

GENERAL NOTES:

1. STORM PANEL SHOWN ON THIS PRODUCT EVALUATION DOCUMENT (P.E.D.) HAS BEEN VERIFIED FOR COMPLIANCE IN ACCORDANCE WITH THE 2017 (6th EDITION) OF THE FLORIDA BUILDING CODE.

DESIGN WIND LOADS SHALL BE DETERMINED AS PER SECTION 1620 OF THE ABOVE MENTIONED CODE. FOR A WIND SPEED AS REQUIRED BY THE JURISDICTION WHERE THESE SHUTTERS WILL BE INSTALLED, AND FOR A DIRECTIONALITY FACTOR $K_d=0.85$. USING ASCE 7-10 FOR INSTALLATIONS UNDER 2017 FBC AND SHALL NOT EXCEED THE MAXIMUM (A.S.D.) DESIGN PRESSURE RATINGS INDICATED ON SHEETS 9 THRU 15. IN ORDER TO VERIFY THE ABOVE CONDITION, ULTIMATE DESIGN WIND LOADS DETERMINED PER ASCE 7-10 SHALL BE FIRST REDUCED TO A.S.D. DESIGN WIND LOADS BY MULTIPLYING THEM BY 0.6 IN ORDER TO TO COMPARE THESE W/ MAX. (A.S.D) DESIGN PRESSURE RATINGS INDICATED ON SHEETS 9 THRU 15.

N ORDER TO VERIFY THAT COMPONENTS AND ANCHORS ON THIS P.E.D. AS TESTED WERE NOT OVER STRESSED, A 33% INCREASE IN ALLOWABLE STRESS FOR WIND LOADS WAS NOT USED IN THEIR ANALYSIS. A DURATION FACTOR $CD=1.60$ WAS USED FOR VERIFICATION OF FASTENERS IN WOOD.

STORM PANEL'S ADEQUACY FOR IMPACT AND FATIGUE RESISTANCE HAS BEEN VERIFIED IN ACCORDANCE WITH SECTION 1626 OF THE ABOVE MENTIONED CODE AS PER AMERICAN TEST LAB REPORTS # 1022.01-96, # 0221.01-01 AND # 0616.02-05, PER PROTOCOLS TAS-201, TAS-202 AND TAS-203.

- 2. ALL ALUMINUM SHEET METAL PANELS SHALL HAVE 5052-H32 OR 3004-H34 ALLOY.
- 3. ALL ALUMINUM EXTRUSIONS SHALL BE ALUMINUM ASSOCIATION 6063-T6 ALLOY & TEMPER UNLESS OTHERWISE NOTED.
- 4. ALL SCREWS TO BE STAINLESS STEEL 304 OR 316 AISI SERIES OR CORROSION RESISTANT COATED CARBON STEEL AS PER DIN 50018 W/ 50 KSI YIELD STRENGTH AND 90 KSI TENSILE STRENGTH & SHALL COMPLY W/ FLORIDA BUILDING CODE SECTION 2411.3.3.4.
- 5. BOLTS TO BE ASTM A-307 GALVANIZED STEEL OR AISI 304 SERIES STAINLESS STEEL, WITH 35 KSI MINIMUM YIELD STRENGTH.
- 6. ANCHORS TO WALL SHALL BE AS FOLLOWS (UNLESS OTHERWISE NOTED):

(A) TO EXISTING POURED CONCRETE:

- 1/4" Ø TAPCON ANCHORS AS MANUFACTURED BY I.T.W. BUILDEX. (REGULAR OR 410 S.S.)
- 1/4" Ø CRETE-FLEX SS4 ANCHORS AS MANUFACTURED BY ELCO CONSTRUCTION PRODUCTS.
- 1/4" Ø CF TAP-GRIP ANCHORS (BERTHA STUD-CON), AS MANUFACTURED BY TRU-FAST CORPORATION.
- 1/4" Ø ZAMAC NAILIN ANCHORS AS MANUFACTURED BY POWER FASTENERS, INC.
- 1/4" Ø x 7/8" CALK-IN ANCHORS OR ELCO male & female "PANELMATE" AS MANUFACTURED BY POWER FASTENERS, INC. AND ELCO CONSTRUCTION PRODUCTS, RESPECTIVELY.
- 1/4" Ø x 3/4" ALL POINTS SOLID-SET ANCHORS AS DISTRIBUTED BY ALL POINTS SCREW, BOLT & SPECIALTY COMPANY.

NOTES:

A.1) MINIMUM EMBEDMENT INTO POURED CONCRETE OF TAPCON ANCHORS OR CRETE-FLEX SS4 IS 1 3/4", FOR ZAMAC NAILIN ANCHORS IS 1 3/8", FOR ELCO PANELMATE ANCHORS IS 1 3/4", AND FOR CF TAP-GRIP ANCHORS IS 1 1/4".

A.2) 7/8" CALK-IN ANCHORS SHALL BE ENTIRELY EMBEDDED INTO THE POURED CONCRETE. NO EMBEDMENT INTO STUCCO SHALL BE PERMITTED. 1/4" Ø-20 SCREWS USED SHALL BE 1 1/2" LONG MINIMUM SHOULD STUCCO EXIST, AND 1" MINIMUM FOR WALLS WITH NO STUCCO.

A.3) MINIMUM EMBEDMENT OF 1/4" Ø x 3/4" ALL POINTS SOLID-SET ANCHORS SHALL BE 7/8" INTO THE POURED CONCRETE. NO EMBEDMENT INTO STUCCO SHALL BE PERMITTED. 1/4" Ø-20 S.S. MACHINE SCREW USED SHALL BE 1 1/2" LONG MINIMUM SHOULD STUCCO EXIST, AND 1" MINIMUM FOR WALLS WITH NO STUCCO.

A.4) IN CASE THAT PRECAST STONE, PRECAST CONCRETE PANELS, OR PAVERS BE FOUND ON THE EXISTING WALL OR FLOOR, ANCHORS SHALL BE LONG ENOUGH TO REACH THE MAIN STRUCTURE BEHIND SUCH PANELS. ANCHORAGE SHALL BE AS INDICATED ON NOTES A.1) & A.2) ABOVE.

(B) TO EXISTING CONCRETE BLOCK WALL:

- 1/4" Ø TAPCON ANCHORS AS MANUFACTURED BY I.T.W. BUILDEX. (REGULAR OR 410 S.S.)
- 1/4" Ø CRETE-FLEX SS4 ANCHORS AS MANUFACTURED BY ELCO CONSTRUCTION PRODUCTS.
- 1/4" Ø CF TAP-GRIP ANCHORS (BERTHA STUD-CON), AS MANUFACTURED BY TRU-FAST CORPORATION.
- 1/4" Ø ZAMAC NAILIN ANCHORS AS MANUFACTURED BY POWER FASTENERS, INC.
- 1/4" Ø x 7/8" CALK-IN ANCHORS OR ELCO male & female "PANELMATE" AS MANUFACTURED BY POWER FASTENERS, INC. AND ELCO CONSTRUCTION PRODUCTS, RESPECTIVELY.
- 1/4" Ø x 3/4" ALL POINTS SOLID-SET ANCHORS AS DISTRIBUTED BY ALL POINTS SCREW, BOLT & SPECIALTY COMPANY.

NOTES:

B.1) MINIMUM EMBEDMENT OF TAPCON, ELCO PANELMATE, CF TAP-GRIP AND CRETE-FLEX SS4 ANCHORS INTO CONCRETE BLOCK UNIT SHALL BE 1 1/4", 1 3/8" FOR ZAMAC NAILIN ANCHORS.

B.2) 7/8" CALK-IN ANCHORS SHALL BE ENTIRELY EMBEDDED INTO THE CONCRETE BLOCK UNIT. NO EMBEDMENT INTO STUCCO SHALL BE PERMITTED. 1/4" Ø-20 SCREWS USED SHALL BE 1 1/2" LONG MINIMUM SHOULD STUCCO EXIST, AND 1" MINIMUM FOR WALLS WITH NO STUCCO.

B.3) MINIMUM EMBEDMENT OF 1/4" Ø x 3/4" ALL POINTS SOLID-SET ANCHORS SHALL BE 7/8" INTO THE CONCRETE BLOCK. NO EMBEDMENT INTO STUCCO SHALL BE PERMITTED. 1/4" Ø-20 S.S. MACHINE SCREW USED SHALL BE 1 1/2" LONG MINIMUM SHOULD STUCCO EXIST, AND 1" MINIMUM FOR WALLS WITH NO STUCCO.

B.4) IN CASE THAT PRECAST STONE OR PRECAST CONCRETE PANELS BE FOUND ON THE EXISTING WALL, ANCHORS SHALL BE LONG ENOUGH TO REACH THE MAIN STRUCTURE BEHIND SUCH PANELS. ANCHORAGE SHALL BE AS INDICATED ON NOTES IN B.1) AND B.2) ABOVE.

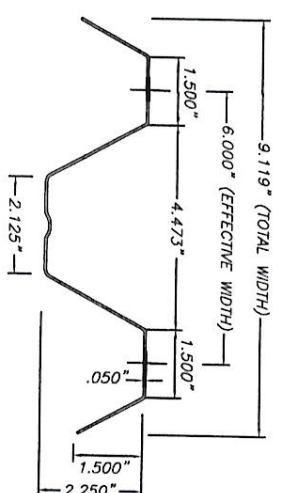
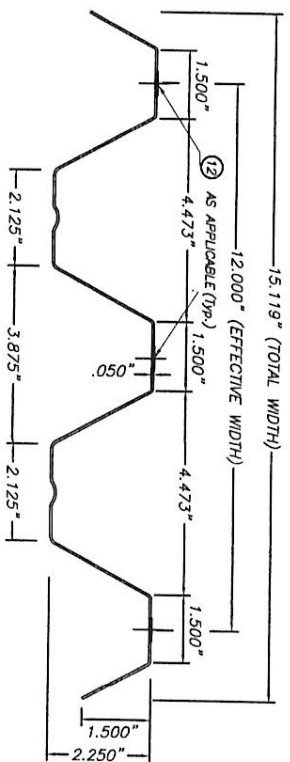
(C) ANCHORS SHALL BE INSTALLED FOLLOWING ALL OF THE RECOMMENDATIONS AND SPECIFICATIONS OF THE ANCHOR'S MANUFACTURER.

- 7. PANELS MAY ALSO BE INSTALLED HORIZONTALLY FOLLOWING INSTALLATION DETAILS SHOWN ON SECTIONS 1 THRU 16 (SHEET 3 & 7 OF 15) EXCEPT THAT HEADERS 2, 3 & 4 SHALL NOT BE USED.
- 8. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE SOUNDNESS OF THE STRUCTURE WHERE SHUTTER IS TO BE ATTACHED TO INSURE PROPER ANCHORAGE. THIS SHUTTER SHALL ONLY BE ATTACHED TO CONCRETE, BLOCK OR WOOD FRAME BUILDINGS.
- 9. THE INSTALLATION CONTRACTOR IS TO SEAL/CAULK ALL SHUTTER COMPONENT EDGES WHICH REMAIN IN CONTINUOUS CONTACT WITH THE BUILDING TO PREVENT WIND/RAIN INTRUSION. CAULK AND SEAL SHUTTER TRACKS ALL AROUND FULL LENGTH.
- 10. STORM PANEL INSTALLATION SHALL COMPLY WITH SPECS INDICATED IN THIS DRAWING PLUS ANY BUILDING AND ZONING REGULATIONS PROVIDED BY THE JURISDICTION WHERE PERMIT IS APPLIED TO.
- 11. (a) THIS PRODUCT EVALUATION DOCUMENT (P.E.D.) PREPARED BY THIS ENGINEER IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SITE SPECIFIC PROJECT, i.e. WHERE THE SITE CONDITIONS DEVIATE FROM THE P.E.D.
- (b) CONTRACTOR TO BE RESPONSIBLE FOR THE SELECTION, PURCHASE AND INSTALLATION INCLUDING LIFE SAFETY OF THIS PRODUCT BASED ON THIS P.E.D. PROVIDED HE/SHE DOES NOT DEVIATE FROM THE CONDITIONS DETAILED ON THIS DOCUMENT. CONSTRUCTION SAFETY AT SITE IS THE CONTRACTOR'S RESPONSIBILITY.
- (c) THIS PRODUCT EVALUATION DOCUMENT WILL BE CONSIDERED INVALID IF MODIFIED.
- (d) SITE SPECIFIC PROJECTS SHALL BE PREPARED BY A FLORIDA REGISTERED ENGINEER OR ARCHITECT WHICH WILL BECOME THE ENGINEER OF RECORD (E.O.R.) FOR THE PROJECT AND WHO WILL BE RESPONSIBLE FOR THE PROPER USE OF THE P.E.D. ENGINEER OF RECORD, ACTING AS A DELEGATED ENGINEER TO THE P.E.D. ENGINEER, SHALL SUBMIT TO THIS LATTER THE SITE SPECIFIC DRAWINGS FOR REVIEW.
- (e) THIS P.E.D. SHALL BEAR THE DATE AND ORIGINAL SEAL AND SIGNATURE OF THE PROFESSIONAL ENGINEER OF RECORD THAT PREPARED IT.
- 12. SHUTTER MANUFACTURER'S LABEL SHALL BE LOCATED ON A READILY VISIBLE LOCATION AT STORM PANEL IN ACCORDANCE WITH SECTION 1709.9.3 OF FLORIDA BUILDING CODE. ONE LABEL SHALL BE PLACED FOR EVERY OPENING. LABELING TO COMPLY WITH SECTION 1709.9.2 OF THE FLORIDA BUILDING CODE.

THIS DRAWING SHALL ONLY BE USED TO OBTAIN PERMITS IN THE STATE OF FLORIDA

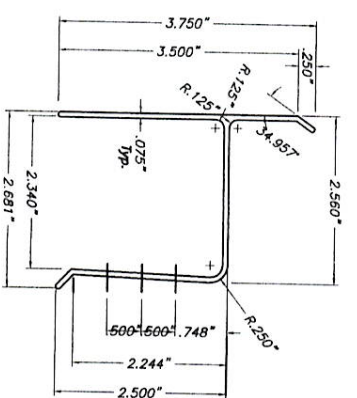


© 2017 TILTECO, INC.		FLORIDA BUILDING CODE (High Velocity Hurricane Zone)			
0.050" BERTHA ALUMINUM STORM PANEL (2.25" DEEP)		L.C. DRAWN BY: 07/26/17			
TILTECO inc.		EASTERN METAL SUPPLY, INC			
TILLIT TESTING & ENGINEERING COMPANY 6355 N.W. 36th St., Ste. 305, Virginia Gardens, FL 33166 Phone : (305)971-1530 , Fax : (305)971-1531 EB-0006719		4268 WEST ROADS DRIVE WEST PALM BEACH, FL 33407 PHONE: (561)533-6061, FAX: (561)568-4780			
REV. NO	DESCRIPTION	DATE	REV. NO	DESCRIPTION	DATE
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2			4		
DRAWING No					17-100
SHEET					1 OF 15

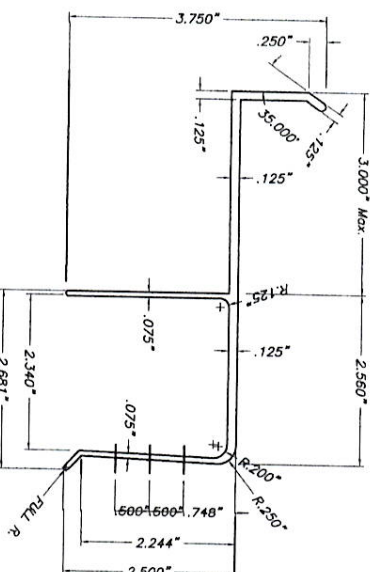


1 ALUMINUM PANEL
SCALE: 1/4" = 1"

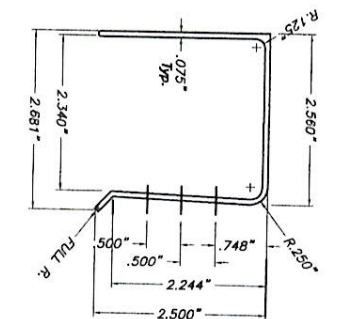
1A ALUMINUM HALF PANEL
SCALE: 1/4" = 1"



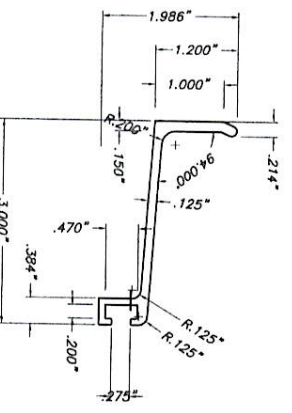
2 H-HEADER
SCALE: 3/8" = 1"



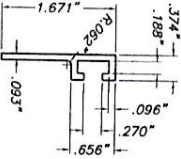
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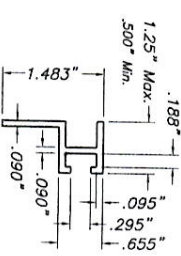
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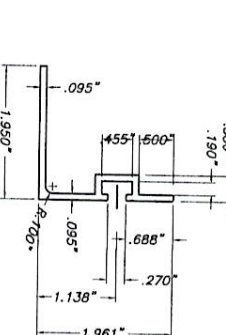
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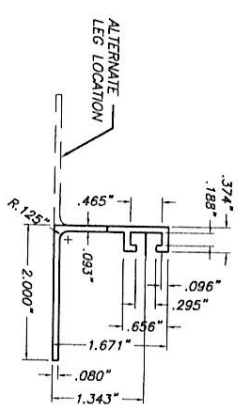
6 F-TRACK
SCALE: 3/8" = 1"



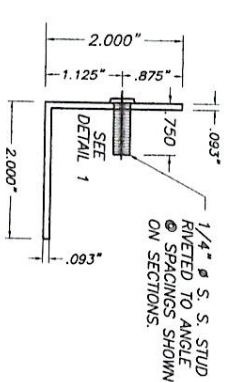
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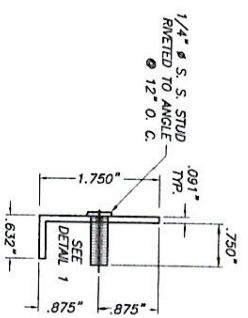
7 REVERSED F-TRACK ANGLE TRACK
SCALE: 3/8" = 1"



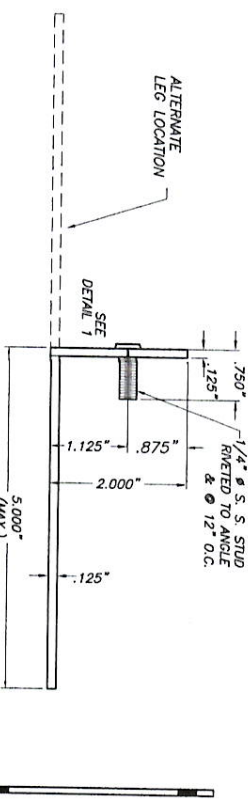
8 F-TRACK ANGLE
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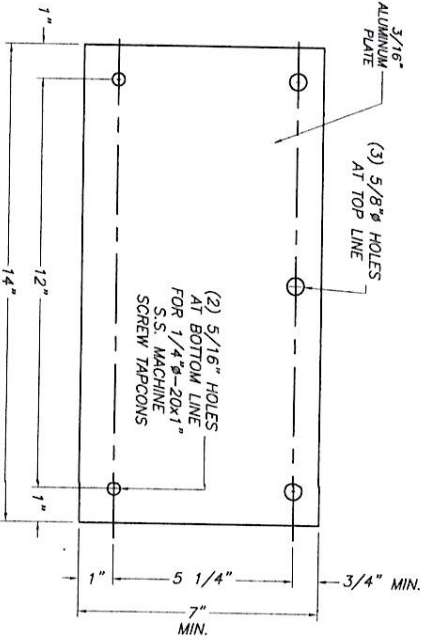
9 STUDDED ANGLE
6063-T5 ALUM. ALLOY
SCALE: 3/8" = 1"



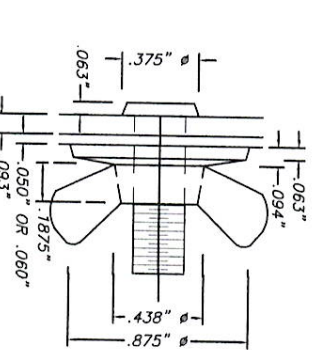
9A MINI WALL 1.75\"/>



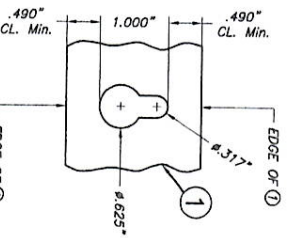
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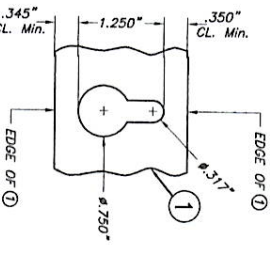
11 3/16\"/>



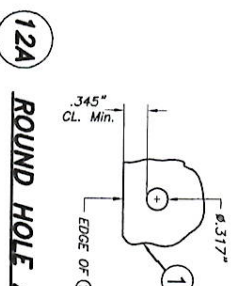
DETAIL 1: STUD W/ DIE CAST ZINC NICKEL PLATED WING NUT



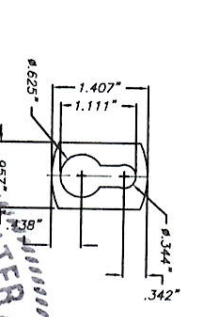
OPTION 1



OPTION 2

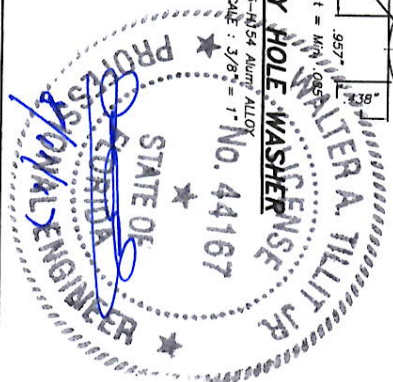


12A ROUND HOLE AT PANEL (OPTION TO 12)



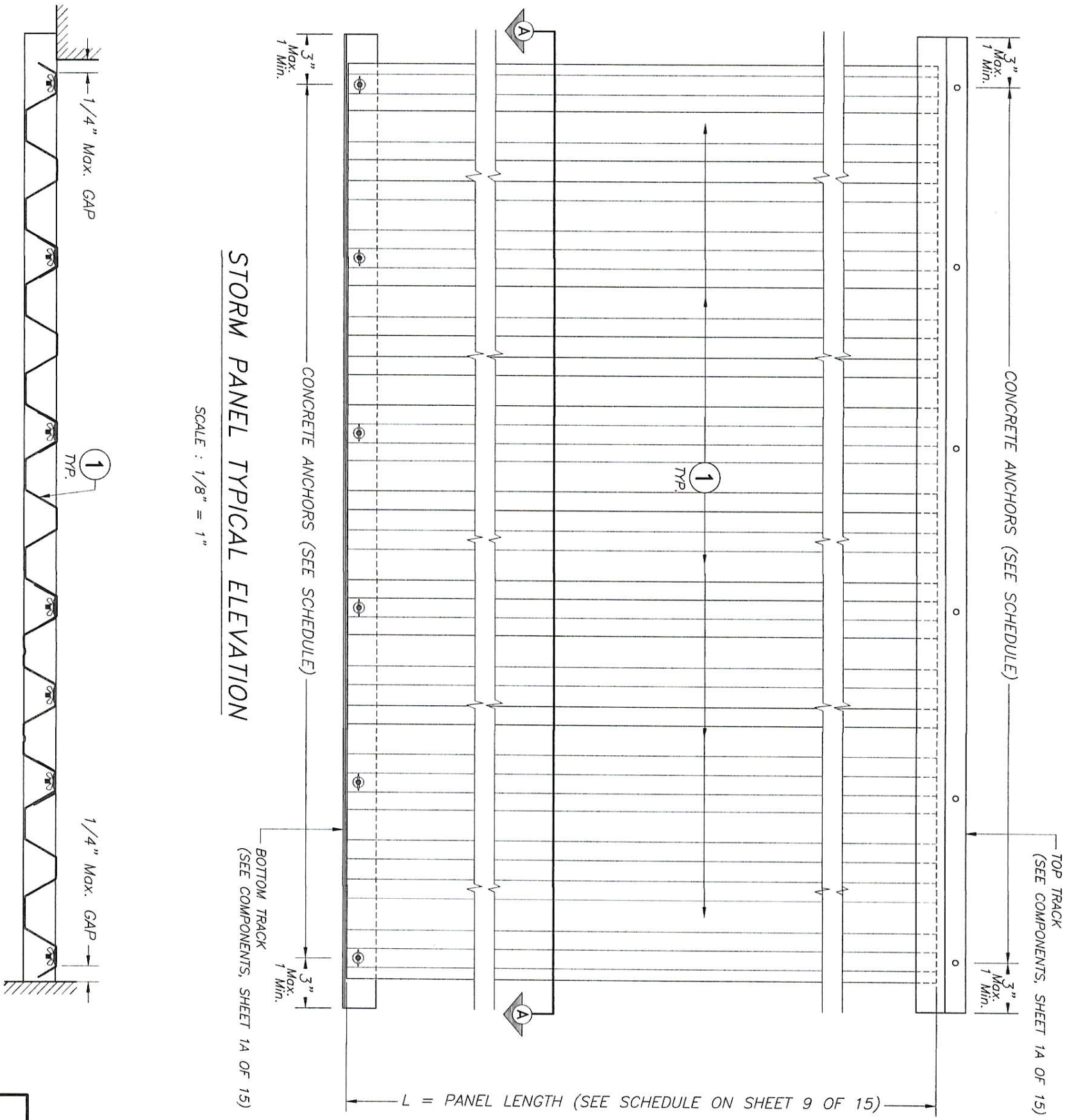
13 KEY HOLE WASHER
3103-H154 ALUM. ALLOY
SCALE: 3/8" = 1"

COMPONENTS

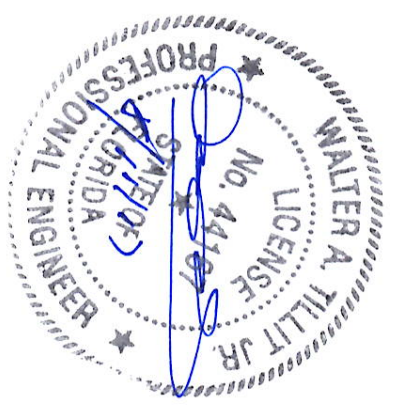


TILECO INC.
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6355 N.W. 36th, St. 300, Virginia Gardens, FL 33166
Phone: (305) 871-1530, Fax: (305) 871-1531
WALTER A. TILIT JR., P.E.
FLORIDA LIC. # 44167

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)				EASTERN METAL SUPPLY, INC		DRAWN BY:	
0.050" BERTHA ALUMINUM STORM PANEL (2.25" DEEP)				4268 WEST ROADS DRIVE		07/26/17	
				WEST PALM BEACH, FL 33407		DATE:	
				PHONE: (561) 553-6061, FAX: (561) 588-4780		17-100	
						DRAWING NO	
						SHEET 1A OF 15	



SECTION A-A
SCALE : 1/8" = 1"



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TILITECO INC.

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6355 N.W. 36th, Ste. 305, VIRGINIA GARDENS, FL 33166
Phone : (305)871-1530 . Fax : (305)871-1531
EB-0006719
WALTER A. TILIT Jr., P.E.
FLORIDA Lic. # 44167

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

0.050" BERTHA ALUMINUM STORM PANEL
(2.25" DEEP)

EASTERN METAL SUPPLY, INC

4268 WEST ROADS DRIVE
WEST PALM BEACH, FL 33407
PHONE: (561)533-6061, FAX: (561)568-4780

17-100
DRAWING No

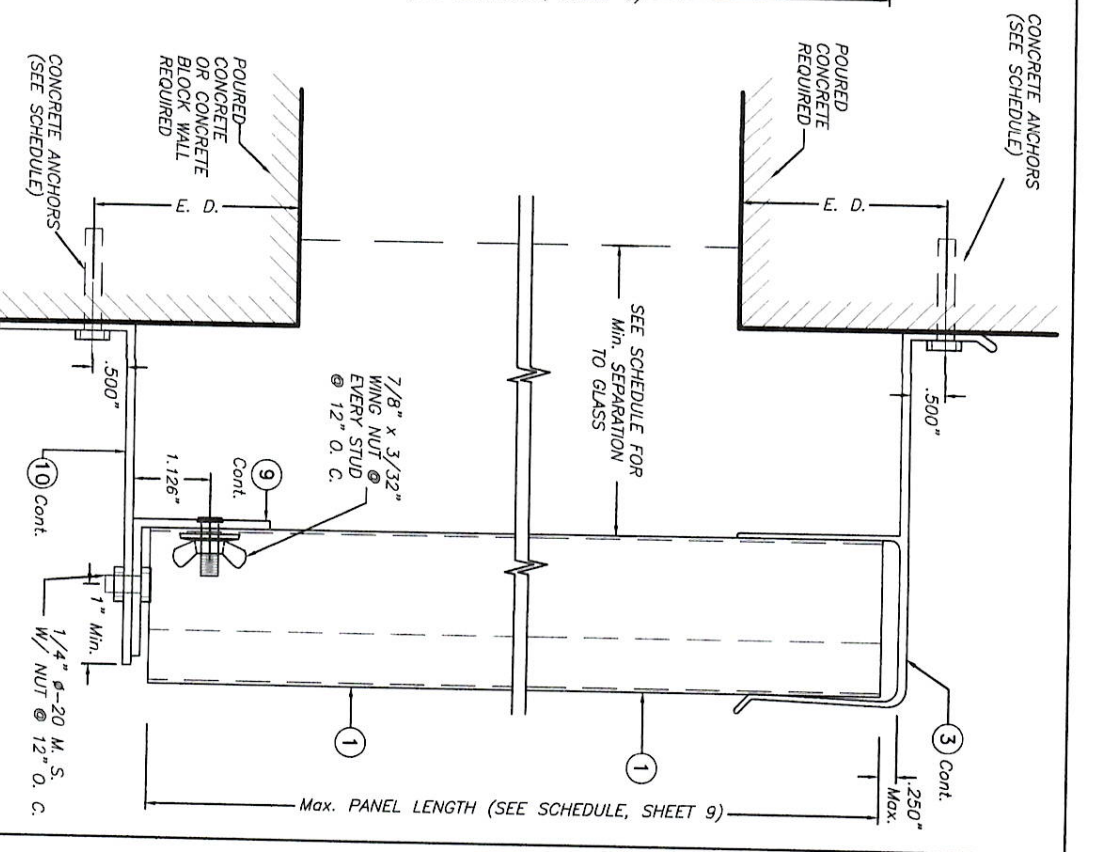
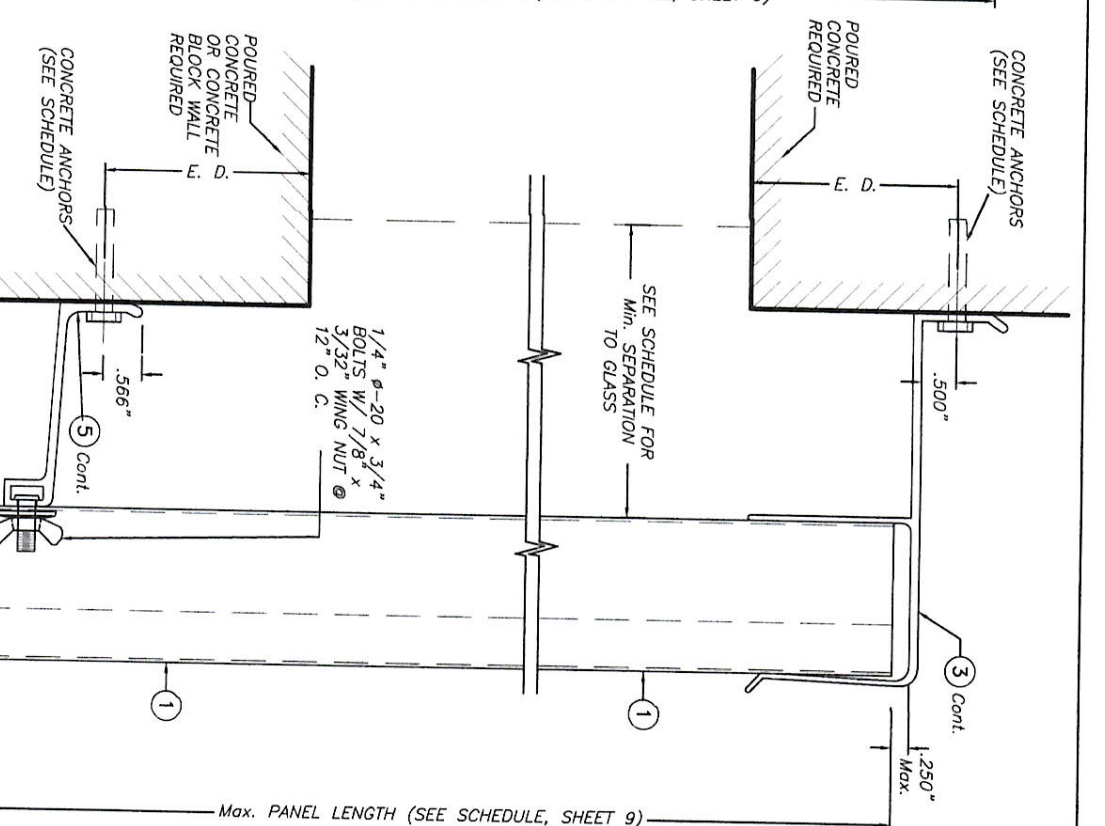
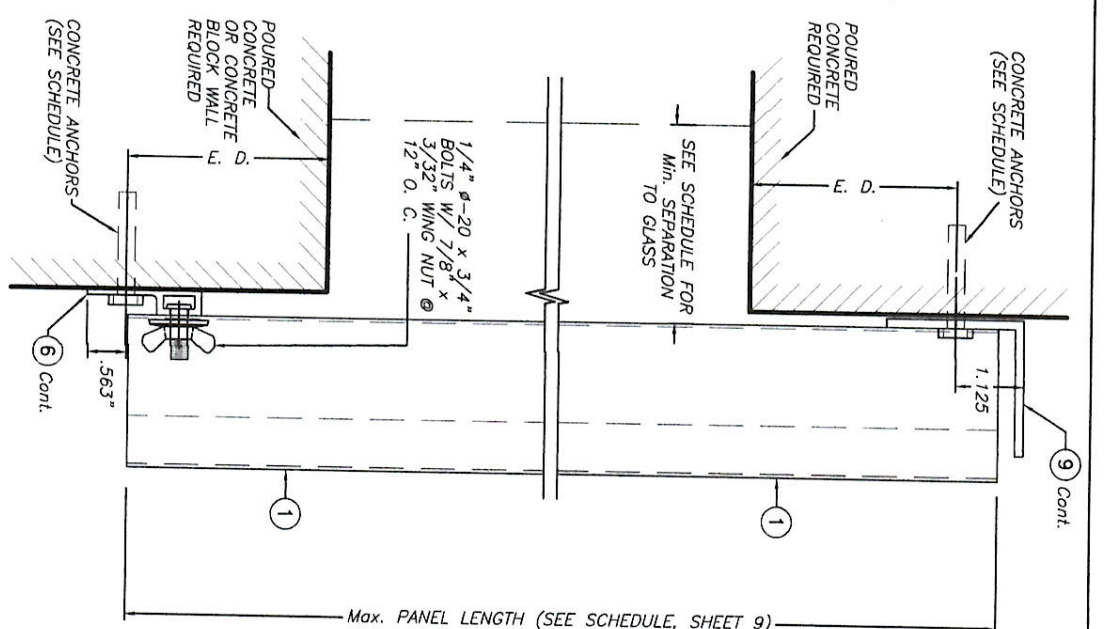
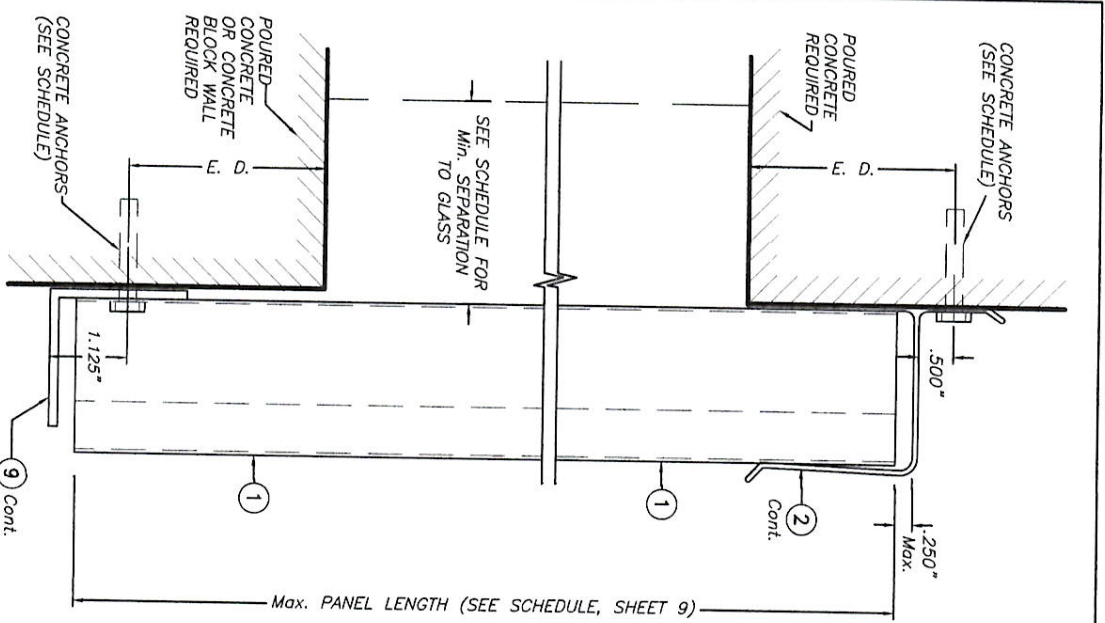
L.C.
DRAWN BY:

07/26/17
DATE:

17-100
DRAWING No

REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
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2			4		

SHEET 2 OF 15

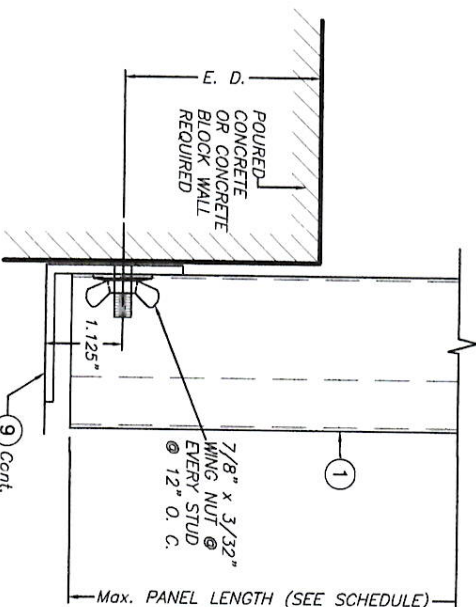


SECTION 1 @ ANCHOR

WALL MOUNTING INSTALLATION
SECTION 2

BUILD OUT INSTALLATION
SECTION 3

BUILD OUT INSTALLATION
SECTION 4



SECTION 1 @ STUD

WALL MOUNTING INSTALLATION
SECTION 1

NOTE : DETAIL OF SECTION 1 @ STUD VALID ALSO FOR WALL MOUNTING INSTALLATION - SECTION 2 (TOP)

E. D. = EDGE DISTANCE
(SEE SCHEDULE ON SHEETS 10 & 11)

NOTE FOR COMBINATION OF SECTIONS :
WALL MOUNTING SECTIONS CAN BE COMBINED IN ANY WAY TO SUIT ANY INSTALLATION.

TILECO inc.

TILTIT TESTING & ENGINEERING COMPANY
6355 W. 36th St., Suite 150, Virginia Gardens, FL 33166
Phone : (305) 971-1531, (305) 971-1531

WALTER A. TILTIT Jr., P.E.
FLORIDA Lic. # 44167

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)
0.050" BERTHA ALUMINUM STORM PANEL
(2.25" DEEP)

EASTERN METAL SUPPLY, INC.

4268 WEST ROADS DRIVE
WEST PALM BEACH, FL 33407
PHONE: (561) 533-6061, FAX: (561) 588-4780

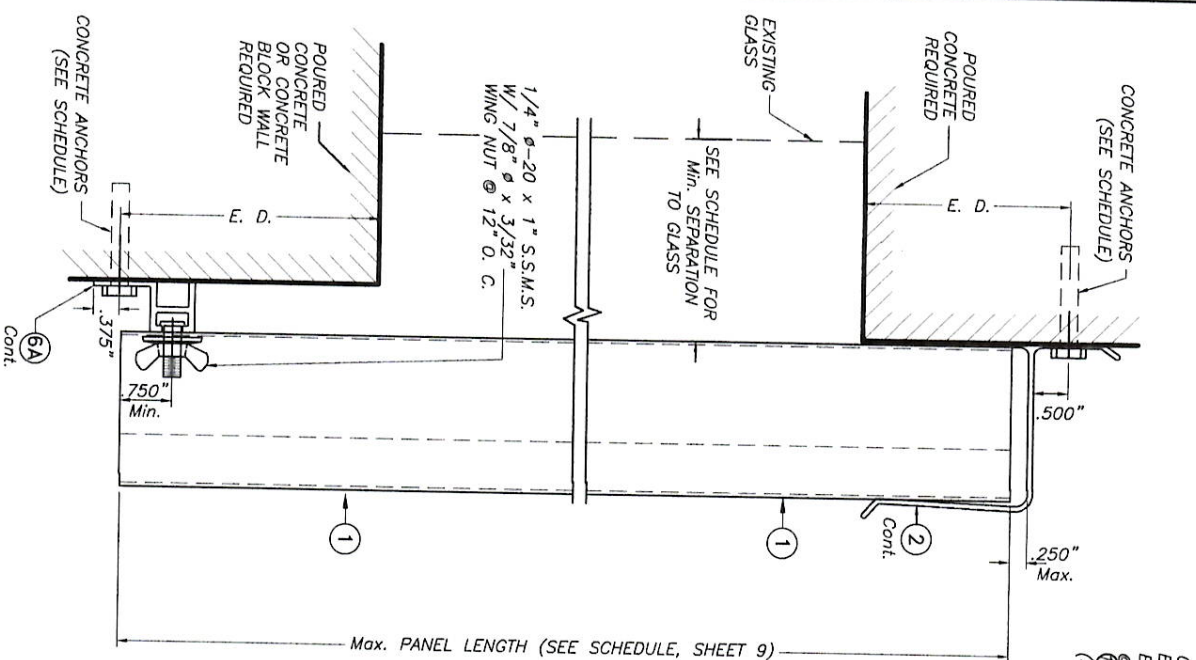
L.C.
DRAWN BY:
DATE: 07/26/17

17-100
DRAWING No

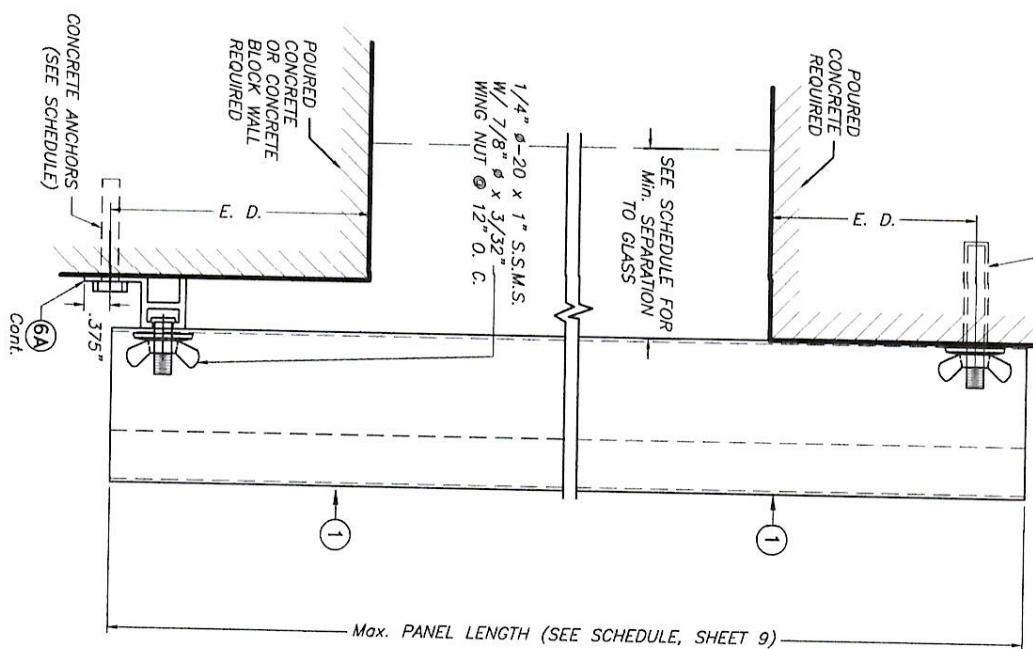
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SHEET 3 OF 15

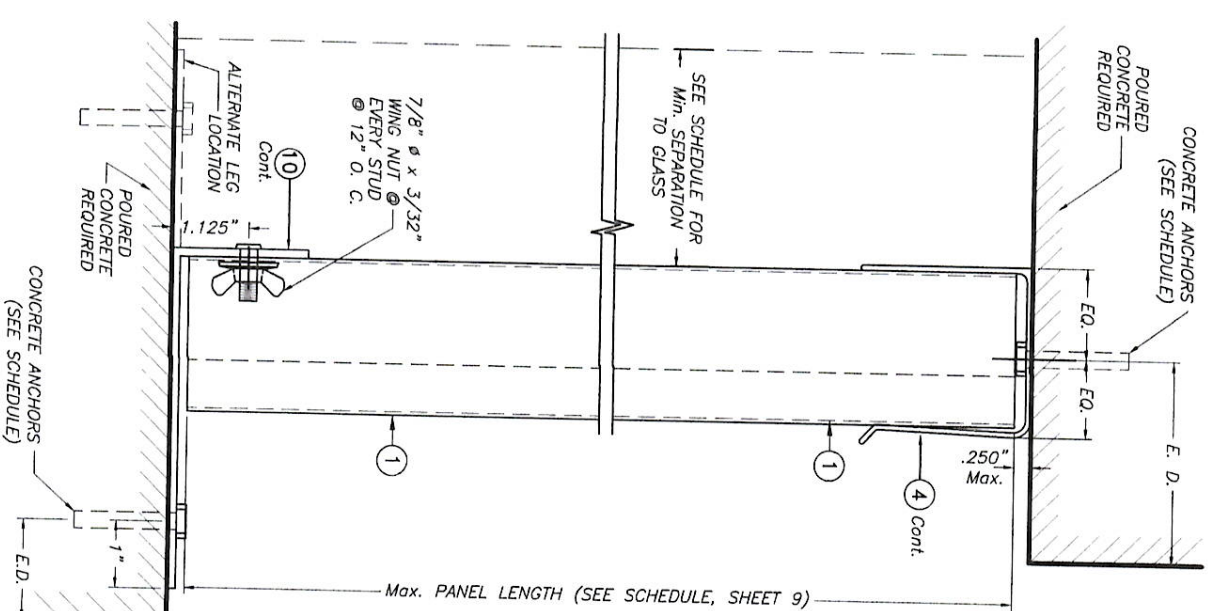
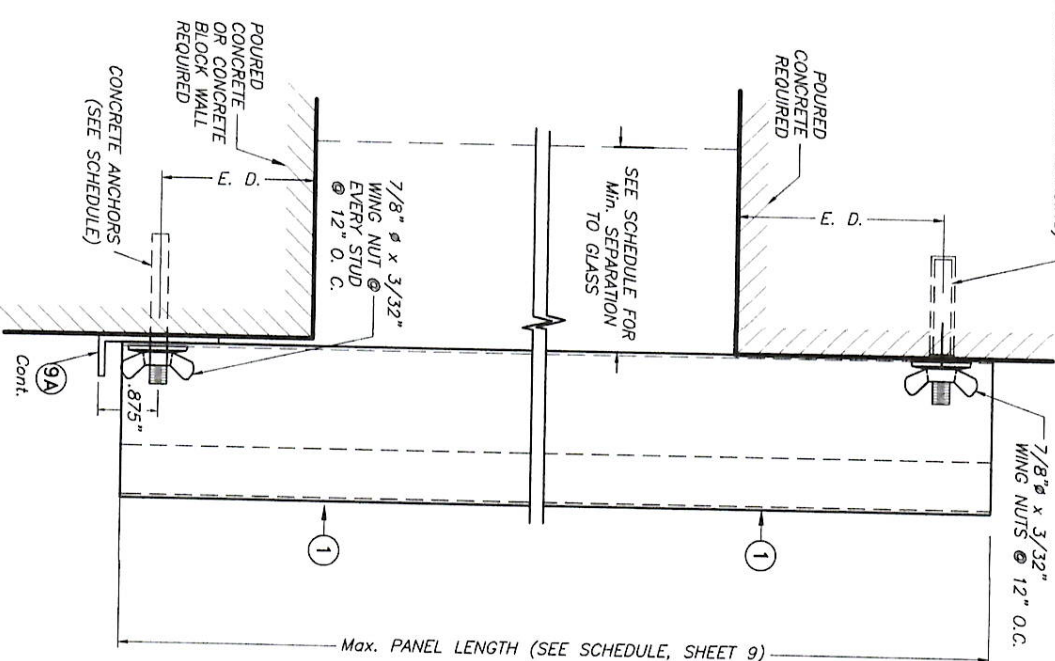




CALK-IN OR ALL POINT SOLID-SET OR
ELCO male/female PANELMATE OR
ELCO male/female PANELMATE PLUS
② W/1/4\"-20 SIDEWALK BOLT OR ③
② W/1/4\"-20 TRUSSEAD BOLT + +
(SEE SCHEDULE FOR SPACING)



CALK-IN OR ALL POINT SOLID-SET OR
ELCO male/female PANELMATE OR
ELCO male/female PANELMATE PLUS
② W/1/4\"-20 SIDEWALK BOLT OR ③
② W/1/4\"-20 TRUSSEAD BOLT + +
(SEE SCHEDULE FOR SPACING)



WALL MOUNTING INSTALLATION

SECTION 9

SCALE : 3/8" = 1"

WALL MOUNTING INSTALLATION

SECTION 10

SCALE : 3/8" = 1"

WALL MOUNTING INSTALLATION

SECTION 11

SCALE : 3/8" = 1"

CEILING & FLOOR MOUNTING

INSTALLATION SECTION 12

SCALE : 3/8" = 1"

E. D. = EDGE DISTANCE
(SEE SCHEDULE ON
SHEETS 10 & 11 OF 15)

NOTE FOR COMBINATION OF SECTIONS :
WALL/FLOOR/CEILING MOUNTING SECTIONS CAN BE
COMBINED IN ANY WAY TO SUIT ANY INSTALLATION.

++ SIDE WALK BOLTS ARE 3/4\"-3/32\"THICK
HEAD MACHINE SCREW W/LENGTH
AS PER NOTES A.2 & B.2 (SHEET 1)
++ TRUSS HEAD BOLTS ARE 1/2\"-3/8\"THICK
HEAD MACHINE SCREW W/LENGTH
AS PER NOTES A.2 & B.2 (SHEET 1)



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EB-0006719

WALTER A. TILTIT Jr., P.E.
FLORIDA Lic. # 44167

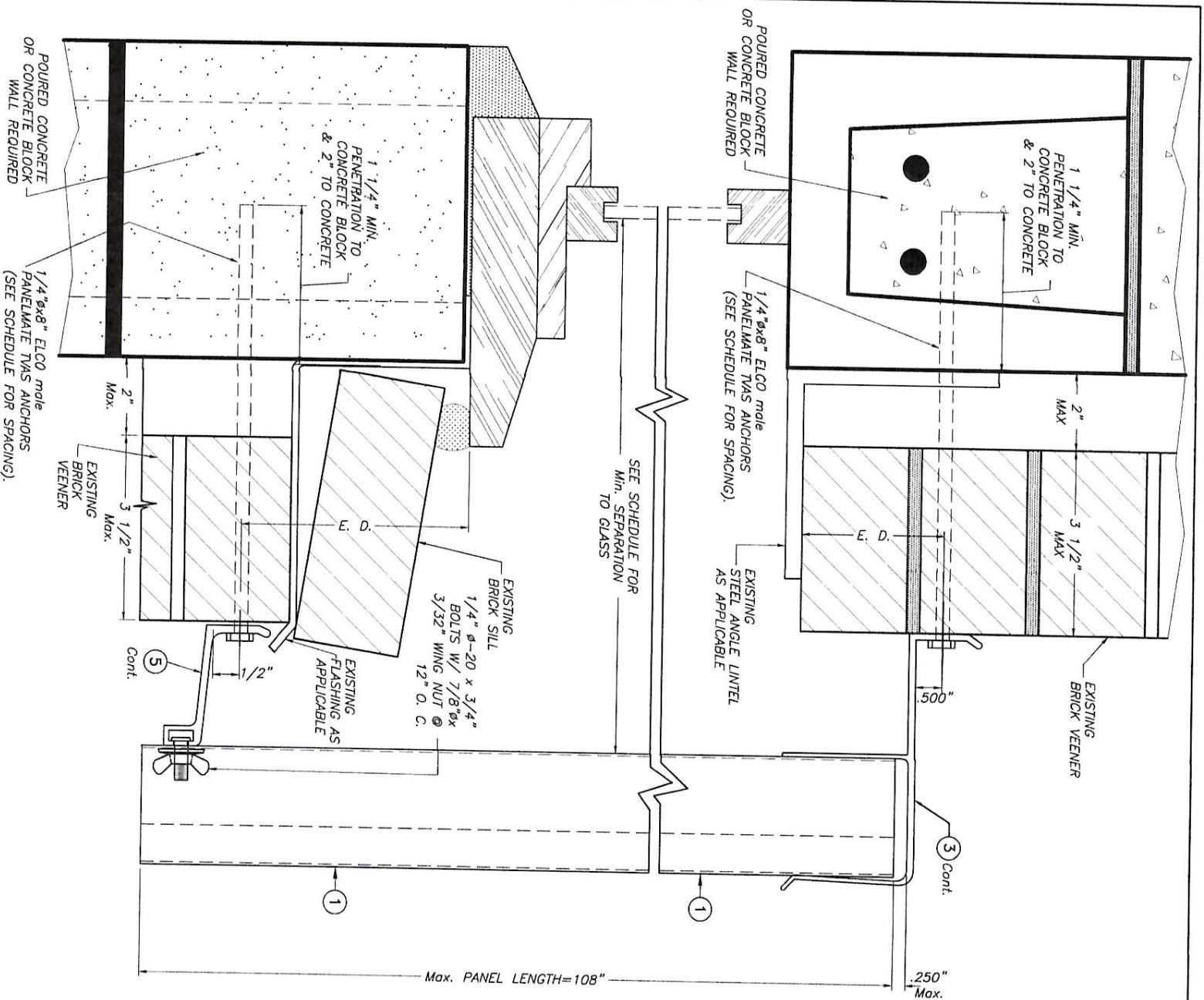
FLORIDA BUILDING CODE (High Velocity Hurricane Zone)
0.050" BERTHA ALUMINUM STORM PANEL
(2.25" DEEP)

EASTERN METAL SUPPLY, INC

4288 WEST ROADS DRIVE
WEST PALM BEACH, FL 33407
PHONE: (561)533-6061, FAX: (561)588-4780

17-100
DATE: 07/26/17

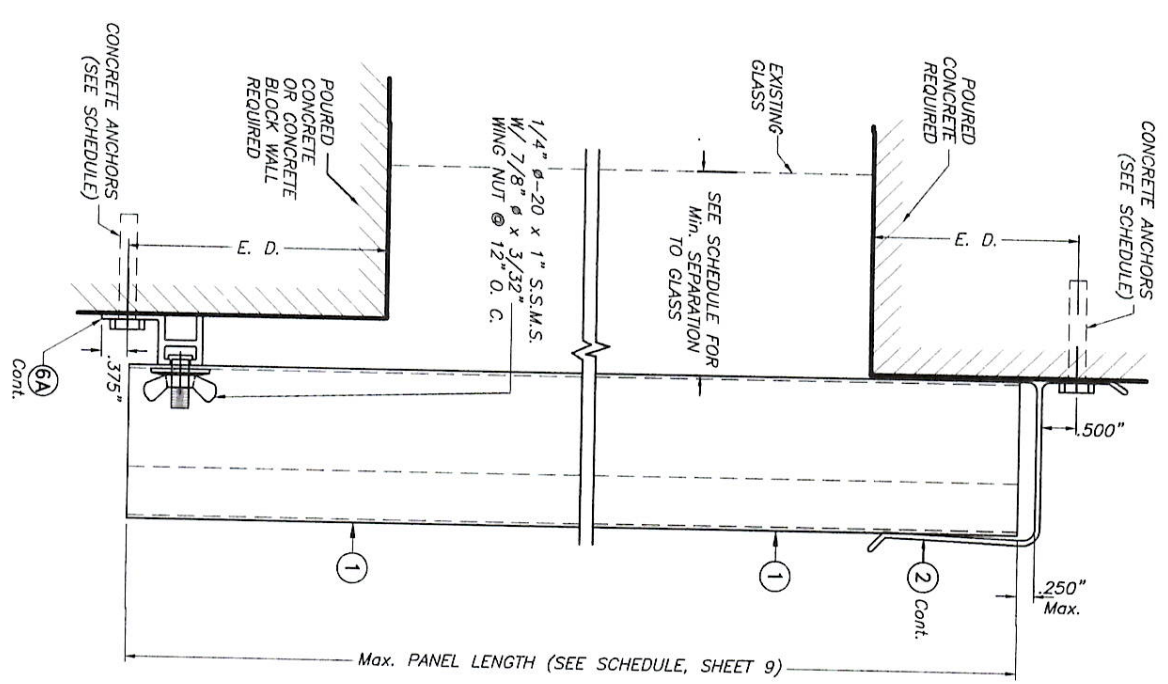
REV. NO. DESCRIPTION DATE REV. NO. DESCRIPTION DATE
1 OLD 15-049 07/26/17 4
SHEET 5 OF 15



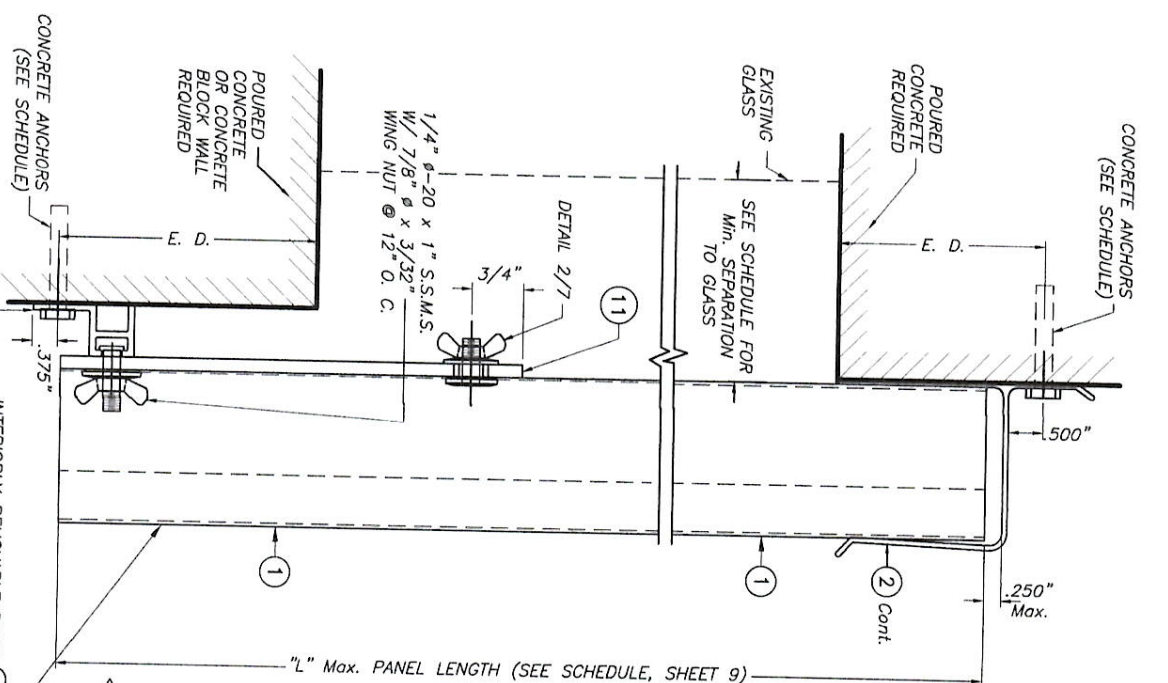
BUILD OUT INSTALLATION **SECTION 13** SCALE : 3/8" = 1"

E. D. = EDGE DISTANCE (SEE SCHEDULE ON SHEETS 10 & 11 OF 15)

NOTE FOR COMBINATION OF SECTIONS : WALL MOUNTING SECTIONS CAN BE COMBINED IN ANY WAY TO SUIT ANY INSTALLATION.



SECTION 14A



SECTION 14B

INSTALLATIONS VALID FOR PANELS 1 USED JOINTLY WITH INTERIORLY REMOVABLE PANELS 1

WALL MOUNTING INSTALLATIONS **SECTIONS 14** SCALE : 3/8" = 1"



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EB-0006719
WALTER A. TILIT Jr., P.E.
FLORIDA Lic. # 44167

EASTERN METAL SUPPLY, INC

4268 WEST ROADS DRIVE
WEST PALM BEACH, FL 33407
PHONE: (561)533-6061, FAX: (561)588-4780

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

0.050" BERTHA ALUMINUM STORM PANEL
(2.25" DEEP)

REV. NO	DESCRIPTION	DATE	REV. NO	DESCRIPTION	DATE
1	QLD 15-048	07/26/17	3		
2			4		

L.C.

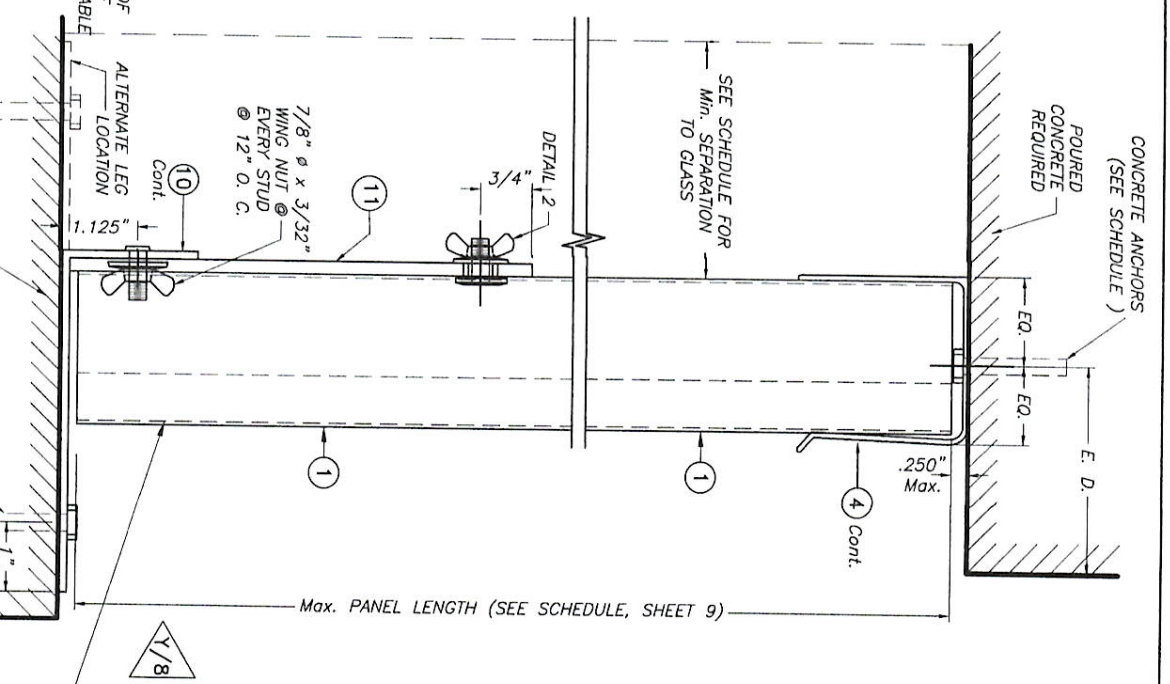
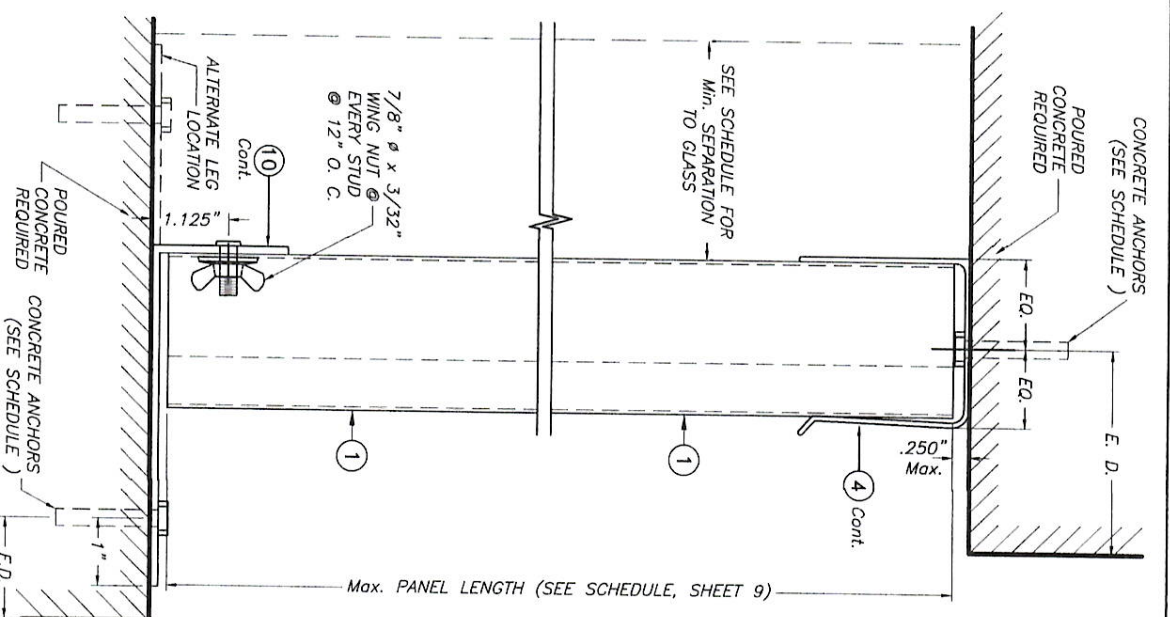
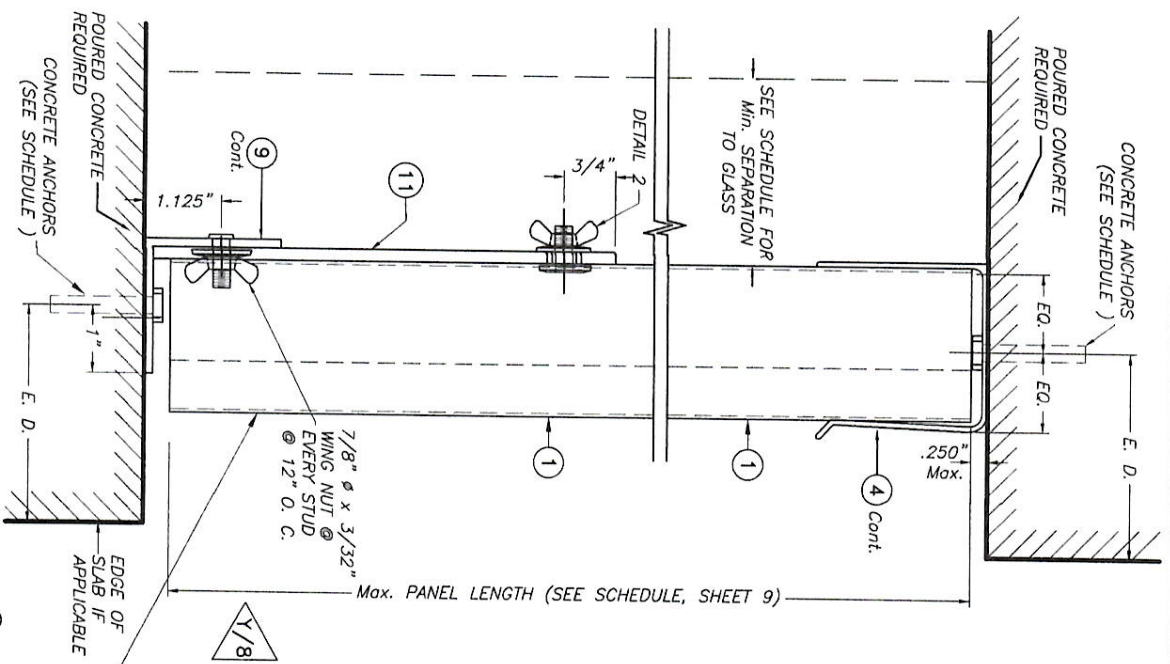
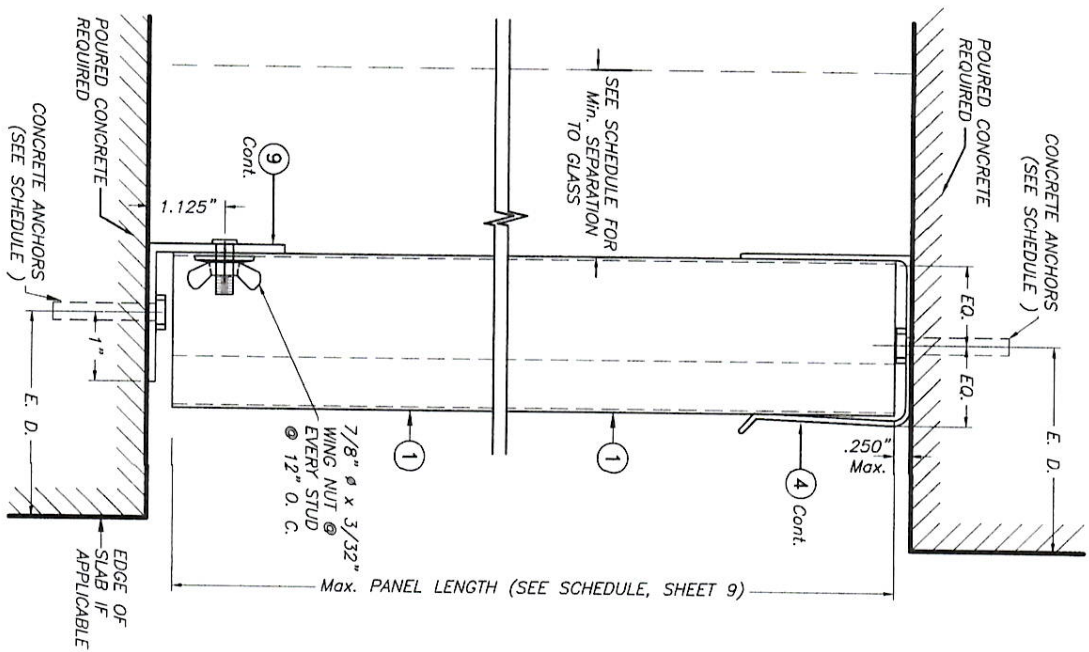
DRAWN BY:

DATE: 07/26/17

17-100

DRAWING No

SHEET 6 OF 15



SECTION 15A

CEILING & FLOOR MOUNTING INSTALLATIONS

SECTIONS 15

SECTION 15B

CEILING & FLOOR MOUNTING INSTALLATIONS

SECTIONS 15

SECTION 16A

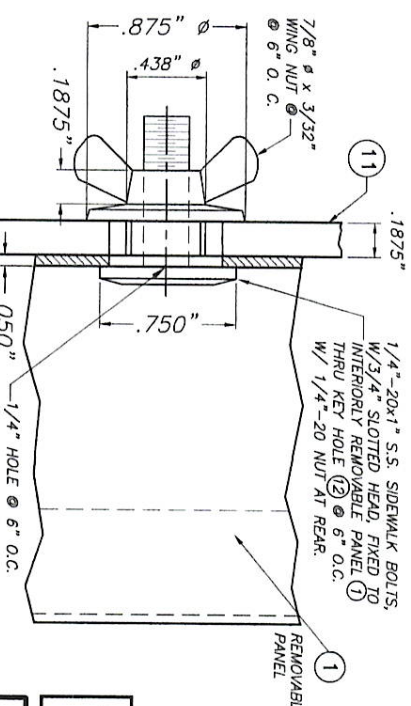
CEILING & FLOOR MOUNTING INSTALLATIONS

SECTIONS 16

SECTION 16B

CEILING & FLOOR MOUNTING INSTALLATIONS

SECTIONS 16



INSTALLATIONS VALID FOR PANELS 1 USED JOINTLY

WITH INTERIORLY REMOVABLE PANELS 1

E. D. = EDGE DISTANCE
(SEE SCHEDULE ON
SHEET 10 & 11 OF 15)

NOTE FOR COMBINATION OF SECTIONS :
FLOOR/CEILING MOUNTING SECTIONS CAN BE
COMBINED IN ANY WAY TO SUIT ANY INSTALLATION.



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FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

0.050" BERTHA ALUMINUM STORM PANEL
(2.25" DEEP)

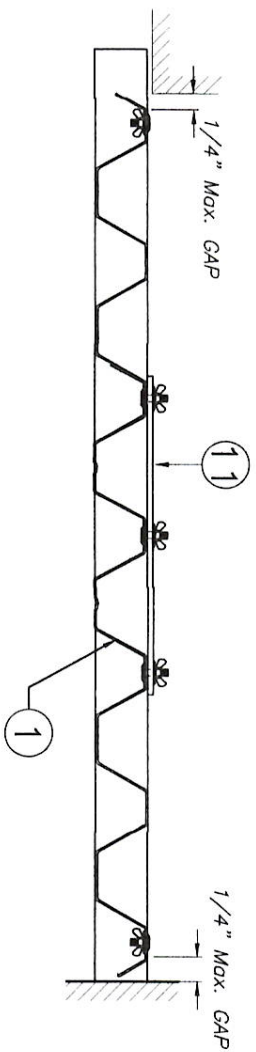
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4288 WEST ROADS DRIVE
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PHONE: (561) 533-6061, FAX: (561) 568-4780

17-100
DATE: 07/26/17

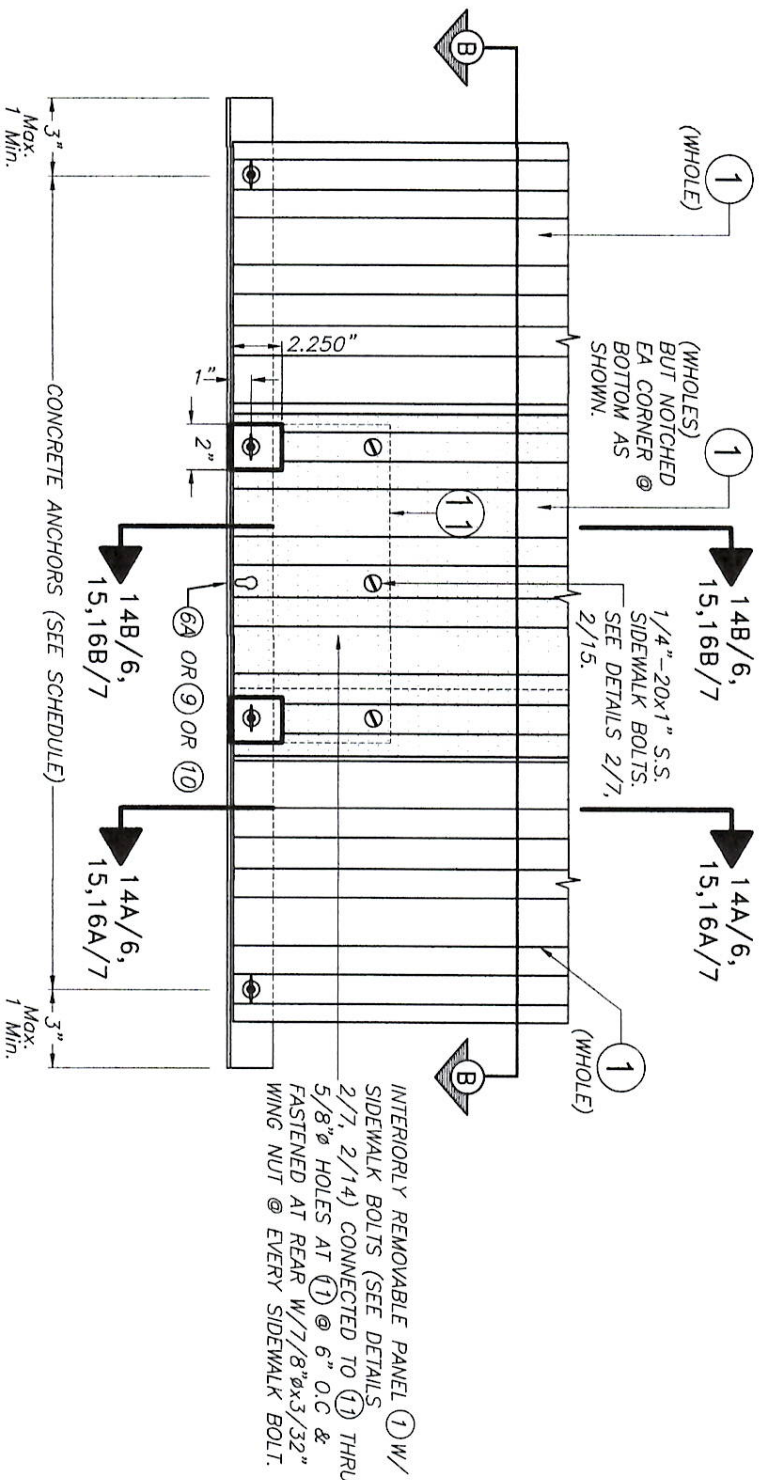
17-100
DRAWING NO.

SHEET 7 OF 15



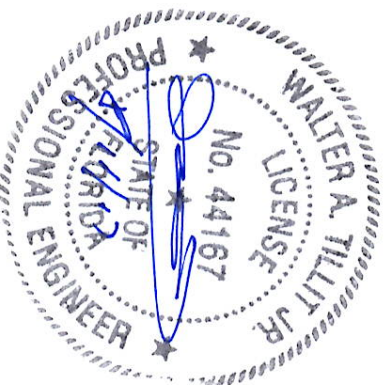
SECTION B-B

SCALE : 1/8" = 1"



INTERIORLY REMOVABLE STORM PANEL
PARTIAL ELEVATION Y

SCALE : 1/8" = 1"



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(2.25" DEEP)

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REV. NO.	DESCRIPTION	DATE	REV. NO.	DESCRIPTION	DATE
1	QAD 15-048	07/26/17	3		
2			4		

L.C.

DRAWN BY:

07/26/17

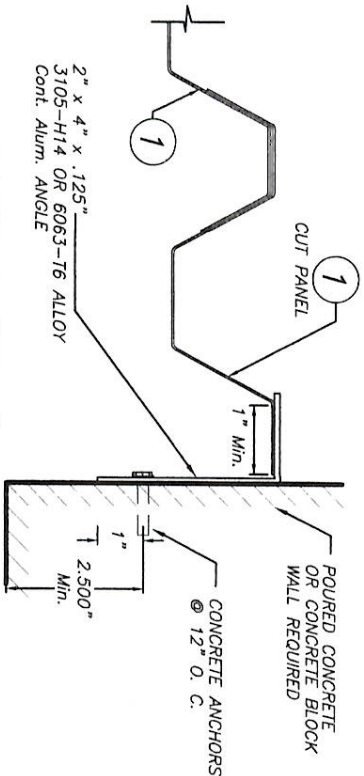
DATE:

17-100

DRAWING No

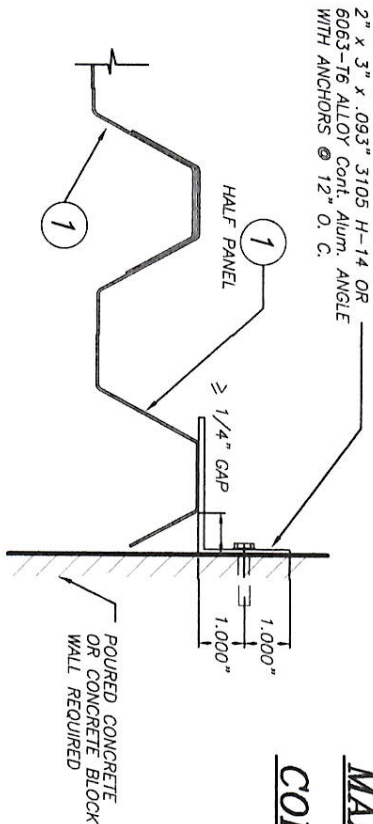
SHEET 8 OF 15

MAXIMUM A.S.D. DESIGN PRESSURE RATING (p.s.f.) AND
CORRESPONDING MAXIMUM PANEL LENGTH "L" SCHEDULE



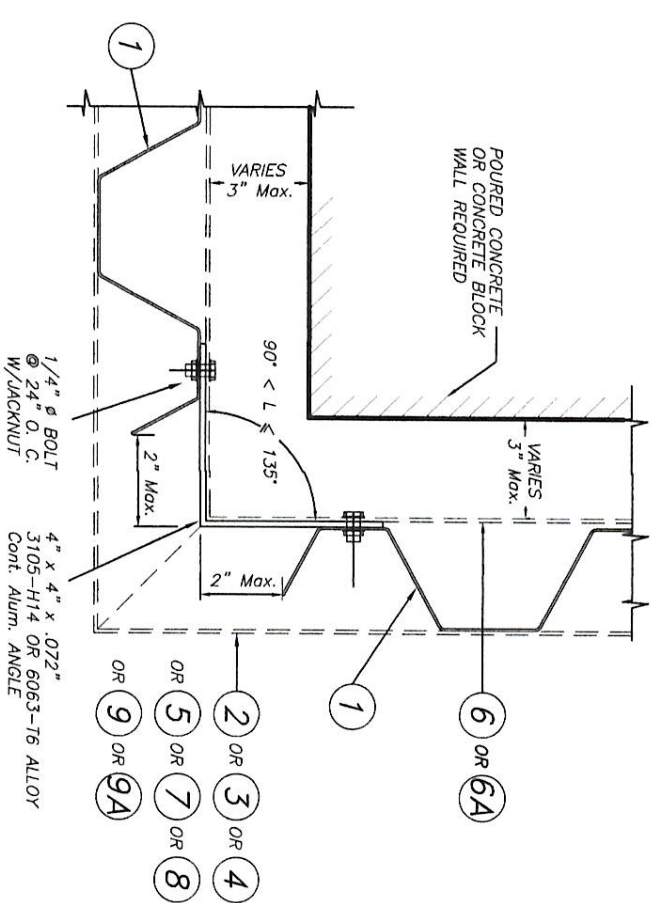
CASE A (Plan)

SCALE: 1/4" = 1"



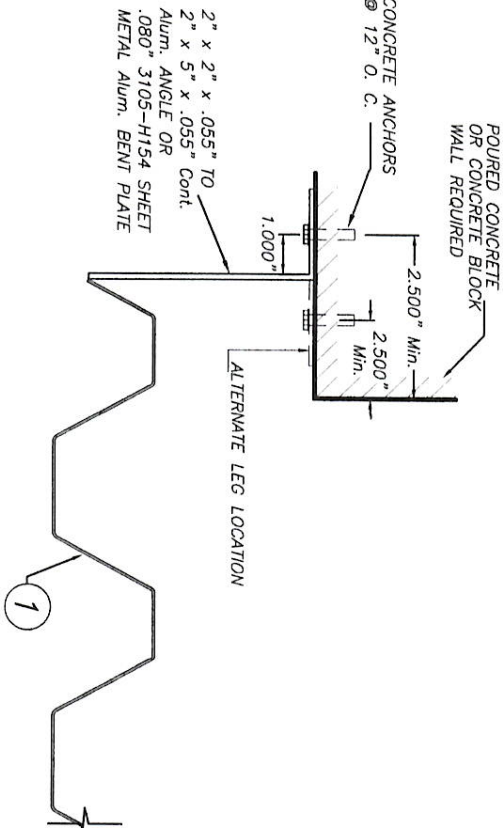
CASE D (Plan)

SCALE: 1/4" = 1"



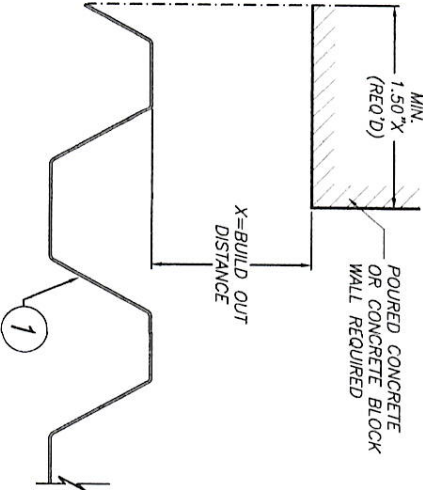
CASE B (Plan)

SCALE: 1/4" = 1"



CASE C (Plan)

SCALE: 1/4" = 1"



CASE D (Plan)

SCALE: 1/4" = 1"

MAXIMUM A.S.D. DESIGN PRESSURE RATING (p.s.f.)	Max. PANEL LENGTH L (ft.) (SEE SECTIONS)	MINIMUM SEPARATION TO GLASS	APPLICABLE TO SECTIONS # & ANY COMBINATION OF THEM
+65.0, -77.0	8'-0" OR LESS	2 1/4"	1 THRU 8
+65.0, -77.0	9'-0" OR LESS	3 11/16"	1 THRU 8
+65.0, -72.0	9'-0" OR LESS	3 1/2"	11
+62.0, -73.3	10'-0" OR LESS	3 7/8"	2, 6, 7 & 8
+63.5, -63.5	9'-0" OR LESS	3 1/2"	9, 14, 10
+65.0, -65.0	9'-0" OR LESS	3 1/2"	12, 15, 16
+63.5, -63.5	9'-0" OR LESS	3 3/4"	13

END CLOSURES DETAILS



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0.050" BERTHA ALUMINUM STORM PANEL
(2.25" DEEP)

L.C.

07/26/17

DATE:

EASTERN METAL SUPPLY, INC

4268 WEST ROADS DRIVE
WEST PALM BEACH, FL 33407
PHONE: (561) 533-6061, FAX: (561) 588-4780

17-100

DRAWING No

REV. NO

DESCRIPTION

DATE

REV. No

DESCRIPTION

DATE

1

OLD 15-048

07/26/17

3

2

4

SHEET 9 OF 15

MAXIMUM A.S.D. DESIGN PRESSURE RATING (P.S.F.) AND CORRESPONDING MAXIMUM ANCHOR SPACING SCHEDULE FOR INSTALLATIONS IN CONCRETE AND CONCRETE BLOCK STRUCTURES

MAXIMUM A.S.D. DESIGN PRESSURE RATING (P=1.1)	MAXIMUM ANCHORS SPACING FOR E. D. = 3 1/2" *																		APPLICABLE TO SECTIONS ANY OF THEM	MAXIMUM PANEL LENGTH L (ft)
	REGULAR TAPCONS		CRETE-FLEX SS4		ZMAC NAILIN		CALK-IN		SOLID-SET		CF TAP-GRIP		PANELMATS		PANELMATE PLUS		410 S.S. TAPCON			
	TO CONCRETE	TO BLOCK	TO CONCRETE	TO BLOCK	TO CONCRETE	TO BLOCK	TO CONCRETE	TO BLOCK	TO CONCRETE	TO BLOCK	TO CONCRETE	TO BLOCK	TO CONCRETE	TO BLOCK	TO CONCRETE	TO BLOCK	TO CONCRETE	TO BLOCK		
+63.5, -63.5	8"	N/A	N/A	N/A	4"	N/A	8"	N/A	N/A	N/A	5"	N/A	3 1/2"	N/A	N/A	N/A	N/A	1 (TOP)		
	12"	4"	N/A	N/A	10"	N/A	12"	7"	N/A	N/A	12"	6"	11"	8"	12"	N/A	N/A	1 (BOTTOM)		
	12"	N/A	N/A	N/A	10"	N/A	12"	N/A	N/A	N/A	12"	N/A	11"	N/A	N/A	N/A	N/A	2 (TOP)		
	12"	4"	N/A	N/A	10"	N/A	12"	7"	N/A	N/A	12"	6"	11"	8"	12"	N/A	N/A	2 (BOTTOM)		
	12"	N/A	N/A	N/A	10"	N/A	12"	N/A	N/A	N/A	12"	N/A	11"	N/A	N/A	N/A	N/A	3 (TOP)		
	12"	4"	N/A	N/A	10"	N/A	12"	7"	N/A	N/A	12"	6"	11"	8"	12"	N/A	N/A	3 (BOTTOM)		
	12"	N/A	N/A	N/A	10"	N/A	12"	N/A	N/A	N/A	12"	N/A	11"	N/A	N/A	N/A	N/A	4 (TOP)		
	12"	4"	N/A	N/A	10"	N/A	12"	7"	N/A	N/A	12"	6"	11"	8"	12"	N/A	N/A	4 (BOTTOM)		
	8 1/2"	N/A	12"	N/A	5 1/2"	N/A	7 1/2"	N/A	N/A	N/A	8 1/2"	N/A	11 1/2"	N/A	11"	N/A	9 1/2"	5 (BOTTOM)		
	8 1/2"	N/A	12"	N/A	5 1/2"	N/A	7 1/2"	N/A	N/A	N/A	8 1/2"	N/A	11 1/2"	N/A	11"	N/A	9 1/2"	6 (TOP)		
	7 1/2"	N/A	11 1/2"	N/A	5"	N/A	7"	N/A	10 1/2"	N/A	7"	N/A	10 1/2"	N/A	10"	N/A	8 1/2"	7 (TOP/BOTTOM)		
	N/A	N/A	N/A	N/A	N/A	N/A	12"	7"	12"	N/A	12"	6"	6"	N/A	12"	N/A	N/A	8 (TOP/BOTTOM)		
	12"	N/A	12"	N/A	N/A	N/A	12"	N/A	N/A	N/A	12"	N/A	12"	N/A	12"	N/A	N/A	9 (TOP)		
	12"	4"	N/A	N/A	N/A	N/A	12"	9"	N/A	N/A	N/A	N/A	12"	8"	12"	N/A	N/A	9 (BOTTOM)		
	N/A	N/A	N/A	N/A	N/A	N/A	12"	9"	N/A	N/A	N/A	N/A	12"	8"	12"	N/A	N/A	10 (TOP)		
	N/A	N/A	N/A	N/A	N/A	N/A	12"	9"	N/A	N/A	N/A	N/A	12"	8"	12"	N/A	N/A	10 (BOTTOM)		
+65.0, -65.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	13 (TOP)		
	12"	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	13 (BOTTOM)		
	12"	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	14 (TOP)		
	12"	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	14 (BOTTOM)		
	12"	4"	N/A	N/A	N/A	N/A	12"	9"	N/A	N/A	N/A	N/A	12"	8"	12"	N/A	N/A	14 (TOP)		
	12"	N/A	N/A	N/A	N/A	N/A	12"	9"	N/A	N/A	N/A	N/A	12"	8"	12"	N/A	N/A	14 (BOTTOM)		
	12"	N/A	N/A	N/A	N/A	N/A	12"	9"	N/A	N/A	N/A	N/A	12"	8"	12"	N/A	N/A	14 (TOP)		
	12"	N/A	N/A	N/A	N/A	N/A	12"	9"	N/A	N/A	N/A	N/A	12"	8"	12"	N/A	N/A	14 (BOTTOM)		
	12"	4"	N/A	N/A	N/A	N/A	12"	9"	N/A	N/A	N/A	N/A	12"	8"	12"	N/A	N/A	14 (TOP)		
	12"	N/A	N/A	N/A	N/A	N/A	12"	9"	N/A	N/A	N/A	N/A	12"	8"	12"	N/A	N/A	14 (BOTTOM)		
	12"	N/A	N/A	N/A	N/A	N/A	12"	9"	N/A	N/A	N/A	N/A	12"	8"	12"	N/A	N/A	14 (TOP)		
	12"	N/A	N/A	N/A	N/A	N/A	12"	9"	N/A	N/A	N/A	N/A	12"	8"	12"	N/A	N/A	14 (BOTTOM)		
	12"	4"	N/A	N/A	N/A	N/A	12"	9"	N/A	N/A	N/A	N/A	12"	8"	12"	N/A	N/A	14 (TOP)		
	12"	N/A	N/A	N/A	N/A	N/A	12"	9"	N/A	N/A	N/A	N/A	12"	8"	12"	N/A	N/A	14 (BOTTOM)		
	12"	N/A	N/A	N/A	N/A	N/A	12"	9"	N/A	N/A	N/A	N/A	12"	8"	12"	N/A	N/A	14 (TOP)		
	12"	N/A	N/A	N/A	N/A	N/A	12"	9"	N/A	N/A	N/A	N/A	12"	8"	12"	N/A	N/A	14 (BOTTOM)		
9'-0" TO 10'-0"	12"	N/A	N/A	N/A	N/A	N/A	12"	9"	N/A	N/A	N/A	N/A	12"	8"	12"	N/A	N/A	15 (TOP)		
	12"	N/A	N/A	N/A	N/A	N/A	12"	9"	N/A	N/A	N/A	N/A	12"	8"	12"	N/A	N/A	15 (BOTTOM)		
	12"	N/A	N/A	N/A	N/A	N/A	12"	9"	N/A	N/A	N/A	N/A	12"	8"	12"	N/A	N/A	15 (TOP)		
	12"	N/A	N/A	N/A	N/A	N/A	12"	9"	N/A	N/A	N/A	N/A	12"	8"	12"	N/A	N/A	15 (BOTTOM)		
	12"	4"	N/A	N/A	N/A	N/A	12"	9"	N/A	N/A	N/A	N/A	12"	8"	12"	N/A	N/A	15 (TOP)		
	12"	N/A	N/A	N/A	N/A	N/A	12"	9"	N/A	N/A	N/A	N/A	12"	8"	12"	N/A	N/A	15 (BOTTOM)		
	12"	N/A	N/A	N/A	N/A	N/A	12"	9"	N/A	N/A	N/A	N/A	12"	8"	12"	N/A	N/A	15 (TOP)		
	12"	N/A	N/A	N/A	N/A	N/A	12"	9"	N/A	N/A	N/A	N/A	12"	8"	12"	N/A	N/A	15 (BOTTOM)		
	12"	4"	N/A	N/A	N/A	N/A	12"	9"	N/A	N/A	N/A	N/A	12"	8"	12"	N/A	N/A	15 (TOP)		
	12"	N/A	N/A	N/A	N/A	N/A	12"	9"	N/A	N/A	N/A	N/A	12"	8"	12"	N/A	N/A	15 (BOTTOM)		
	12"	N/A	N/A	N/A	N/A	N/A	12"	9"	N/A	N/A	N/A	N/A	12"	8"	12"	N/A	N/A	15 (TOP)		
	12"	N/A	N/A	N/A	N/A	N/A	12"	9"	N/A	N/A	N/A	N/A	12"	8"	12"	N/A	N/A	15 (BOTTOM)		
	12"	4"	N/A	N/A	N/A	N/A	12"	9"	N/A	N/A	N/A	N/A	12"	8"	12"	N/A	N/A	15 (TOP)		
	12"	N/A	N/A	N/A	N/A	N/A	12"	9"	N/A	N/A	N/A	N/A	12"	8"	12"	N/A	N/A	15 (BOTTOM)		
	12"	N/A	N/A	N/A	N/A	N/A	12"	9"	N/A	N/A	N/A	N/A	12"	8"	12"	N/A	N/A	15 (TOP)		
	12"	N/A	N/A	N/A	N/A	N/A	12"	9"	N/A	N/A	N/A	N/A	12"	8"	12"	N/A	N/A	15 (BOTTOM)		
9'-0" TO 10'-0"	12"	N/A	N/A	N/A	N/A	N/A	12"	9"	N/A	N/A	N/A	N/A	12"	8"	12"	N/A	N/A	16 (TOP)		
	12"	N/A	N/A	N/A	N/A	N/A	12"	9"	N/A	N/A	N/A	N/A	12"	8"	12"	N/A	N/A	16 (BOTTOM)		
	12"	N/A	N/A	N/A	N/A	N/A	12"	9"	N/A	N/A	N/A	N/A	12"	8"	12"	N/A	N/A	16 (TOP)		
	12"	N/A	N/A	N/A	N/A	N/A	12"	9"	N/A	N/A	N/A	N/A	12"	8"	12"	N/A	N/A	16 (BOTTOM)		
	12"	4"	N/A	N/A	N/A	N/A	12"	9"	N/A	N/A	N/A	N/A	12"	8"	12"	N/A	N/A	16 (TOP)		
	12"	N/A	N/A	N/A	N/A	N/A	12"	9"	N/A	N/A	N/A	N/A	12"	8"	12"	N/A	N/A	16 (BOTTOM)		
	12"	N/A	N/A	N/A	N/A	N/A	12"	9"	N/A	N/A	N/A	N/A	12"	8"	12"	N/A	N/A	16 (TOP)		
	12"	N/A	N/A	N/A	N/A	N/A	12"	9"	N/A	N/A	N/A	N/A	12"	8"	12"	N/A	N/A	16 (BOTTOM)		
	12"	4"	N/A	N/A	N/A	N/A	12"	9"	N/A	N/A	N/A	N/A	12"	8"	12"	N/A	N/A	16 (TOP)		
	12"	N/A	N/A	N/A	N/A	N/A	12"	9"	N/A	N/A	N/A	N/A	12"	8"	12"	N/A	N/A	16 (BOTTOM)		
	12"	N/A	N/A	N/A	N/A	N/A	12"	9"	N/A	N/A	N/A	N/A	12"	8"	12"	N/A	N/A	16 (TOP)		
	12"	N/A	N/A	N/A	N/A	N/A	12"	9"	N/A	N/A	N/A	N/A	12"	8"	12"	N/A	N/A	16 (BOTTOM)		
	12"	4"	N/A	N/A	N/A	N/A	12"	9"	N/A	N/A	N/A	N/A	12"	8"	12"	N/A	N/A	16 (TOP)		
	12"	N/A	N/A	N/A	N/A	N/A	12"	9"	N/A	N/A	N/A	N/A	12"	8"	12"	N/A	N/A	16 (BOTTOM)		
	12"	N/A	N/A	N/A	N/A	N/A	12"	9"	N/A	N/A	N/A	N/A	12"	8"	12"	N/A	N/A	16 (TOP)		
	12"	N/A	N/A	N/A	N/A	N/A	12"	9"	N/A	N/A	N/A	N/A	12"	8"	12"	N/A	N/A	16 (BOTTOM)		

E. D. = EDGE DISTANCE

ANCHORS LEGEND

ANCHOR TYPE	MIN. ANCHOR SPACING
ZMAC NAILING, CF TAP-GRIP, PANELMATE OR PANELMATE PLUS.	3.0"
CALK-IN	2.5"
SOLID-SET	3.5"
CRETE FLEX SS4	6.0"
REGULAR & 410.S.S TAPCON IN BLOCK	4.0"
REGULAR & 410.S.S TAPCON IN CONCRETE	3.0"

** LIMITED TO 5'-4" MAX SPAN.

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

0.050" BERTHA ALUMINUM STORM PANEL (2.25" DEEP)

L.C. DRAWN BY: DATE: 07/26/17

EASTERN METAL SUPPLY, INC.

DATE: 17-100

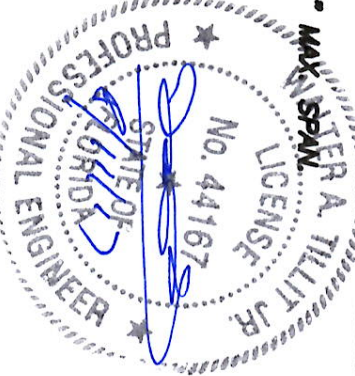
4268 WEST ROADS DRIVE WEST PALM BEACH, FL 33407 PHONE: (561)533-6061, FAX: (561)588-4780

DRAWING No SHEET 10 OF 15

TILECO INC.

TILTIT TESTING & ENGINEERING COMPANY 6355 N.W. 36th St., Suite 305, Fort Lauderdale, FL 33309 Phone: (954)971-1530, Fax: (954)971-1531

WALTER A. TILIT JR., P.E. FLORIDA Lic. # 44167



MAXIMUM A.S.D. DESIGN PRESSURE RATING (p.s.f.) AND CORRESPONDING MAXIMUM ANCHOR SPACING SCHEDULE FOR INSTALLATIONS INTO CONCRETE AND CONCRETE BLOCK STRUCTURES

MAXIMUM A.S.D. DESIGN PRESSURE RATING (p.s.f.)	MAXIMUM ANCHORS SPACING FOR E. D. = 3 1/2" *																		APPLICABLE TO SECTIONS # & ANY COMBINATION OF THEM	MAXIMUM PANEL LENGTH L" (ft.)
	REGULAR TAPCONS		CRETE-FLEX SS4		ZMAC NAILIN		CALK-IN		SOLID-SET		CF TAP-GRIP		PANELMATES		PANELMATE PLUS		410 S.S. TAPCON			
	TO CONCRETE	TO BLOCK	TO CONCRETE	TO BLOCK	TO CONCRETE	TO BLOCK	TO CONCRETE	TO BLOCK	TO CONCRETE	TO BLOCK	TO CONCRETE	TO BLOCK	TO CONCRETE	TO BLOCK	TO CONCRETE	TO BLOCK	TO CONCRETE	TO BLOCK		
+65.0, -77.0	6"	N/A	N/A	N/A	3"	N/A	6"	N/A	N/A	N/A	3 1/2"	N/A	2 1/2"	N/A	N/A	N/A	N/A	N/A	1 (TOP)	9'-0" OR LESS
	12"	4"	N/A	N/A	10"	6"	12"	6"	N/A	N/A	12"	4"	9 1/2"	7"	N/A	N/A	N/A	N/A	1 (BOTTOM)	
	12"	N/A	N/A	N/A	10"	N/A	12"	N/A	N/A	N/A	12"	N/A	9 1/2"	N/A	N/A	N/A	N/A	N/A	2 (TOP)	
	12"	4"	N/A	N/A	10"	6"	12"	6"	N/A	N/A	12"	4"	9 1/2"	7"	N/A	N/A	N/A	N/A	2 (BOTTOM)	
	12"	N/A	N/A	N/A	10"	N/A	12"	N/A	N/A	N/A	12"	N/A	9 1/2"	N/A	N/A	N/A	N/A	N/A	3 (TOP)	
	12"	4"	N/A	N/A	8"	6"	12"	6"	N/A	N/A	12"	4"	9 1/2"	7"	N/A	N/A	N/A	N/A	3 (BOTTOM)	
	12"	N/A	N/A	N/A	10"	N/A	12"	N/A	N/A	N/A	12"	N/A	9 1/2"	N/A	N/A	N/A	N/A	N/A	4 (TOP)	
	12"	4"	N/A	N/A	8"	6"	12"	6"	N/A	N/A	12"	4"	9 1/2"	7"	N/A	N/A	N/A	N/A	4 (BOTTOM)	
	12"	N/A	N/A	N/A	8"	N/A	12"	N/A	N/A	N/A	12"	N/A	9 1/2"	N/A	N/A	N/A	N/A	N/A	5 (TOP)	
	12"	N/A	N/A	N/A	7"	5"	12"	12"	N/A	N/A	10"	4"	7 1/2"	4"	N/A	N/A	N/A	N/A	5 (BOTTOM)	
	7"	N/A	N/A	N/A	4 1/2"	N/A	6"	N/A	N/A	N/A	7"	N/A	5"	N/A	N/A	N/A	N/A	N/A	6 (TOP)	
	6"	N/A	N/A	N/A	4"	N/A	5 1/2"	N/A	9"	N/A	6"	N/A	4 1/2"	N/A	N/A	N/A	N/A	N/A	6 (BOTTOM)	
+65.0, -72.0	N/A	N/A	N/A	N/A	N/A	N/A	12"	6"	N/A	10"	12"	4"	6"	4"	N/A	N/A	N/A	N/A	7 (TOP/BOTTOM)	9'-0" OR LESS
	6 1/2"	N/A	12"	N/A	N/A	N/A	6"	N/A	N/A	9 1/2"	N/A	N/A	9"	N/A	9"	N/A	N/A	N/A	7 (TOP/BOTTOM)	
	N/A	N/A	N/A	N/A	N/A	N/A	12"	6"	N/A	12"	12"	4"	6"	6"	N/A	N/A	N/A	N/A	8 (TOP/BOTTOM)	
	12"	4"	12"	9"	N/A	N/A	8"	12"	11"	N/A	12"	12"	7"	12"	6"	12"	6"	12"	11 (BOTTOM)	
	6"	N/A	N/A	N/A	6"	N/A	N/A	N/A	10"	6"	N/A	N/A	6"	N/A	N/A	N/A	N/A	N/A	2 (TOP)	
	6"	N/A	N/A	N/A	6"	N/A	5 1/2"	N/A	N/A	N/A	6"	4"	6"	6"	N/A	N/A	N/A	N/A	2 (BOTTOM)	
	6"	N/A	N/A	N/A	4"	N/A	6"	N/A	N/A	N/A	6"	N/A	5"	N/A	N/A	N/A	N/A	N/A	6 (TOP)	
	6"	N/A	N/A	N/A	4"	N/A	6"	N/A	N/A	N/A	6"	N/A	5"	N/A	N/A	N/A	N/A	N/A	6 (BOTTOM)	
	N/A	N/A	N/A	N/A	5"	N/A	6"	N/A	8"	N/A	5 1/2"	N/A	4"	N/A	N/A	N/A	N/A	N/A	7 (TOP/BOTTOM)	
	N/A	N/A	N/A	N/A	5"	N/A	6"	N/A	8"	N/A	5 1/2"	N/A	4"	N/A	N/A	N/A	N/A	N/A	8 (TOP/BOTTOM)	
	N/A	N/A	N/A	N/A	6"	N/A	6"	N/A	10"	N/A	N/A	N/A	6"	N/A	N/A	N/A	N/A	N/A	1 (BOTTOM TO 10'-0")	
	+62.0, -73.3	6"	N/A	N/A	N/A	5"	N/A	6"	N/A	10"	N/A	6"	4"	6"	4"	N/A	N/A	N/A	N/A	
N/A		N/A	N/A	N/A	5"	N/A	6"	N/A	10"	N/A	6"	4"	6"	4"	N/A	N/A	N/A	N/A	7 (TOP/BOTTOM)	
N/A		N/A	N/A	N/A	5"	N/A	6"	N/A	10"	N/A	6"	4"	6"	4"	N/A	N/A	N/A	N/A	6 (TOP/BOTTOM)	
6"		N/A	N/A	N/A	5"	N/A	6"	N/A	10"	N/A	6"	4"	6"	4"	N/A	N/A	N/A	N/A	5 (TOP/BOTTOM)	
6"		N/A	N/A	N/A	5"	N/A	6"	N/A	10"	N/A	6"	4"	6"	4"	N/A	N/A	N/A	N/A	4 (TOP/BOTTOM)	
N/A		N/A	N/A	N/A	5"	N/A	6"	N/A	10"	N/A	6"	4"	6"	4"	N/A	N/A	N/A	N/A	3 (TOP/BOTTOM)	
N/A		N/A	N/A	N/A	5"	N/A	6"	N/A	10"	N/A	6"	4"	6"	4"	N/A	N/A	N/A	N/A	2 (TOP/BOTTOM)	
N/A		N/A	N/A	N/A	5"	N/A	6"	N/A	10"	N/A	6"	4"	6"	4"	N/A	N/A	N/A	N/A	1 (TOP/BOTTOM)	
N/A		N/A	N/A	N/A	5"	N/A	6"	N/A	10"	N/A	6"	4"	6"	4"	N/A	N/A	N/A	N/A	1 (BOTTOM TO 10'-0")	
N/A		N/A	N/A	N/A	5"	N/A	6"	N/A	10"	N/A	6"	4"	6"	4"	N/A	N/A	N/A	N/A	1 (BOTTOM TO 10'-0")	
N/A		N/A	N/A	N/A	5"	N/A	6"	N/A	10"	N/A	6"	4"	6"	4"	N/A	N/A	N/A	N/A	1 (BOTTOM TO 10'-0")	
N/A		N/A	N/A	N/A	5"	N/A	6"	N/A	10"	N/A	6"	4"	6"	4"	N/A	N/A	N/A	N/A	1 (BOTTOM TO 10'-0")	

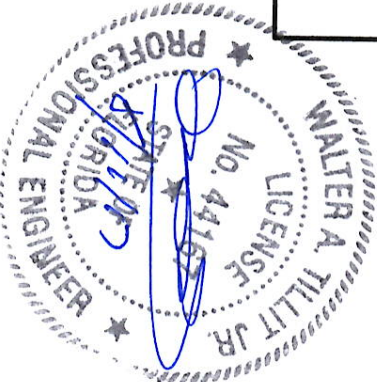
* MAXIMUM ANCHOR SPACINGS ARE VALID FOR 3 1/2" EDGE DISTANCE. FOR E. D. LESS THAN 3 1/2", REDUCE ANCHOR SPACING BY MULTIPLYING SPACING SHOWN ON SCHEDULE BY THE FOLLOWING FACTORS. (NOTE: MIN. E. D. FOR CALK-IN ANCHORS IS 2 1/2")
FOR THIS OPERATION TO BE POSSIBLE, REDUCED SPACING OBTAINED USING FACTOR SHALL NOT BE LESS THAN MINIMUM SPACING INDICATED FOR EACH ANCHOR TYPE AT ANCHORS LEGEND.

ACTUAL E. D.	FACTOR				
	REGULAR TAPCON & 410 S.S. TAPCON	ZAMAC NAILIN, CRETE-FLEX SS4 & PANELMATE OR PANELMATE PLUS.	CALK-IN	SOLID-SET	CF TAP-GRIP
3"	-	.86	.75	.78	1.00
2 1/2"	-	.71	.50	-	.80
2"	-	.50	-	-	-
1 1/2"	0.35	-	-	-	-

ANCHORS LEGEND

ANCHOR TYPE	MIN. ANCHOR SPACING
ZAMAC NAILING, PANELMATE OR PANELMATE PLUS.	3.0"
CALK-IN	2.5"
SOLID-SET	3.5"
CRETE FLEX SS4	6.0"
REGULAR & 410 S.S. TAPCON IN BLOCK	4.0"
REGULAR & 410 S.S. TAPCON IN CONCRETE	3.0"

E. D. = EDGE DISTANCE



FLORIDA BUILDING CODE (High Velocity Hurricane Zone)
0.050" BERTHA ALUMINUM STORM PANEL
(2.25" DEEP)

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Miami, FL 33166
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Fax: (305)971-1531

WALTER A. TILIT, P.E.
FLORIDA Lic. # 44167

REV. NO	DESCRIPTION	DATE	REV. NO	DESCRIPTION	DATE
1	OLD 15-049	07/26/17	3		
2			4		

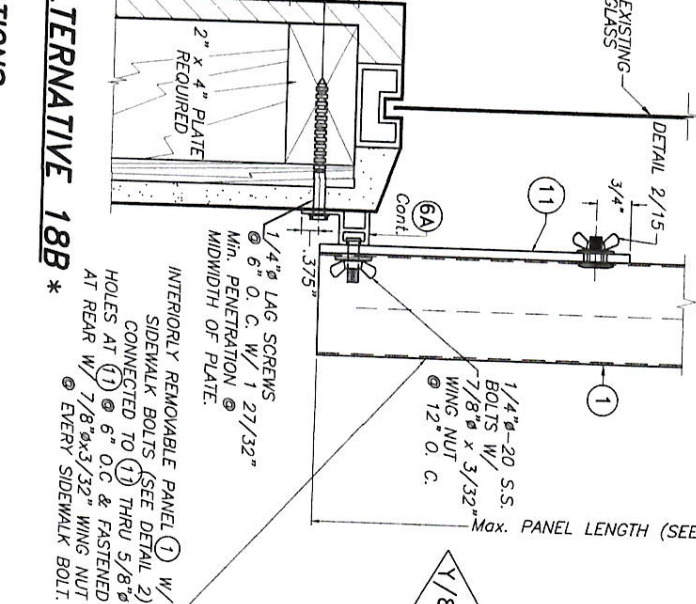
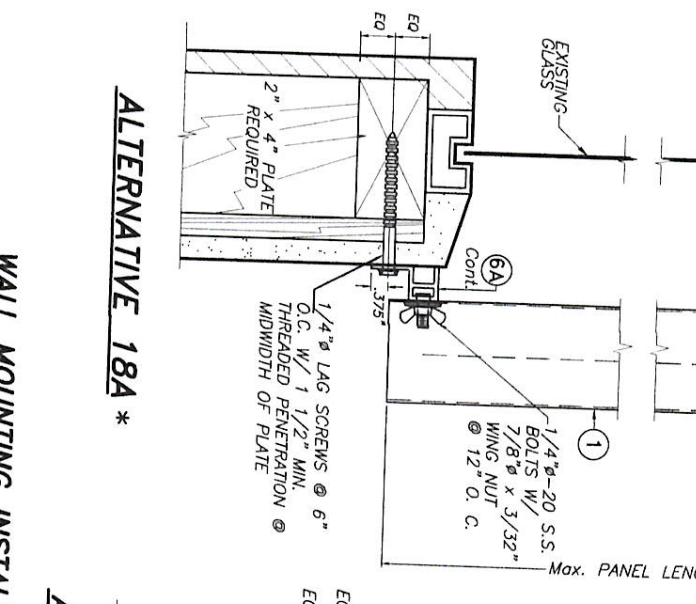
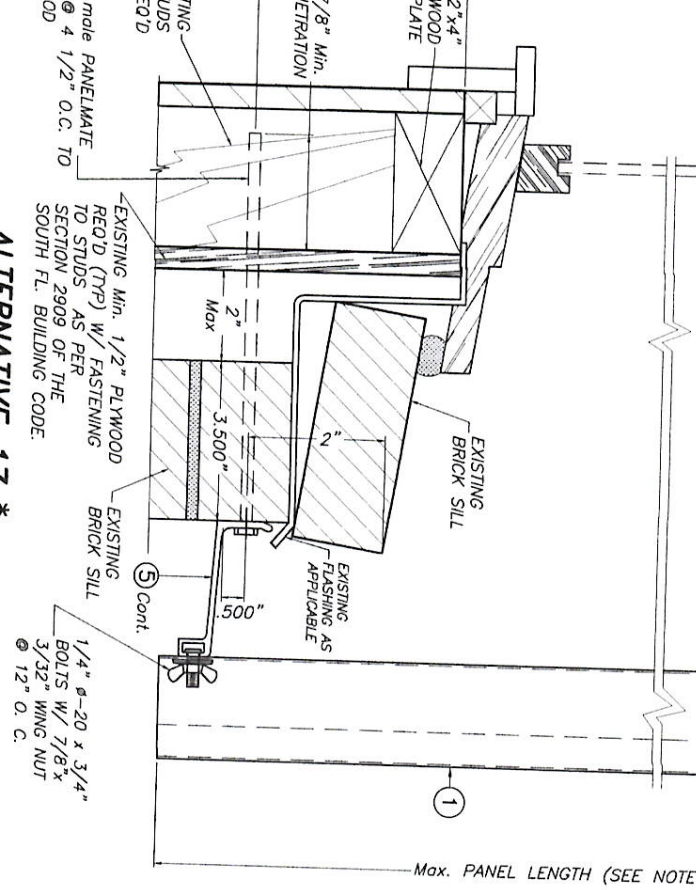
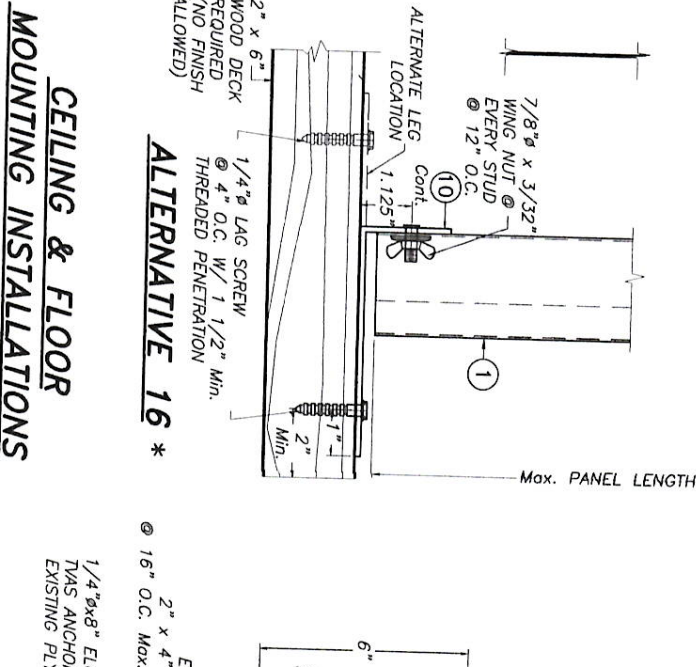
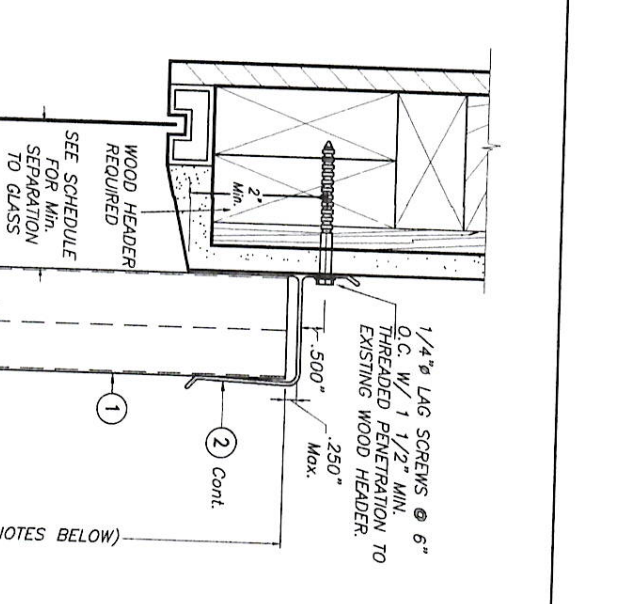
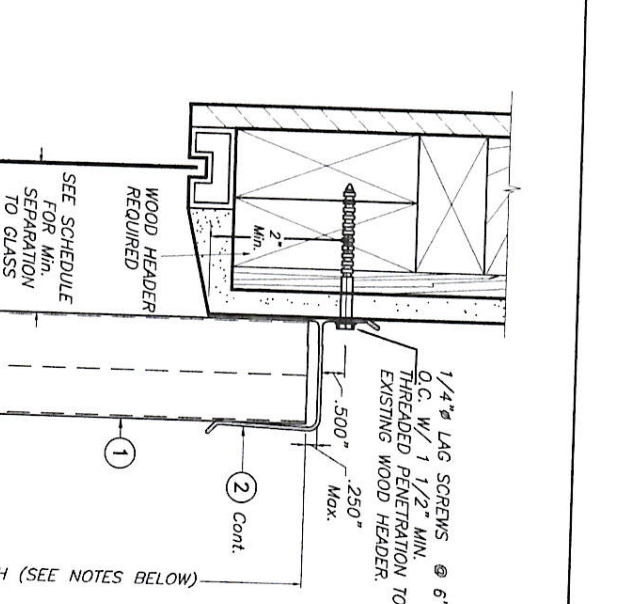
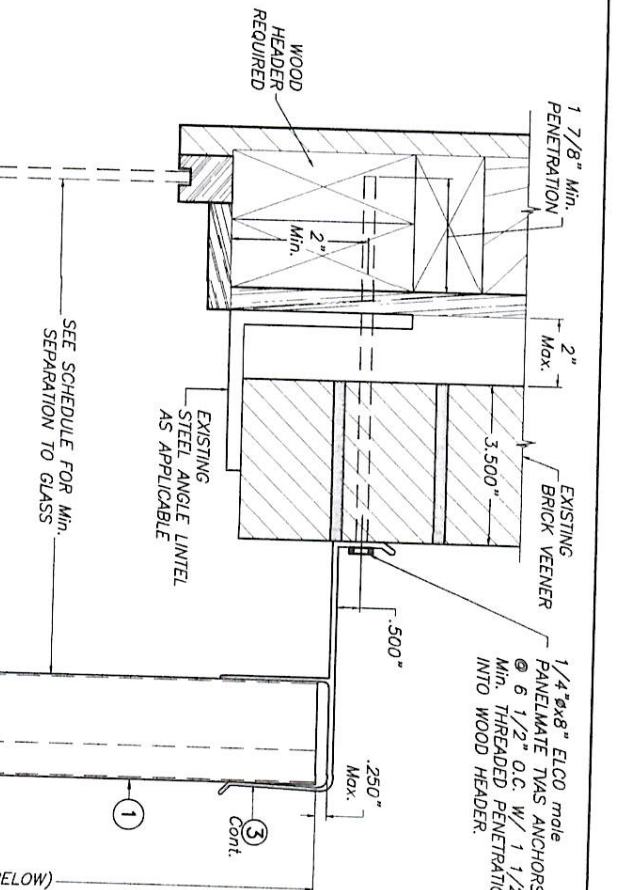
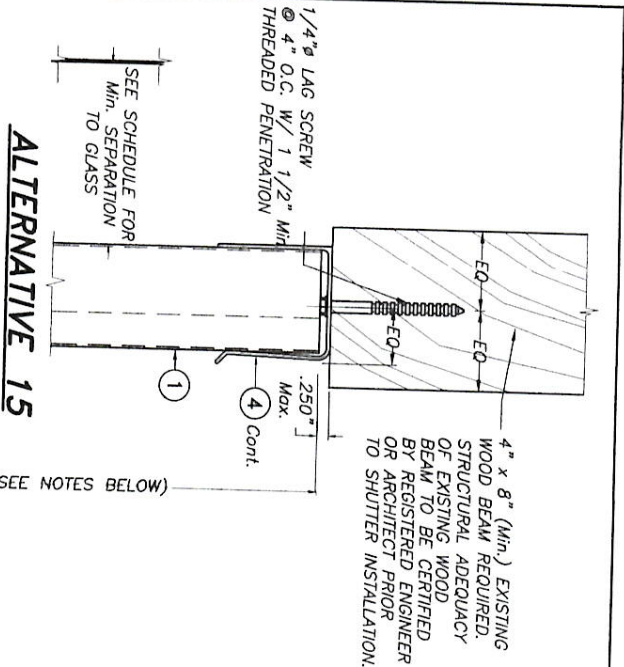
17-100
DRAWING No

SHEET 11 OF 15



SHEET 12 OF





CEILING & FLOOR MOUNTING INSTALLATIONS

SCALE : 1/4" = 1"

NOTE FOR COMBINATION OF SECTIONS:
WALL/FLOOR/CEILING MOUNTING SECTIONS CAN BE COMBINED IN ANY WAY TO SUIT ANY INSTALLATION.

- NOTES:
1. INSTALLATIONS ARE ONLY VALID FOR A.S.D. DESIGN PRESSURE RATING UP TO +63.0, -72.0 psf AND PANEL'S LENGTHS UP TO 9'-0", EXCEPT AS NOTED.
 2. FOR NEW WOOD FRAME CONSTRUCTION: WOOD MEMBERS TO BE SOUTHERN PINE NO. 2, W/ SPECIFIC DENSITY OF 0.55 OR EQUAL.

INSTALLATION DETAILS ON EXISTING WOOD BUILDINGS

* VALID FOR Max. +63.5, -63.5 psf.
A.S.D. DESIGN PRESSURE RATING.

BUILD-OUT INSTALLATION

SCALE : 1/4" = 1"

WALL MOUNTING INSTALLATIONS

SCALE : 1/4" = 1"

* VALID FOR Max. +63.5, -63.5 psf.
A.S.D. DESIGN PRESSURE RATING.

INSTALLATIONS VALID FOR PANELS 1 USED JOINTLY WITH INTERIORLY REMOVABLE PANELS 1

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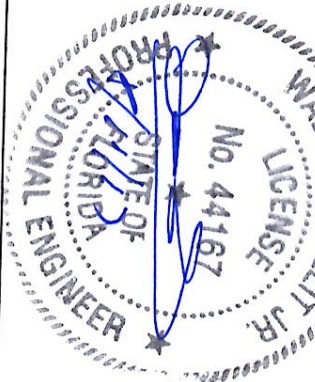
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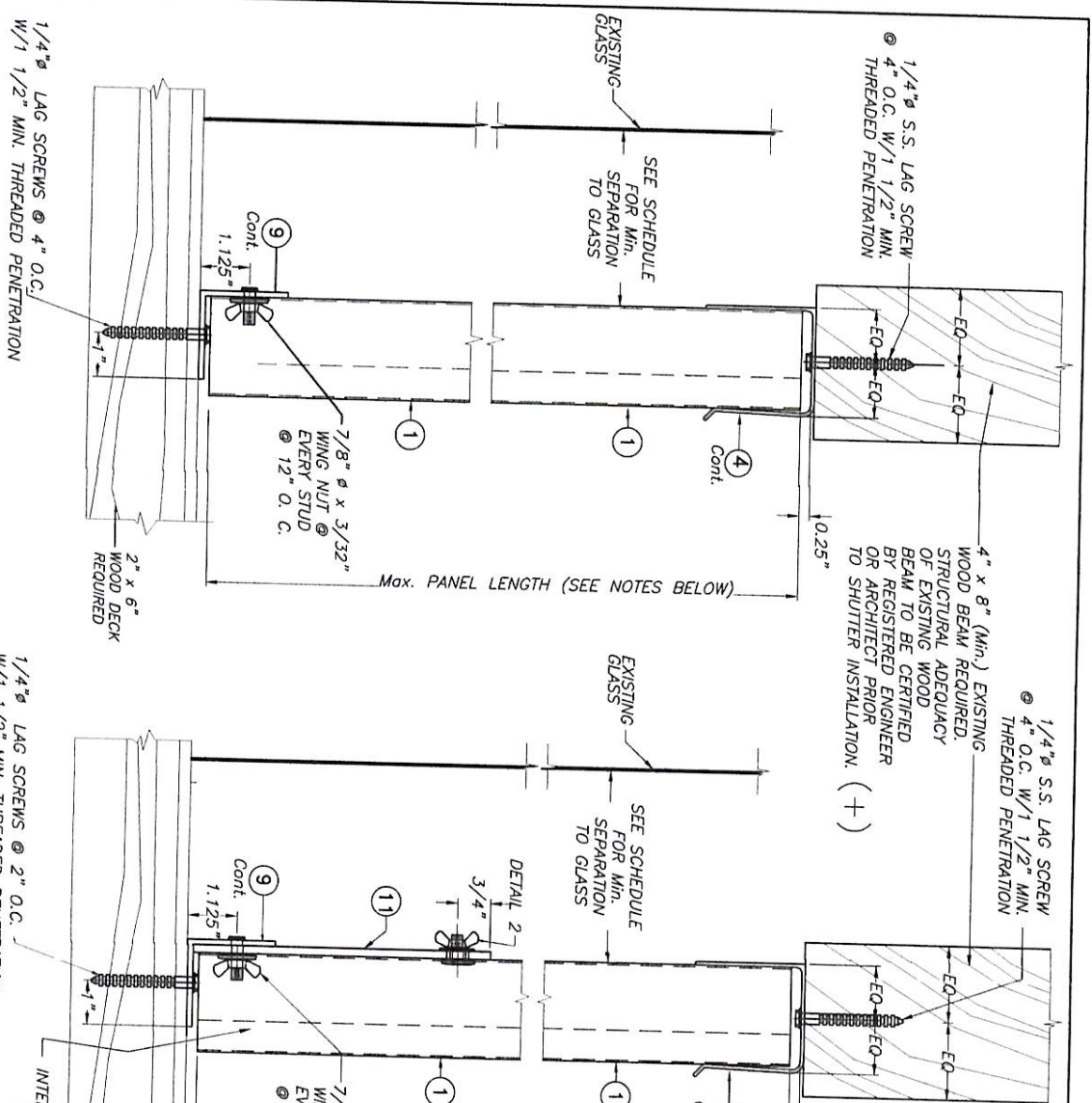
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TILECO inc.
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EB-0006719
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REV. NO	DESCRIPTION	DATE	REV. NO	DESCRIPTION	DATE
1	OLD 15-049	07/26/17	3		
2			4		

DRAWN BY: L.C.
DATE: 07/26/17
17-100
DRAWING NO
SHEET 14 OF 15





1/4" S.S. LAG SCREW @ 4" O.C. W/ 1 1/2" MIN. THREADED PENETRATION

4" x 8" (Min.) EXISTING WOOD BEAM REQUIRED. STRUCTURAL ADEQUACY OF EXISTING WOOD BEAM TO BE CERTIFIED BY REGISTERED ENGINEER OR ARCHITECT PRIOR TO SHUTTER INSTALLATION. (+)

SEE SCHEDULE FOR MIN. SEPARATION TO GLASS

EXISTING GLASS

Max. PANEL LENGTH (SEE NOTES BELOW)

1/8" S.S. LAG SCREW @ 4" O.C. W/ 1 1/2" MIN. THREADED PENETRATION

4" x 8" (Min.) EXISTING WOOD BEAM REQUIRED. STRUCTURAL ADEQUACY OF EXISTING WOOD BEAM TO BE CERTIFIED BY REGISTERED ENGINEER OR ARCHITECT PRIOR TO SHUTTER INSTALLATION. (+)

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EXISTING GLASS

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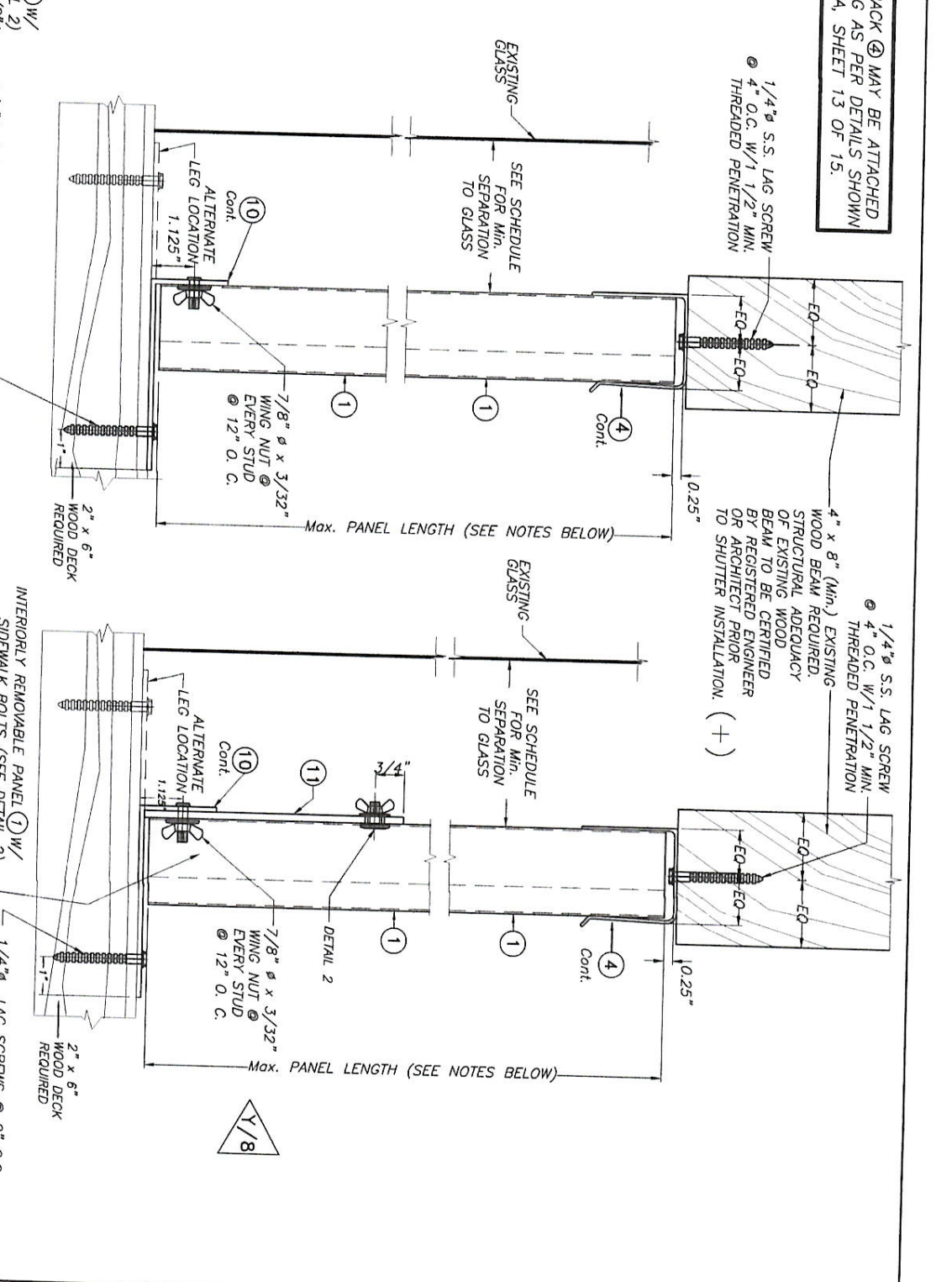
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EXISTING GLASS

Max. PANEL LENGTH (SEE NOTES BELOW)



1/4" S.S. LAG SCREWS @ 4" O.C. W/ 1 1/2" MIN. THREADED PENETRATION

2" x 6" WOOD DECK REQUIRED

1/8" S.S. LAG SCREW @ 4" O.C. W/ 1 1/2" MIN. THREADED PENETRATION

4" x 8" (Min.) EXISTING WOOD BEAM REQUIRED. STRUCTURAL ADEQUACY OF EXISTING WOOD BEAM TO BE CERTIFIED BY REGISTERED ENGINEER OR ARCHITECT PRIOR TO SHUTTER INSTALLATION. (+)

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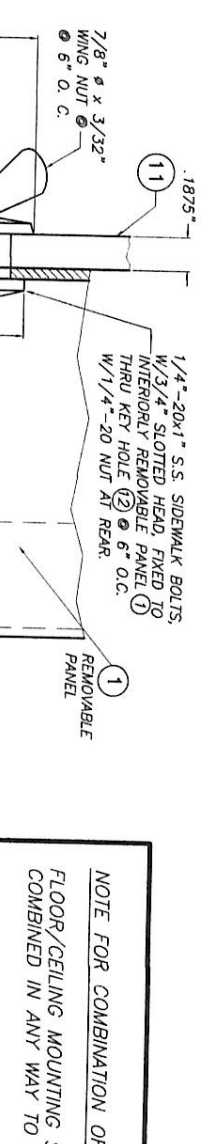
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4" x 8" (Min.) EXISTING WOOD BEAM REQUIRED. STRUCTURAL ADEQUACY OF EXISTING WOOD BEAM TO BE CERTIFIED BY REGISTERED ENGINEER OR ARCHITECT PRIOR TO SHUTTER INSTALLATION. (+)

SEE SCHEDULE FOR MIN. SEPARATION TO GLASS

EXISTING GLASS

Max. PANEL LENGTH (SEE NOTES BELOW)

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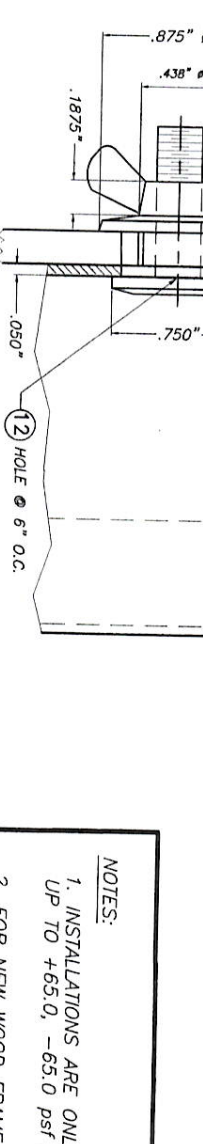
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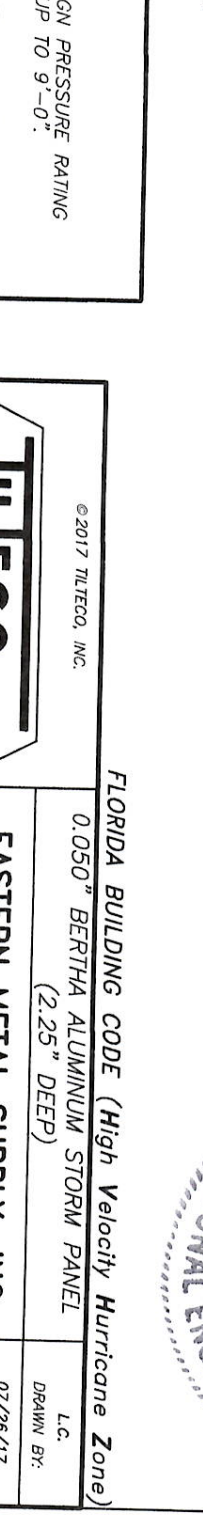
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Max. PANEL LENGTH (SEE NOTES BELOW)

DETAIL 2 - INSTALLATION OF 1/4"x1" SIDEWALK BOLTS @ REMOVABLE PANEL

SCALE: 1" = 1'

- NOTES:
1. INSTALLATIONS ARE ONLY VALID FOR A.S.D. DESIGN PRESSURE RATING UP TO +65.0, -65.0 psf AND PANEL'S LENGTHS UP TO 9'-0".
 2. FOR NEW WOOD FRAME CONSTRUCTION: WOOD MEMBERS TO BE SOUTHERN PINE NO. 2, W/ SPECIFIC DENSITY OF 0.55 OR EQUAL.

NOTE FOR COMBINATION OF SECTIONS:

FLOOR/CEILING MOUNTING SECTIONS CAN BE COMBINED IN ANY WAY TO SUIT ANY INSTALLATION.

INSTALLATION DETAILS ON EXISTING WOOD BUILDINGS



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TILTECO INC.

TILTIT TESTING & ENGINEERING COMPANY
6555 N.W. 36th, Ste. 205, Miramar, FL 33186
Phone: (305) 971-1530, Fax: (305) 871-1531
EB-0006719
WALTER A. TILT JR., P.E.
FLORIDA LIC. # 44187

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

0.050" BERTHA ALUMINUM STORM PANEL (2.25" DEEP)

EASTERN METAL SUPPLY, INC.

4268 WEST ROADS DRIVE
WEST PALM BEACH, FL 33407
PHONE: (561) 533-6061, FAX: (561) 568-4780

DATE: 07/26/17

DRAWING No: 17-100

SHEET 15 OF 15