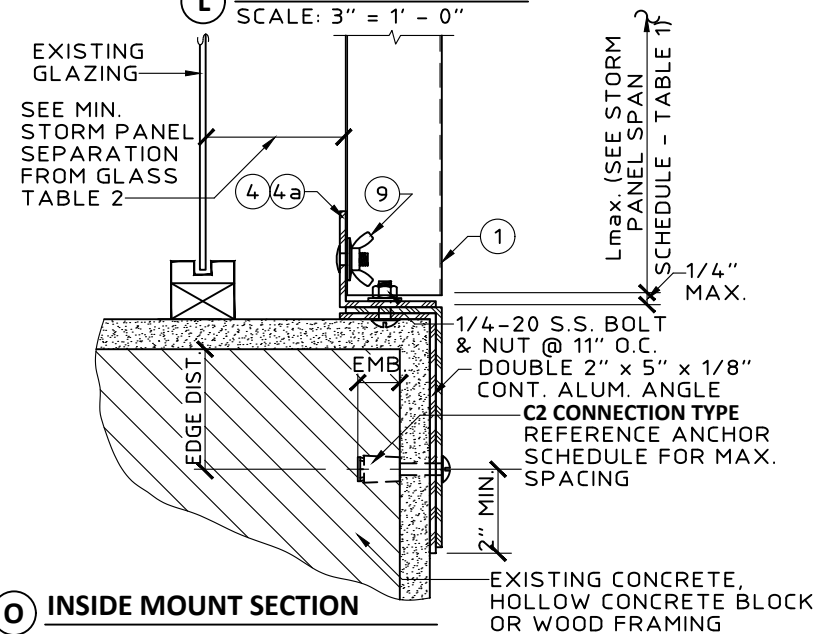
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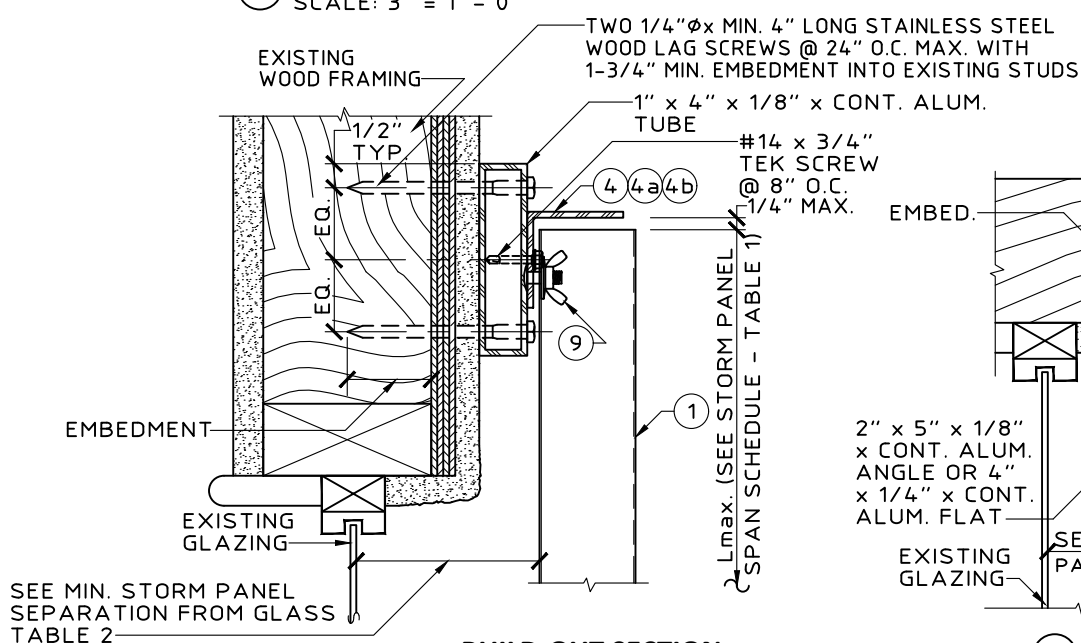
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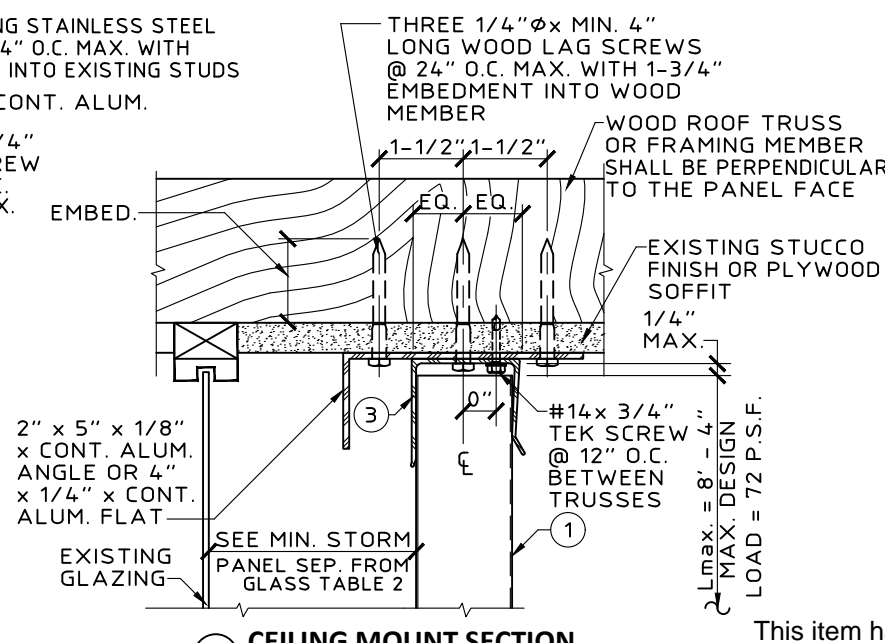
**N WALL MOUNT SECTION**  
SCALE: 3" = 1' - 0"



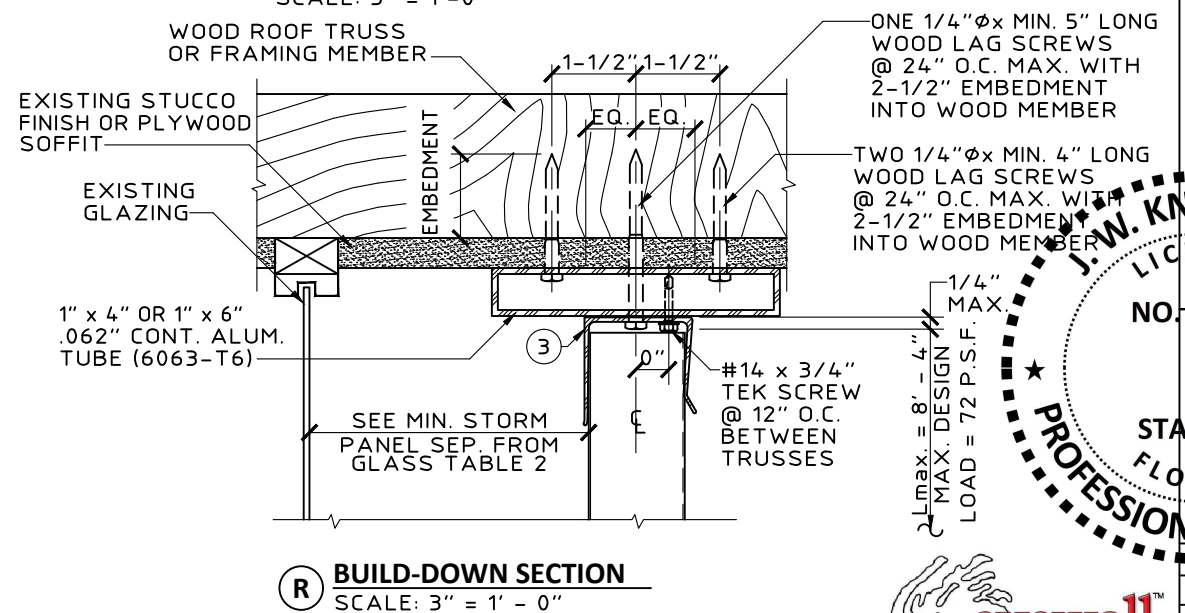
**O INSIDE MOUNT SECTION**  
SCALE: 3" = 1' - 0"



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



**Q CEILING MOUNT SECTION**  
SCALE: 3" = 1' - 0"



**R BUILD-DOWN SECTION**  
SCALE: 3" = 1' - 0"

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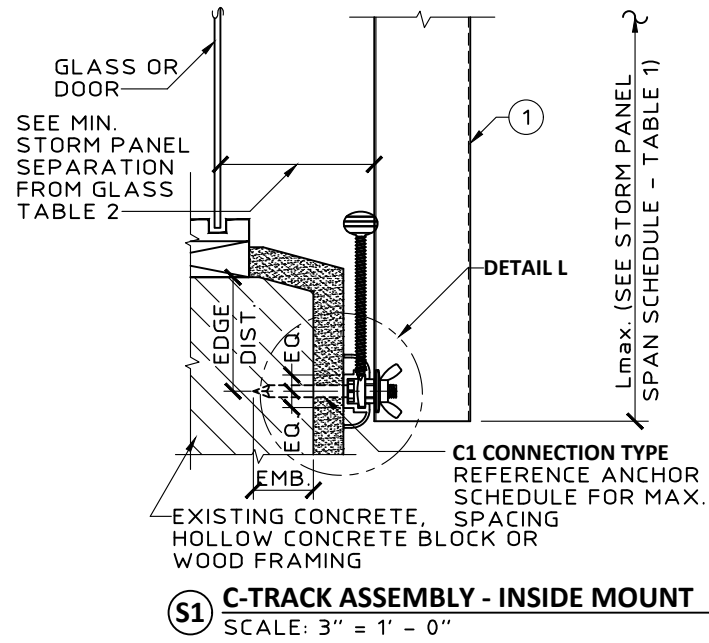
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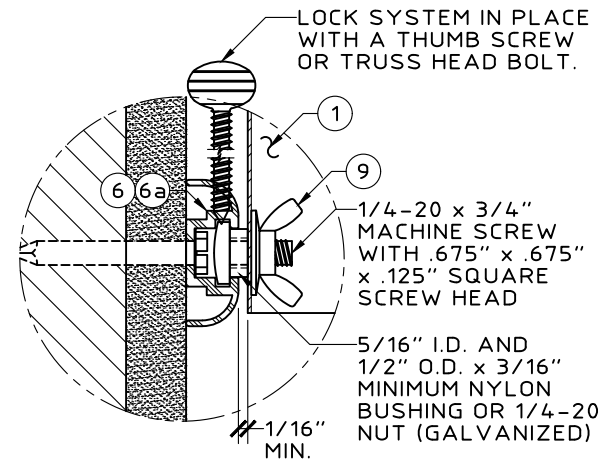
Revisions	description
1	Update to ABC 2017 Update

**J.W. KNEZEVICH**  
LICENSE NO. 41561  
Professional Engineer  
L License No.: PE 11561  
STATE OF FLORIDA  
PROFESSIONAL ENGINEER

Scale: AS NOTED  
Drawn by: ARV  
Date: 04/10/2015  
Drawing No: KC15-0107  
sheet 4 of 8

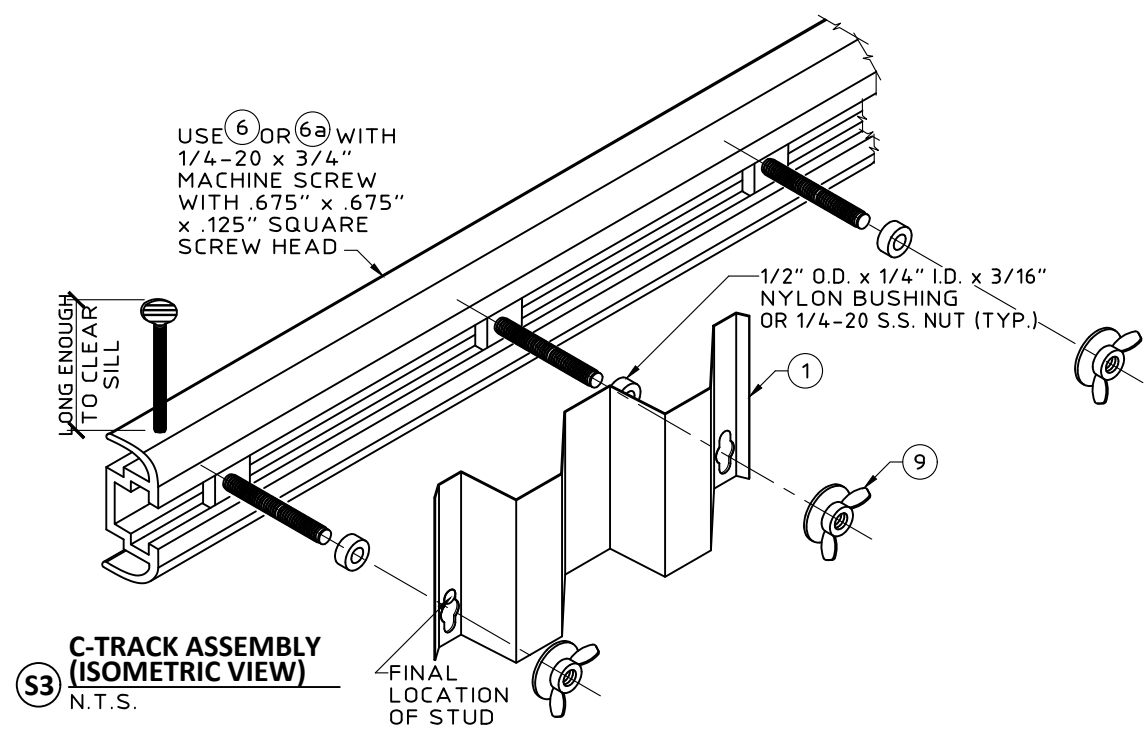


**S1 C-TRACK ASSEMBLY - INSIDE MOUNT**  
SCALE: 3" = 1' - 0"

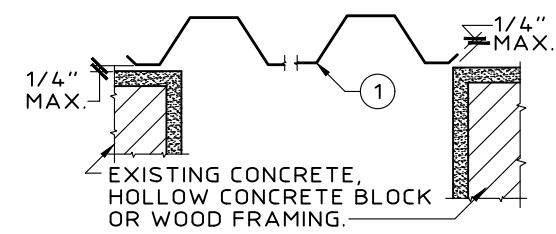


**S2 C-TRACK BLOW UP**  
SCALE: HALF SIZE

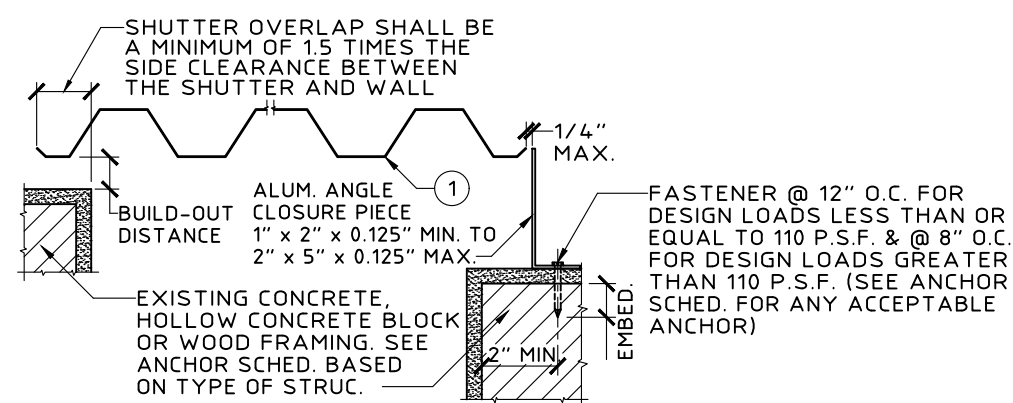
NOTE: USE OF DETAIL SHALL BE IN CONJUNCTION WITH AN "h" HEADER OR "U" HEADER TOP MOUNT



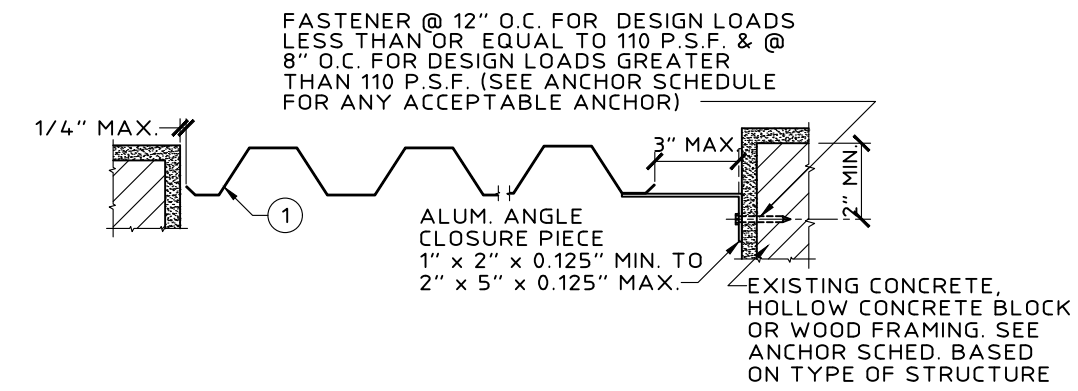
**S3 C-TRACK ASSEMBLY (ISOMETRIC VIEW)**  
N.T.S.



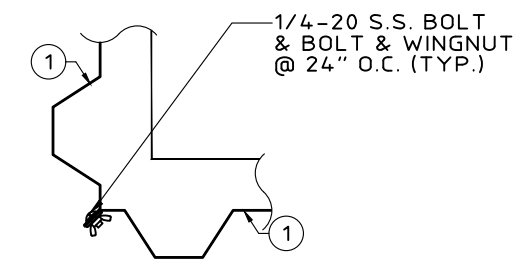
**T1 WALL MOUNT CLOSURE DETAIL**  
SCALE: 1-1/2" = 1'-0"



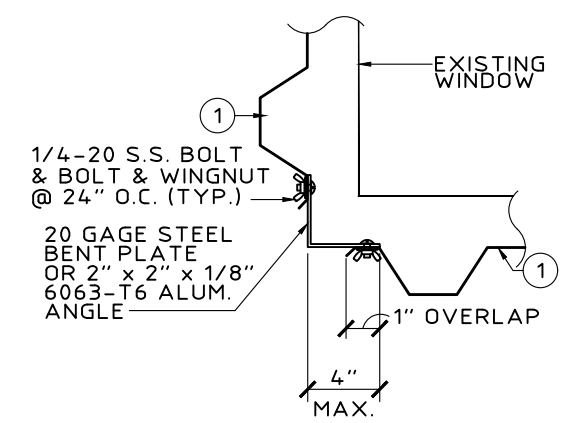
**T2 BUILD-OUT MOUNT CLOSURE DETAIL**  
SCALE: 1-1/2" = 1'-0"



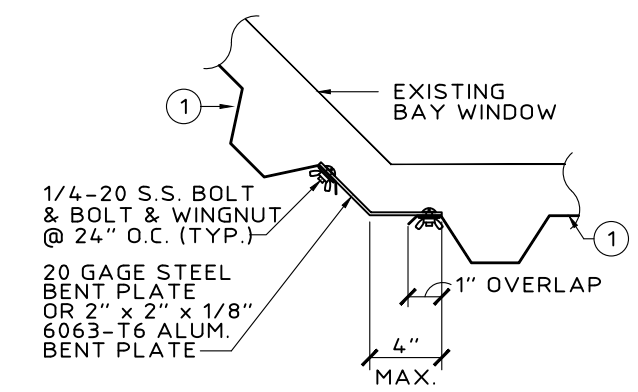
**T3 TRAP MOUNT CLOSURE DETAIL**  
SCALE: 1-1/2" = 1'-0"



**U1 CORNER CLOSURE DETAIL**  
SCALE: 1-1/2" = 1'-0"



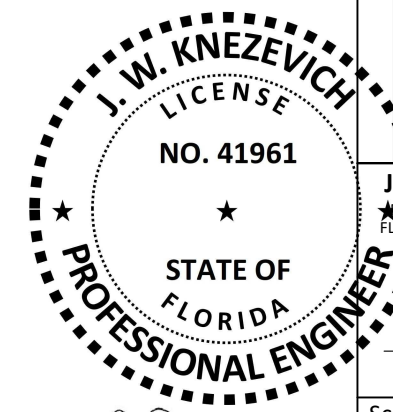
**U2 CORNER CLOSURE DETAIL**  
SCALE: 1-1/2" = 1'-0"



**U3 CORNER CLOSURE DETAIL**  
SCALE: 1-1/2" = 1'-0"

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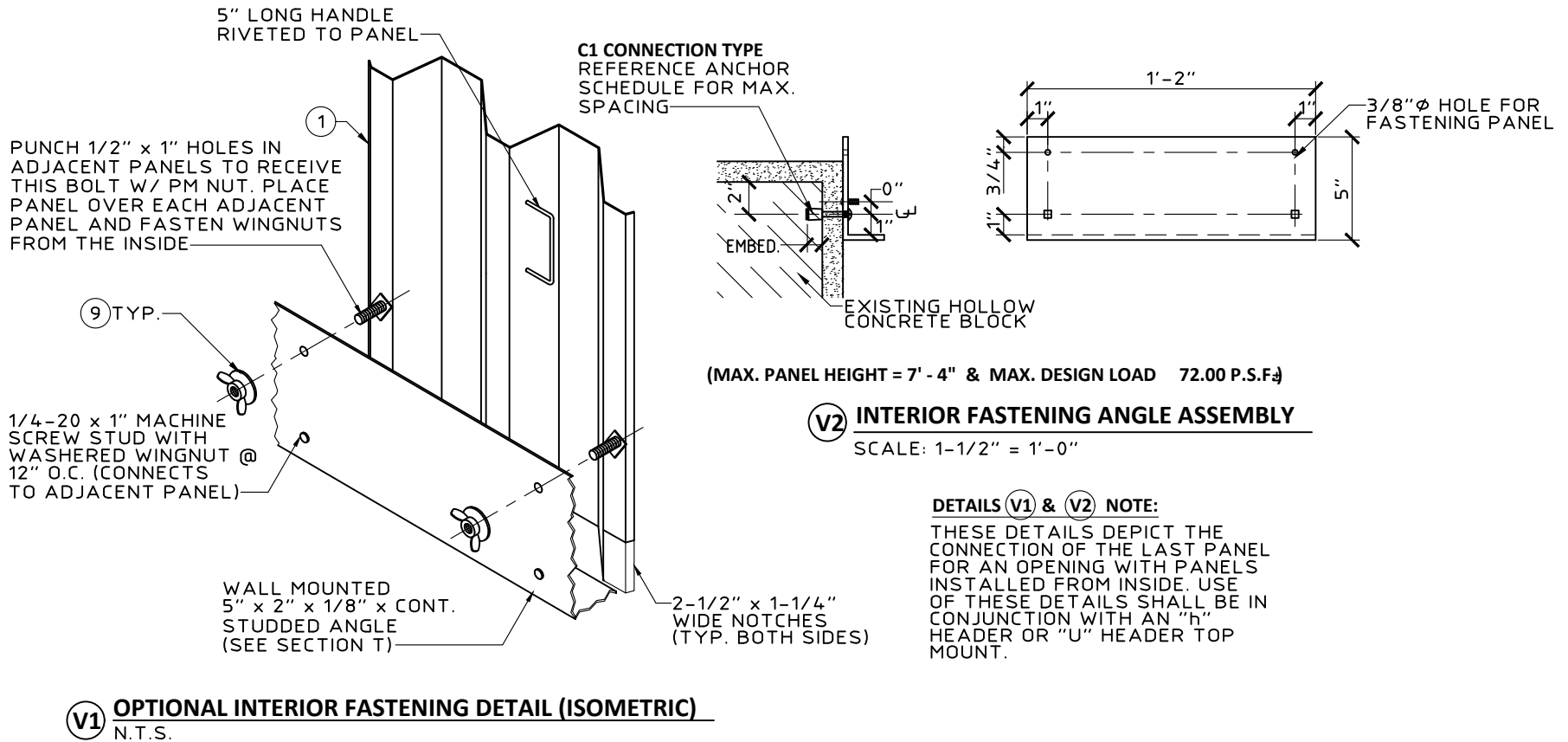
Revisions	description
1	8/5/2017 JWK/FBC 2017 Update

J. W. Knezevich  
Professional Engineer  
FL License No.: PE 41961

Scale: AS NOTED  
Drawn by: ARV  
Date: 04/10/2015  
Drawing No. **KC15-0107**  
sheet 5 of 8



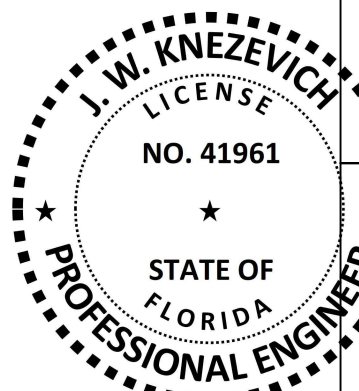
		<b>ANCHOR SCHEDULE</b>															
		FASTENER MAXIMUM SPACING (INCHES) REQUIRED FOR VARIOUS DESIGN LOADS AND SPANS															
EXIST. STRUC.	ANCHOR TYPE	MAX LOAD (PSF) SEE NOTE 1	SPANS UP TO 5'-0" (SEE NOTE 1)					SPANS UP TO 9'-0" (SEE NOTE 1)					SPANS UP TO 12'-0" (SEE NOTE 1)				
			CONNECTION TYPE (SEE NOTE 3)					CONNECTION TYPE (SEE NOTE 3)					CONNECTION TYPE (SEE NOTE 3)				
WOOD	* 1/4" Ø LAG SCREW OR HANGER BOLT MIN 1.75" PENETRATION IN WOOD WITH G = 0.55	W	0.75" Edge Distance														
		48.0	C1	C2	C3	C4	C5	C1	C2	C3	C4	C5	C1	C2	C3	C4	C5
		62.0	16	16	13	8	7	16	11	7	4	4	16	8	5	3	3
		76.0	16	16	10	7	6	16	9	6	4	3	16	8	5	3	3
	90.0	16	14	9	6	5	16	8	5	3	3	16	8	5	3	3	
	120.0	16	10	6	4	3	16	8	5	3	3	16	8	5	3	3	
	* 1/4" Ø LAG SCREW OR HANGER BOLT MIN 1.75" PENETRATION IN WOOD WITH G = 0.42	W	0.75" Edge Distance														
		48.0	C1	C2	C3	C4	C5	C1	C2	C3	C4	C5	C1	C2	C3	C4	C5
		62.0	16	13	8	7	5	15	7	4	4	3	11	5	3	3	
		76.0	16	11	7	5	4	12	6	3	3		11	5	3		
	90.0	16	9	6	5	4	11	5	3			11	5	3			
	120.0	14	7	4	3	3	11	5	3			11	5	3			
* 7/16" Ø BRASS WOOD BUSHING W/ 7/8" EMBED IN WOOD WITH G = 0.55	W	0.75" Edge Distance															
	48.0	C1	C2	C3	C4	C5	C1	C2	C3	C4	C5	C1	C2	C3	C4	C5	
	62.0	16	8	5			9	4				7	3				
	76.0	13	6	4			7	3				5					
90.0	10	5	3			6					5						
120.0	9	4				5					5						
1/4" Ø ELCO PANELMATE PRO OR FEMALE ID W/ STALGARD FINISH OR STAINLESS STEEL W/ 1-7/8" EMBED IN WOOD WITH G = 0.55	W	0.75" Edge Distance															
	48.0	C1	C2	C3	C4	C5	C1	C2	C3	C4	C5	C1	C2	C3	C4	C5	
	62.0	16	16	15	16	14	16	13	8	10	7	16	10	6	7	5	
	76.0	16	16	12	15	11	16	11	7	8	6	16	9	6	7	5	
90.0	16	16	10	12	9	16	9	6	7	5	16	9	6	7	5		
120.0	16	12	8	9	7	16	9	6	7	5	16	9	6	7	5		
#14 WOOD SCREW OR #14-10 SMS W/ 1.5" EMBED IN WOOD WITH G = 0.55	W	0.75" Edge Distance															
	48.0	C1	C2	C3	C4	C5	C1	C2	C3	C4	C5	C1	C2	C3	C4	C5	
	62.0	16	16	12	12	9	16	11	7	7	5	16	8	5	5	4	
	76.0	16	15	9	9	7	16	8	5	5	4	13	6	4	4	3	
90.0	16	12	8	7	6	14	7	4	4	3	13	6	4	3	3		
120.0	16	10	6	6	5	13	6	4	3	3	13	6	4	3	3		
#14 WOOD SCREW OR #14-10 SMS W/ 1.5" EMBED IN WOOD WITH G = 0.42	W	0.75" Edge Distance															
	48.0	C1	C2	C3	C4	C5	C1	C2	C3	C4	C5	C1	C2	C3	C4	C5	
	62.0	16	11	7	9	6	13	6	4	5	3	10	4	3	3		
	76.0	16	8	5	7	5	10	4	3	4	3	7	3		3		
90.0	15	7	4	6	4	8	4		3		7	3					
120.0	12	6	3	5	3	7	3				7	3					



**V1** OPTIONAL INTERIOR FASTENING DETAIL (ISOMETRIC)  
N.T.S.

		<b>ANCHOR SCHEDULE</b>															
		FASTENER MAXIMUM SPACING (INCHES) REQUIRED FOR VARIOUS DESIGN LOADS AND SPANS															
EXIST. STRUC.	ANCHOR TYPE	MAX LOAD (PSF) SEE NOTE 1	SPANS UP TO 5'-0" (SEE NOTE 1)					SPANS UP TO 9'-0" (SEE NOTE 1)					SPANS UP TO 12'-0" (SEE NOTE 1)				
			CONNECTION TYPE (SEE NOTE 3)					CONNECTION TYPE (SEE NOTE 3)					CONNECTION TYPE (SEE NOTE 3)				
GROUTED MASONRY	#12 STAINLESS STEEL SMS W/ 2" EYEWALL ARMOR INSERT W/ 2" SCREW EMBED IN GROUT BLOCK	W	2" Edge Distance														
		48.0	C1	C2	C3	C4	C5	C1	C2	C3	C4	C5	C1	C2	C3	C4	C5
		62.0	16	16	11	16	11	16	10	6	9	6	15	7	4	6	4
		76.0	16	14	9	12	9	16	7	5	7	5	12	5	3	5	3
	90.0	16	11	7	10	7	13	6	4	5	4	11	5	3	5	3	
	120.0	16	9	6	8	6	11	5	3	5	3	11	5	3	5	3	
	5/16" Ø ELCO ULTRACON W/ 2.25" EMBED IN GROUTED BLOCK	W	2.5" Edge Distance														
		48.0	C1	C2	C3	C4	C5	C1	C2	C3	C4	C5	C1	C2	C3	C4	C5
		62.0	16	13	9	16	13	16	7	5	13	7	12	5	3	10	5
		76.0	16	10	6	16	10	12	6	3	10	5	9	4		7	4
	90.0	16	8	5	15	8	10	4	3	8	4	9	4		7	4	
	120.0	15	7	4	12	7	9	4		7	4	9	4		7	4	

ANCHOR NOTES:  
SEE SHEET 8 FOR ANCHOR NOTES.



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Revisions	date	by	description
1	8/5/2017	JWK	FBC 2017 Update

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Professional Engineer  
FL License No.: PE 41961

Scale: AS NOTED  
Drawn by: ARV  
Date: 04/10/2015  
Drawing No. **KC15-0107**  
sheet 6 of 8

		<b>ANCHOR SCHEDULE</b>																															
		FASTENER MAXIMUM SPACING (INCHES) REQUIRED FOR VARIOUS DESIGN LOADS AND SPANS																															
EXIST. STRUC.	ANCHOR TYPE	MAX LOAD (PSF) SEE NOTE 1	SPANS UP TO 5'-0" (SEE NOTE 1)					SPANS UP TO 9'-0" (SEE NOTE 1)					SPANS UP TO 12'-0" (SEE NOTE 1)																				
			CONNECTION TYPE (SEE NOTE 3)					CONNECTION TYPE (SEE NOTE 3)					CONNECTION TYPE (SEE NOTE 3)																				
CONCRETE		W	1.5" Edge Distance										3" Edge Distance																				
			C1	C2	C3	C4	C5	C1	C2	C3	C4	C5	C1	C2	C3	C4	C5	C1	C2	C3	C4	C5											
			48.0	16	16	13	16	16	16	12	7	13	10	16	9	5	9	7	16	16	16	16	16	16	14	9	16	15	16	11	7	16	11
			62.0	16	16	10	16	14	16	9	6	10	7	14	7	4	7	5	16	16	13	16	16	16	11	7	16	11	16	8	5	12	8
			76.0	16	13	8	14	11	15	7	4	8	6	14	6	4	7	5	16	16	10	16	16	16	9	5	13	9	16	8	5	12	8
	90.0	16	11	7	12	9	14	6	4	7	5	14	6	4	7	5	16	14	9	16	14	16	8	5	12	8	16	8	5	12	8		
	120.0	16	8	5	9	7	14	6	4	7	5	14	6	4	7	5	16	10	6	15	10	16	8	5	12	8	16	8	5	12	8		
		W	1" Edge Distance										2.5" Edge Distance																				
			C1	C2	C3	C4	C5	C1	C2	C3	C4	C5	C1	C2	C3	C4	C5	C1	C2	C3	C4	C5											
			48.0	16	16	14	16	16	16	12	7	11	9	16	9	5	8	7	16	16	14	16	16	16	12	8	16	14	16	9	6	16	10
			62.0	16	16	11	16	13	16	9	6	9	7	14	7	4	6	5	16	16	11	16	16	16	9	6	16	11	15	7	4	12	8
			76.0	16	13	9	13	11	16	7	5	7	6	14	6	4	6	5	16	14	9	16	16	16	8	5	13	9	14	7	4	12	8
90.0	16	11	7	11	9	14	6	4	6	5	14	6	4	6	5	16	12	7	16	13	14	7	4	12	8	14	7	4	12	8			
120.0	16	8	5	8	7	14	6	4	6	5	14	6	4	6	5	16	9	5	15	10	14	7	4	12	8	14	7	4	12	8			
	W	1.25" Edge Distance										3" Edge Distance																					
		C1	C2	C3	C4	C5	C1	C2	C3	C4	C5	C1	C2	C3	C4	C5	C1	C2	C3	C4	C5												
		48.0	16	15	10	15	10	16	8	5	8	5	13	6	4	6	4	16	16	16	16	16	16	14	9	16	13	16	10	7	16	9	
		62.0	16	12	7	11	8	14	6	4	6	4	10	5	3	4	3	16	16	13	16	16	16	11	7	16	10	16	8	5	12	7	
		76.0	16	9	6	9	6	11	5	3	5	3	10	4	3	4	3	16	16	10	16	14	16	9	5	13	8	16	8	5	12	7	
90.0	16	8	5	8	5	10	4	3	4	3	10	4	3	4	3	16	13	9	16	12	16	8	5	12	7	16	8	5	12	7			
120.0	13	6	4	6	4	10	4	3	4	3	10	4	3	4	3	16	10	6	15	9	16	8	5	12	7	16	8	5	12	7			
	W	1" Edge Distance										2.5" Edge Distance																					
		C1	C2	C3	C4	C5	C1	C2	C3	C4	C5	C1	C2	C3	C4	C5	C1	C2	C3	C4	C5												
		48.0	16	16	10	16	16	16	9	5	14	9	14	6	4	10	7	16	16	13	16	16	16	11	7	16	13	16	8	5	16	10	
		62.0	16	12	8	16	13	14	7	4	11	7	11	5	8	5	16	16	10	16	16	16	9	5	16	10	14	6	4	12	7		
		76.0	16	10	6	16	11	12	5	9	6	10	5	8	5	16	13	8	16	15	15	7	4	14	8	13	6	4	12	7			
90.0	16	8	5	14	9	10	5	8	5	10	5	8	5	16	11	7	16	13	13	6	4	12	7	13	6	4	12	7					
120.0	13	6	4	10	7	10	5	8	5	10	5	8	5	16	8	5	16	9	13	6	4	12	7	13	6	4	12	7					

ANCHOR NOTES:  
SEE SHEET 8 FOR ANCHOR NOTES.

		<b>ANCHOR SCHEDULE</b>																															
		FASTENER MAXIMUM SPACING (INCHES) REQUIRED FOR VARIOUS DESIGN LOADS AND SPANS																															
EXIST. STRUC.	ANCHOR TYPE	MAX LOAD (PSF) SEE NOTE 1	SPANS UP TO 5'-0" (SEE NOTE 1)					SPANS UP TO 9'-0" (SEE NOTE 1)					SPANS UP TO 12'-0" (SEE NOTE 1)																				
			CONNECTION TYPE (SEE NOTE 3)					CONNECTION TYPE (SEE NOTE 3)					CONNECTION TYPE (SEE NOTE 3)																				
CONCRETE		W	2.5" Edge Distance										3" Edge Distance																				
			C1	C2	C3	C4	C5	C1	C2	C3	C4	C5	C1	C2	C3	C4	C5	C1	C2	C3	C4	C5											
			48.0	16	16	16	16	16	16	14	9	16	11	16	10	7	12	8	16	16	16	16	16	16	14	9	16	15	16	11	7	16	11
			62.0	16	16	13	16	15	16	11	7	13	8	16	8	5	9	6	16	16	13	16	16	16	11	7	16	11	16	8	5	12	8
			76.0	16	16	10	16	12	16	9	5	10	7	16	8	5	9	6	16	16	10	16	16	16	9	5	13	9	16	8	5	12	8
	90.0	16	13	9	16	10	16	8	5	9	6	16	8	5	9	6	16	14	9	16	14	16	8	5	12	8	16	8	5	12	8		
	120.0	16	10	6	12	8	16	8	5	9	6	16	8	5	9	6	16	10	6	15	10	16	8	5	12	8	16	8	5	12	8		
		W	2.0" Edge Distance										3" Edge Distance																				
			C1	C2	C3	C4	C5	C1	C2	C3	C4	C5	C1	C2	C3	C4	C5	C1	C2	C3	C4	C5											
			48.0	16	16	14	16	16	16	12	8	15	10	16	9	6	11	7	16	16	16	16	16	16	14	9	16	15	16	11	7	16	11
			62.0	16	16	11	16	14	16	9	6	12	7	15	7	4	9	5	16	16	13	16	16	16	11	7	16	11	16	8	5	12	7
			76.0	16	14	9	16	11	16	7	5	9	6	14	7	4	8	5	16	14	9	16	16	16	9	5	13	9	16	8	5	12	8
90.0	16	12	7	15	9	14	7	4	8	5	14	7	4	8	5	16	12	7	16	13	14	7	4	12	8	14	7	4	12	8			
120.0	16	9	5	11	7	14	7	4	8	5	14	7	4	8	5	16	9	5	15	10	14	7	4	12	8	14	7	4	12	8			
	W	2.0" Edge Distance										3" Edge Distance																					
		C1	C2	C3	C4	C5	C1	C2	C3	C4	C5	C1	C2	C3	C4	C5	C1	C2	C3	C4	C5												
		48.0	16	16	16	16	16	16	15	9	16	11	16	11	7	12	8	16	16	16	16	16	16	14	9	16	13	16	10	7	16	9	
		62.0	16	16	13	16	15	16	11	7	12	8	16	8	5	9	6	16	16	13	16	16	16	11	7	16	11	16	8	5	12	7	
		76.0	16	16	11	16	12	16	9	6	10	7	16	8	5	9	6	16	14	9	16	16	16	9	5	13	8	16	8	5	12	7	
90.0	16	14	9	15	10	16	8	5	9	6	16	8	5	9	6	16	12	7	16	12	16	8	5	12	7	16	8	5	12	7			
120.0	16	11	7	11	8	16	8	5	9	6	16	8	5	9	6	16	10	6	15	9	16	8	5	12	7	16	8	5	12	7			
	W	1.5" Edge Distance										3" Edge Distance																					
		C1	C2	C3	C4	C5	C1	C2	C3	C4	C5	C1	C2	C3	C4	C5	C1	C2	C3	C4	C5												
		48.0	16	10	6	16	11	11	5	3	9	6	8	4	6	4	16	16	16	16	16	16	14	9	16	15	16	11	7	16	13		
		62.0	16	7	5	12	8	9	4	7	4	6	3	5	3	16	16	13	16	16	16	9	5	16	10	14	6	4	12	7			
		76.0	13	6	4	10	7	7	3	5	3	6	3	5	3	16	13	8	16	15	15	7	4	14	8	13	6	4	12	7			
90.0	11	5	3	8	5	6	3	5	3	6	3	5	3	16	11	7	16	13	13	6	4	12	7	13	6	4	12	7					
120.0	8	4	6	4	6	3	5	3	6	3	5	3	6	3	5	3	16	10	6	15	9	13	6	4	12	7	13	6	4	12	7		
	W	3.0" Edge Distance										3" Edge Distance																					
		C1	C2	C3	C4	C5	C1	C2	C3	C4	C5	C1	C2	C3	C4	C5	C1	C2	C3	C4	C5												
		48.0	16	16	13	16	16	16	11	7	16	12	16	8	5	13	9	16	16	16	16	16	16	14	9	16	15	16	11	7	16	13	
		62.0	16	15	10	16	16	16	8	5	14	9	13	6	4	10	7	16	16	13	16	16	16	9	5	16	10	14	6	4	12	7	
		76.0	16	12	8	16	14	14	7	4	11	7	13	6	4	10	6	16	14	9	16	16	16	9	5	16	10	14	6	4	12	7	
90.0	16	10	6	16	11	13	6	4	10	6	13	6	4	10	6	16	12	7	16	12	16	8	5	16	10	14	6	4	12	7			
120.0	16	8	5	13	8	13	6	4	10	6	13	6	4	10	6	16	10	6	15	9	13	6	4	12	7								

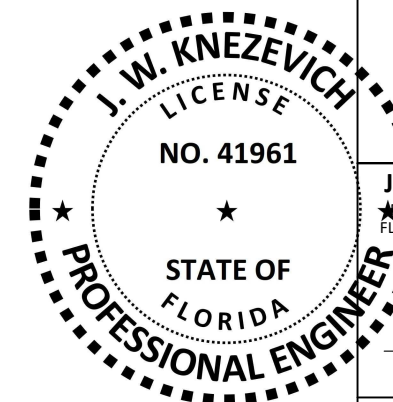


		ANCHOR SCHEDULE																																
		FASTENER MAXIMUM SPACING (INCHES) REQUIRED FOR VARIOUS DESIGN LOADS AND SPANS																																
EXIST. STRUC.	ANCHOR TYPE	MAX LOAD (PSF) SEE NOTE 1	SPANS UP TO 5'-0" (SEE NOTE 1)					SPANS UP TO 9'-0" (SEE NOTE 1)					SPANS UP TO 12'-0" (SEE NOTE 1)					SPANS UP TO 5'-0" (SEE NOTE 1)					SPANS UP TO 9'-0" (SEE NOTE 1)					SPANS UP TO 12'-0" (SEE NOTE 1)						
			CONNECTION TYPE (SEE NOTE 3)					CONNECTION TYPE (SEE NOTE 3)					CONNECTION TYPE (SEE NOTE 3)					CONNECTION TYPE (SEE NOTE 3)					CONNECTION TYPE (SEE NOTE 3)					CONNECTION TYPE (SEE NOTE 3)						
			C1	C2	C3	C4	C5	C1	C2	C3	C4	C5	C1	C2	C3	C4	C5	C1	C2	C3	C4	C5	C1	C2	C3	C4	C5	C1	C2	C3	C4	C5	C1	C2
HOLLOW BLOCK		W	2" Edge Distance										4" Edge Distance																					
			48.0	8		11	5	4			6			4			10	4		14	6	5		7		4			5					
			62.0	6		8	4			4						7			11	5	4		6						4					
			76.0	5		7				4						6			9	4		5							4					
			90.0	4		6										5			7			4							4					
	120.0			4										4			5			4							4							
		W	1" Edge Distance										2.5" Edge Distance																					
			48.0	14	6		12	7	7			6				14	6		16	9	7		11					8						
			62.0	10		9	6	6							10		16	7	6		8							6						
			76.0	8		7									8		13			7		6						6						
			90.0	7		6									7		11			6		6						6						
	120.0														8			6		6						6								
	W	1.25" Edge Distance										3" Edge Distance																						
		48.0	16	7	5	9	6	9	4		5	3	6	3	3	16	15	9	16	13	16	8	5	12	7	13	6	4	9	5				
		62.0	12	6	3	7	4	7	4		4	5		3		16	11	7	16	10	13	6	4	9	5	10	4	3	7	4				
		76.0	10	5	3	5	3	5			3	5				16	9	6	14	8	11	5	3	7	4	9	4	3	7	4				
		90.0	8	4		4	3	5			5					16	8	5	11	7	9	4	3	7	4	9	4	3	7	4				
120.0	6	3		3		5			5					12	6	3	8	5	9	4	3	7	4	9	4	3	7	4						
	W	1" Edge Distance										2.5" Edge Distance																						
		48.0	16	8	5	11	8	9	4		4	7			16	8	5	16	11	10	4		12	6	7		9	4						
		62.0	13	6	4	9	6	7			5				14	6	4	16	8	7		9	4	5		6		6						
		76.0	10	5		7	5	5			5				11	5		13	7	6		7	4	5		6		6						
		90.0	8	4		6	4	5			5				9	4		11	6	5		6	5	6		6		6						
120.0	6			4		5			5				7			8	4	5		6	5	6		6		6								

**ANCHOR NOTES:**

- SPANS AND LOADS SHOWN HERE ARE FOR DETERMINING ANCHOR SPACING ONLY. ALLOWABLE SHUTTER SPANS FOR SPECIFIC LOADS MUST BE LIMITED TO THOSE SHOWN IN TABLE 1 ON SHEET 2.
- AN EFFECTIVE WIND AREA OF 10 SQ. FT. SHALL BE USED FOR DETERMINING WIND LOADS FOR ANCHORS.
- 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.
- SEE MOUNTING SECTION DETAILS FOR IDENTIFICATION OF CONNECTION TYPE.
- EXISTING STRUCTURE MAY BE CONCRETE, ASTM C-90 HOLLOW CONCRETE BLOCK, GROUTED MASONRY, OR WOOD FRAMING. REFERENCE ANCHOR SCHEDULE FOR PROPER ANCHOR TYPE BASED ON TYPE OF EXISTING STRUCTURE.
- ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS.
- MINIMUM EMBEDMENT AND EDGE DISTANCE EXCLUDES WALL FINISH OR STUCCO.
- WHERE EXISTING STRUCTURE IS POST-TENSIONED CONCRETE, CONTRACTOR SHALL LOCATE CABLES PRIOR TO ANCHORING AND COORDINATE ANCHORAGE SUCH THAT CABLES ARE NOT DAMAGED.
- WHERE EXISTING STRUCTURE IS WOOD FRAMING, WOOD FRAMING CONDITIONS VARY. FIELD VERIFY THAT FASTENERS ARE INTO ADEQUATE WOOD FRAMING MEMBERS, NOT PLYWOOD. FASTENING TO PLYWOOD IS ACCEPTABLE ONLY FOR SIDE CLOSURE PIECES.
- WHERE LAG SCREWS AND WOOD 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 HAVE A MIN DENSITY AS NOTED IN ANCHOR SCHEDULE. 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), U.O.N.
- DESIGNATES ANCHOR CONDITIONS THAT ARE NOT ACCEPTABLE USES.
- \* DESIGNATES ANCHORS THAT ARE REMOVABLE BY REMOVING MACHINE SCREW, NUT OR WASHERED WINGNUT.
- ALL CONCRETE ANCHORS SHALL BE INSTALLED IN UNCRACKED CONCRETE ONLY WITH A MINIMUM CONCRETE STRENGTH AS NOTED IN ANCHOR SCHEDULE.
- WHEN ANCHORING TO CONCRETE BLOCK, SDS AND IMPACT DRILLS SHALL NOT BE USED TO DRILL INTO BLOCK OR TO INSTALL CONCRETE SCREWS.

		ANCHOR SCHEDULE																																
		FASTENER MAXIMUM SPACING (INCHES) REQUIRED FOR VARIOUS DESIGN LOADS AND SPANS																																
EXIST. STRUC.	ANCHOR TYPE	MAX LOAD (PSF) SEE NOTE 1	SPANS UP TO 5'-0" (SEE NOTE 1)					SPANS UP TO 9'-0" (SEE NOTE 1)					SPANS UP TO 12'-0" (SEE NOTE 1)					SPANS UP TO 5'-0" (SEE NOTE 1)					SPANS UP TO 9'-0" (SEE NOTE 1)					SPANS UP TO 12'-0" (SEE NOTE 1)						
			CONNECTION TYPE (SEE NOTE 3)					CONNECTION TYPE (SEE NOTE 3)					CONNECTION TYPE (SEE NOTE 3)					CONNECTION TYPE (SEE NOTE 3)					CONNECTION TYPE (SEE NOTE 3)					CONNECTION TYPE (SEE NOTE 3)						
			C1	C2	C3	C4	C5	C1	C2	C3	C4	C5	C1	C2	C3	C4	C5	C1	C2	C3	C4	C5	C1	C2	C3	C4	C5	C1	C2	C3	C4	C5	C1	C2
HOLLOW BLOCK		W	2.5" Edge Distance										4" Edge Distance																					
			48.0	16	10	6	14	8	11	5		7	4		6			10	4		14	6	5		7		4			5				
			62.0	16	7	5	11	6	9	4		6				7			11	5	4		6						4					
			76.0	13	6	4	9	5	7			5				6			9	4		5						4						
			90.0	11	5		7	4	6			4				4			7			4						4						
	120.0	8	4		5		6			4				4			6			4						4								
		W	2" Edge Distance										2.5" Edge Distance																					
			48.0	16	11	7	14	9	12	6	3	8	5	9	4	6	3	16	10	7	16	10	13	6	4	9	5	10	4	3	7	4		
			62.0	16	8	5	11	7	9	4	3	6	3	7	3	4		14	6	4	9	5	8	3	5	3	7	3	4					
			76.0	14	6	4	9	5	8	3		5	3	7	3	4		12	5	3	7	4	7	3	4	7	3	4						
			90.0	12	5	3	7	4	7	3		4	7	3	4		9	4		5	3	7	3	4	7	3	4							
	120.0	9	4		5	3	7	3		4	7	3	4		7	3		4	7	3	4				4									
	W	3" Edge Distance										3" Edge Distance																						
		48.0	11	5		15	7	6			8	4	4			11	5		15	7	6			8	4	4			6					
		62.0	8	4		11	5	4			6					8	4		11	5	4			6				4						
		76.0	7			9	4	4			5					7			9	4	4			5				4						
		90.0	6			8	4				4					6			8	4				4				4						
120.0	4			6					4					4			6			4					4									



This item has been electronically signed and sealed by J. W. Knezevich, PE on 8/9/17 using a Digital Signature.

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**.050 & .0615 ALUMINUM STORM PANEL**

no	date	by	description
1	8/5/2017	JWK	FBC 2017 Update

**J. W. Knezevich**  
 Professional Engineer  
 FL License No.: PE 41961

Scale: AS NOTED  
 Drawn by: ARV  
 Date: 04/10/2015  
 Drawing No. **KC15-0107**  
 sheet 8 of 8