

GENERAL NOTES:

1. 24 GAGE BERTHA GALVANIZED STEEL STORM PANEL (2" DEEP) 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. THIS 24 GAGE BERTHA GALVANIZED STEEL STORM PANEL (2" DEEP) SHALL **NOT** BE INSTALLED AT HIGH VELOCITY HURRICANE ZONES (MIAMI-DADE/BROWARD COUNTIES).

DESIGN WIND LOADS SHALL BE DETERMINED AS PER SECTION 1609 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 2, 6 THRU 10. 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 2, 6 THRU 10.

24 GAGE BERTHA GALVANIZED STEEL STORM PANEL (2" DEEP) ADEQUACY FOR IMPACT AND CYCLIC RESISTANCE HAS BEEN VERIFIED IN ACCORDANCE WITH SECTION 1609.1.2 OF THE ABOVE MENTIONED CODE, AS PER AMERICAN TESTING LAB OF SOUTH FLORIDA; REPORT # 0304.01-08, AS PER ASTM E 1886-05, ASTM E 1996-05 AND ASTM E 330-02 STANDARDS; AS WELL AS REPORT # 1220.01-05 AS PER ASTM E 1886-02, ASTM E 1996-02 AND ASTM E 330-02 STANDARDS; AND REPORT # 0926.01-03 AS PER ASTM E 1886-97, E 1996-02 AND ASTM E 330-02 STANDARDS. QUALIFIED FOR WIND ZONES 1, 2 AND 3. MISSILE TYPE D (BASIC PROTECTION ONLY) AND FOR INSTALLATIONS AT NON ESSENTIAL FACILITIES AS DEFINED BY SECTIONS 6.2.1.1 AND 6.2.1.2 OF ASTM E 1996-02 AND ASTM E 1996-05.

2. ALL STEEL SHEET METAL PANELS SHALL HAVE STRUCTURAL QUALITY ASTM A-653, GRADE 80 WITH MIN $F_y = 106.0$ ksi, WITH G-90 GALVANIZED STEEL DESIGNATION.

3. ALL ALUMINUM EXTRUSIONS SHALL BE ALUMINUM ASSOCIATION 6063-T6 ALLOY & TEMPER UNLESS OTHERWISE NOTED. THE THICKNESS OF ALL EXTRUSIONS SHALL BE AS SHOWN ON THIS DRAWING. STORM PANEL COMPONENTS (10) STUDED SNAP TRACK AND (1) FEMALE COVER CAP ARE PATENT PENDING.

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, $f'_c = 3192$ psi, MIN.
- 1/4" Ø TAPCON ANCHORS AS MANUFACTURED BY I.T.W. BUILDEX.
 - 1/4" Ø x 3/4" ALL POINTS SOLD-SET ANCHORS AS DISTRIBUTED BY ALL POINTS SCREW, BOLT & SPECIALTY COMPANY.

NOTES:

A.1) MINIMUM EMBEDMENT INTO POURED CONCRETE OF TAPCON ANCHORS IS 1 3/4"

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

A.3) 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, ASTM C-90 UNITS:

- 1/4" Ø TAPCON ANCHORS AS MANUFACTURED BY I.T.W. BUILDEX.
- 1/4" Ø S.G. TAPCONS AS MANUFACTURED BY I.T.W. BUILDEX W/ $f'_m = 1500$ psi, MIN.
- 1/4" Ø x 3/4" ALL POINTS SOLD-SET ANCHORS AS DISTRIBUTED BY ALL POINTS SCREW, BOLT & SPECIALTY COMPANY W/ $f'_m = 1800$ psi, MIN.

NOTES:

B.1) MINIMUM EMBEDMENT OF TAPCON INTO CONCRETE BLOCK UNIT SHALL BE 1 1/4".

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

B.3) 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 B.1) AND B.2) ABOVE.

- (C) TO EXISTING WOOD FRAME BUILDINGS, WITH SPECIFIC GRAVITY $G = 0.55$
- 1/4" Ø TAPCON ANCHORS AS MANUFACTURED BY I.T.W. BUILDEX.
 - 1/4" Ø S.G. TAPCONS AS MANUFACTURED BY I.T.W. BUILDEX.
 - 1/4" Ø SAMMY'S SCREW ANCHORS (SSC) AS MANUFACTURED BY ITW BUILDX.

NOTES:

C.1) MINIMUM THREADED PENETRATION OF TAPCONS, S.G OR SAMMY'S SCREW ANCHORS (SSC) INTO WOOD UNIT SHALL BE 1 1/2".

C.2) ANCHORAGE SHALL BE PERFORMED BEYOND ANY FINISH MATERIAL AT WALL LIKE BRICK VENER, STUCCO OR ANY OTHER FINISH. ANCHORAGE SHALL BE AS INDICATED ON NOTE C.1) ABOVE.

(D) 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 5 (SHEETS 4 & 5 FOR CONCRETE/BLOCK SUBSTRATES) AND ALTERNATIVES 1 THRU 6 (SHEETS 8 & 9 FOR WOOD SUBSTRATES) EXCEPT THAT HEADERS 2, 2A, 3 & 4 SHALL NOT BE USED.

8. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE SOUNDNESS OF THE STRUCTURE WHERE PANEL IS TO BE ATTACHED TO INSURE PROPER ANCHORAGE. THIS PANEL SHALL ONLY BE ATTACHED TO POURED CONCRETE, CONCRETE BLOCK OR WOOD FRAME BUILDINGS.

9. THE INSTALLATION CONTRACTOR IS TO SEAL/CAULK ALL PANEL 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. 24 GAGE BERTHA GALVANIZED STEEL STORM PANEL (2" DEEP) SHALL COMPLY WITH SPECIFICATIONS INDICATED IN THIS DRAWING PLUS ANY BUILDING AND ZONING REGULATIONS PROVIDED BY THE JURISDICTION WHERE PERMIT IS APPLIED TO.

11. SHUTTER MANUFACTURER'S LABEL SHALL BE LOCATED ON A READILY VISIBLE LOCATION AT 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.

12. (a) THIS 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.

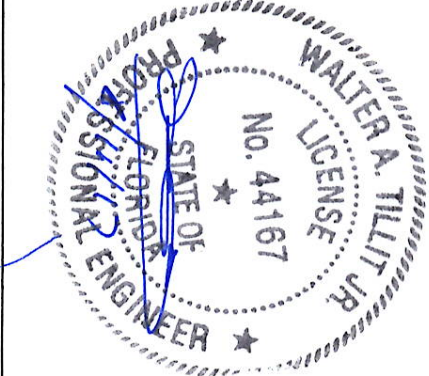
(b) CONTRACTOR TO BE RESPONSIBLE FOR THE SELECTION, PURCHASE AND INSTALLATION INCLUDING LIFE SAFETY OF THIS PRODUCT, BASED ON THIS P.E.D. PROVIDED HE/SHE DOES NOT DEVIATE FROM THE CONDITIONS DETAILED ON THIS DOCUMENT. CONSTRUCTION SAFETY AT SITE IS THE CONTRACTOR'S RESPONSIBILITY.

(c) THIS P.E.D. WILL BE CONSIDERED INVALID IF ALTERED BY ANY MEANS.

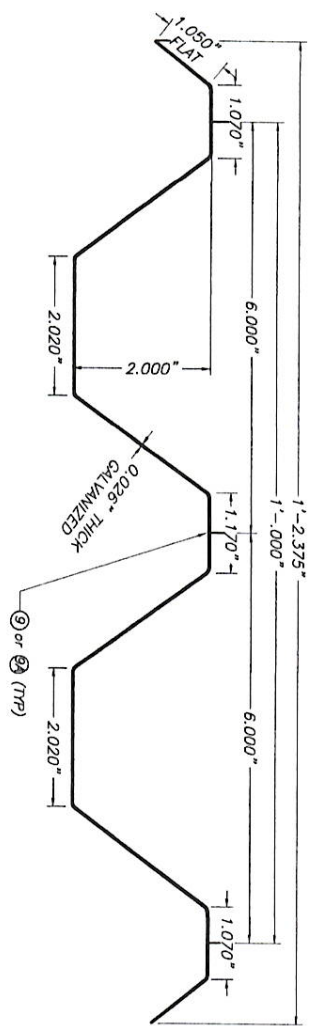
(d) SITE SPECIFIC PROJECTS SHALL BE PREPARED BY A PROFESSIONAL ENGINEER OR REGISTERED ARCHITECT WHICH WILL BECOME THE ENGINEER OF RECORD (E.O.R.) FOR THE PROJECT AND WHO WILL BE RESPONSIBLE FOR THE PROPER USE OF THE P.E.D. ENGINEER OF RECORD, ACTING AS A DELEGATED ENGINEER TO THE P.E.D. ENGINEER, SHALL 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.

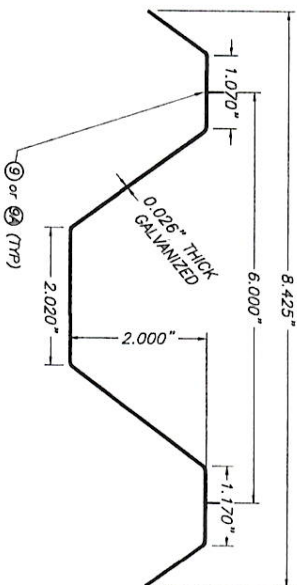
THIS DRAWING SHALL ONLY BE USED TO
OBTAIN PERMITS IN THE STATE OF FLORIDA



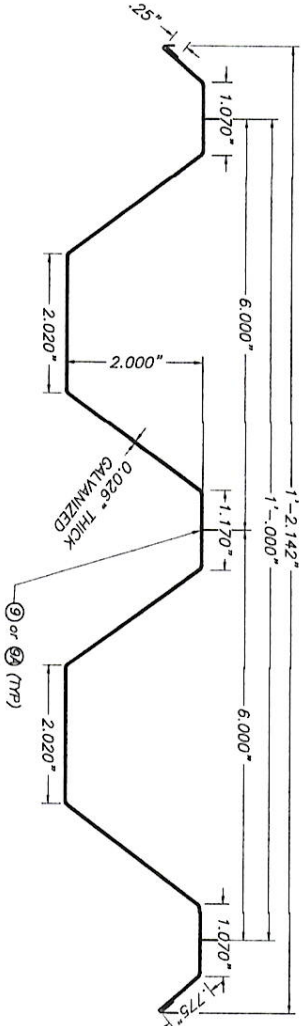
© 2017 TILTECO, INC.		24 GAGE GALVANIZED BERTHA STEEL STORM PANEL (2" DEEP)		L.C. DRAWN BY:	
TILTECO INC.		EASTERN METAL SUPPLY, INC.		DATE: 07/25/17	
TILIT TESTING & ENGINEERING COMPANY 6355 N.W. 38th St., Ste. 305, MIAMI GARDENS, FL 33166 Phone : (305)971-1530 , Fax : (305)971-1531 EB-0006719 WALTER A. TILIT Jr., P.E. FLORIDA Lic. # 44167		4268 WEST ROADS DRIVE WEST PALM BEACH, FL 33407 PH: (561) 533-6061 FAX: (561) 568-4780		17-089 DRAWING No	
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 15-041	07/21/17	3		
2			4		
SHEET 1 OF 10					



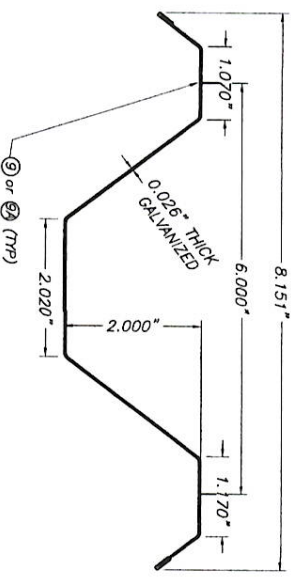
FULL PANEL W/O HEMMED EDGES



HALF PANEL W/O HEMMED EDGES

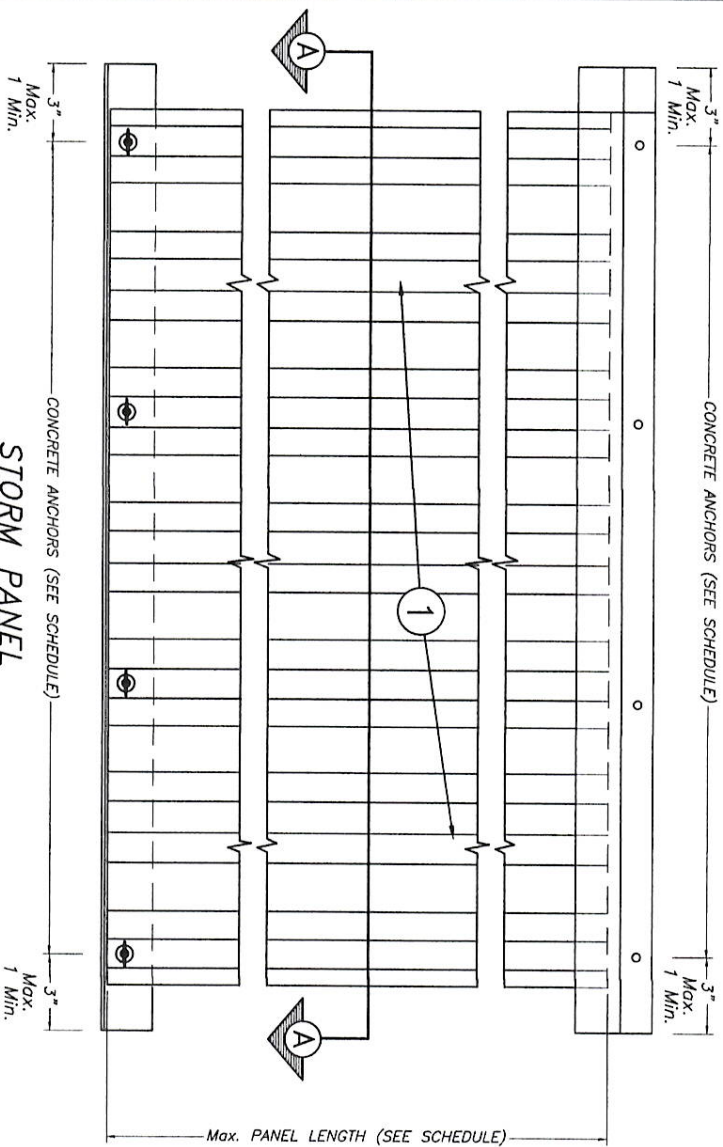


FULL PANEL W/ HEMMED EDGES



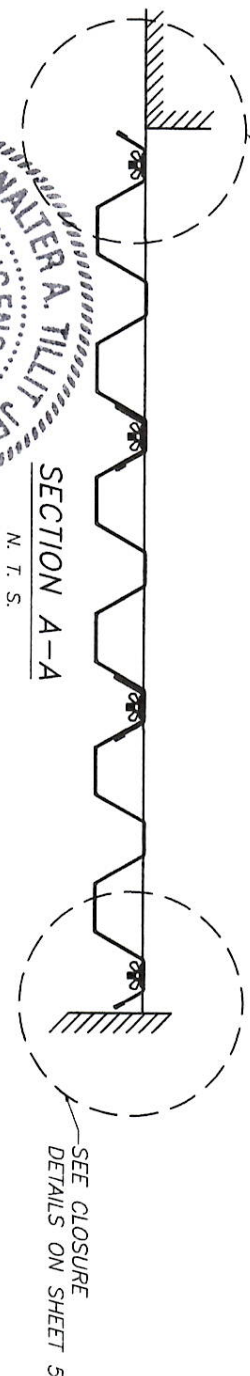
HALF PANEL W/ HEMMED EDGES

1 STORM PANEL
SCALE 3/8" = 1"



STORM PANEL
TYPICAL ELEVATION

SEE CLOSURE
DETAILS ON SHEET 5



SECTION A-A

N. T. S.

SEE CLOSURE
DETAILS ON SHEET 5

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

0 NOTES:

(1) L+ : MAX. ALLOWABLE PANEL LENGTH FOR A GIVEN POSITIVE A.S.D. DESIGN LOAD.
L- : MAX. ALLOWABLE PANEL LENGTH FOR A GIVEN NEGATIVE A.S.D. DESIGN LOAD.

(2) PROCEDURE TO DETERMINE MAXIMUM PANEL LENGTH FOR WALL MOUNTINGS OR FLOOR/CEILING:
GIVEN A POSITIVE A.S.D. DESIGN LOAD, DETERMINE MAXIMUM PANEL LENGTH "L+" FROM
SCHEDULE.
GIVEN A NEGATIVE A.S.D. DESIGN LOAD, DETERMINE MAXIMUM PANEL LENGTH "L-" FROM
SCHEDULE.
FINAL MAXIMUM ALLOWABLE PANEL LENGTH IS EQUAL TO THE MINIMUM DETERMINED PANEL
LENGTH BETWEEN "L+" AND "L-".

(3) MINIMUM PANEL LENGTH TO BE 48"

SCHEDULE # 1

VALID FOR POURED CONCRETE, CONCRETE BLOCK AND
WOOD SUBSTRATE INSTALLATIONS *

MAXIMUM PANEL LENGTH "L+" OR "L-" (ft.) 0		
MAXIMUM A.S.D. DESIGN PRESSURE RATING (p.s.f.) (+ or -)	CONCRETE, CONCRETE BLOCK & WOOD INSTALLATIONS	
	Max. PANEL LENGTH L+ (ft.)	Max. PANEL LENGTH L- (ft.)
32.6	9'-10"	9'-10"
34.0	9'-7"	9'-10"
36.0	9'-4"	9'-10"
38.0	9'-1"	9'-10"
40.0	8'-10"	9'-10"
42.0	8'-7"	9'-10"
44.0	8'-5"	9'-6"
46.0	8'-3"	9'-1"
48.0	8'-1"	8'-8"
50.0	7'-11"	8'-4"
52.0	7'-9"	8'-0"
54.0	7'-7"	7'-8"
56.0	7'-5"	7'-5"
57.0	7'-4"	7'-4"
58.0	2'-8"	2'-8"

FLORIDA BUILDING CODE (Non High Velocity Hurricane Zone)

24 GAGE GALVANIZED BERTHA STEEL STORM PANEL
(2" DEEP)

EASTERN METAL SUPPLY, INC.

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

REV. NO.	DESCRIPTION	DATE	REV. NO.	DESCRIPTION	DATE
1	OLD 15-04-1	07/21/17	3		
2			4		

TILECO INC.

TILIT TESTING & ENGINEERING COMPANY
6350 N.W. 150th Ave., Suite 150, Fort Lauderdale, FL 33308
Phone : (352) 971-1530 Fax : (352) 971-1531
WALTER A. TILIT Jr. P.E.
FLORIDA Lic. # 44167

© 2017 TILECO, INC.



Max.
1 Min.

Max.
1 Min.

L.C.

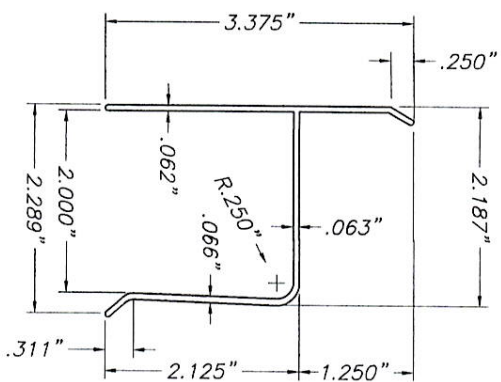
DRAWN BY:

DATE:

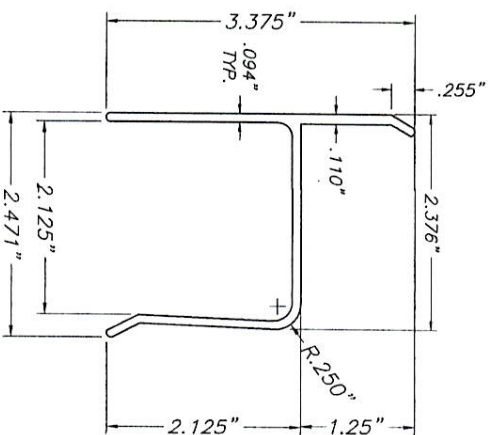
17-089

DRAWING NO

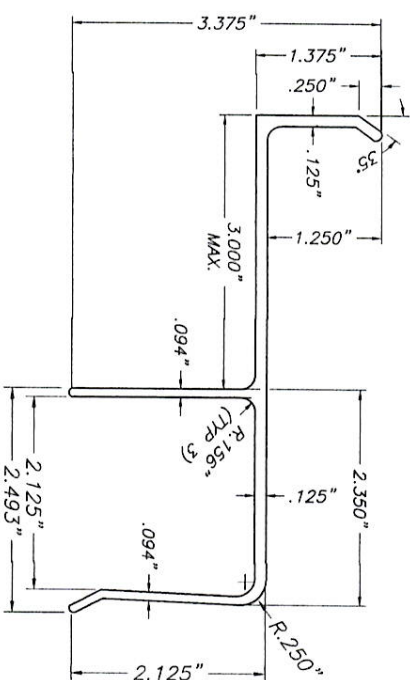
SHEET 2 OF 10



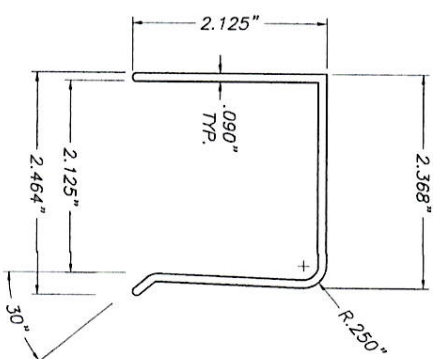
② "h" HEADER



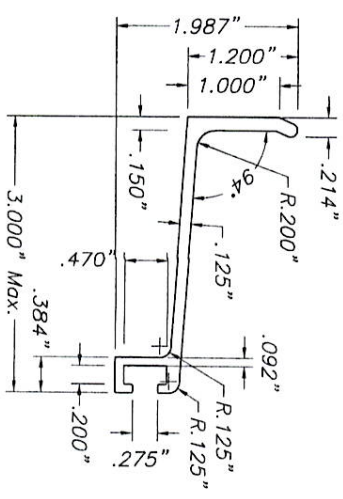
②A "h" HEADER (OPTIONAL)



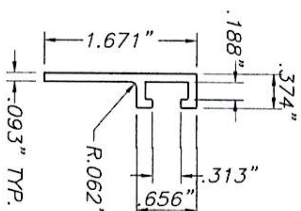
③ BUILD OUT "h" HEADER (3" MAX.)



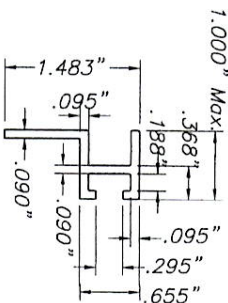
④ "u" HEADER



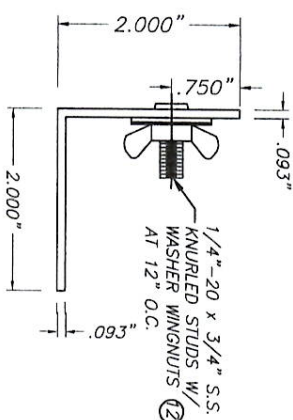
⑤ 3" ANGLE BUILD OUT BRACKET



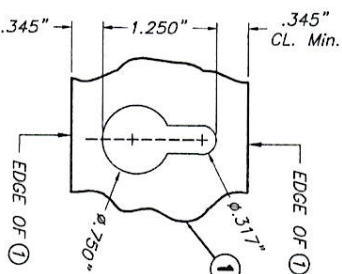
⑥ "f" TRACK



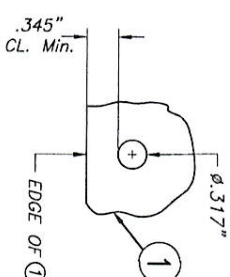
⑦ 1" STUCCO TRACK



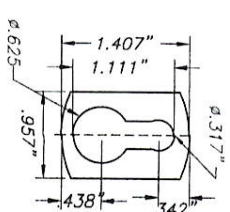
⑧ STUDDED ANGLE



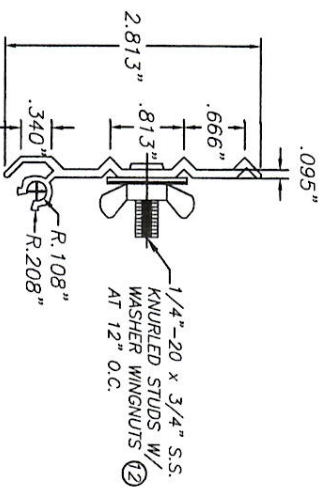
⑨ LARGE KEY HOLE



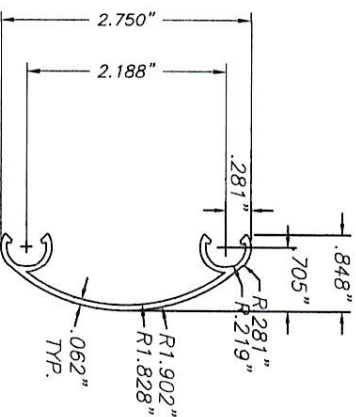
⑨A ROUND HOLE AT PANEL



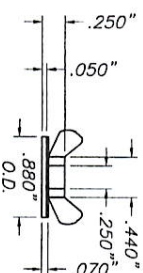
⑨B KEY HOLE WASHER
3105-H154 ALUM. ALLOY



⑩ STUDDED SNAP TRACK

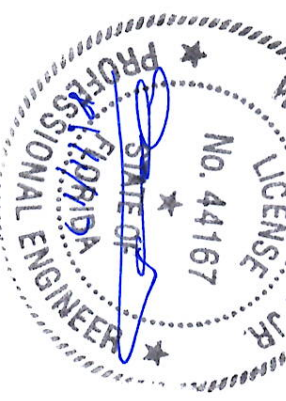


⑪ FEMALE COVER CAP



⑫ WASHERED WING NUT

DIE CAST (ZINC # 7)
NICKEL PLATED UP



COMPONENTS

SCALE : 1/2" = 1"

FLORIDA BUILDING CODE (Non High Velocity Hurricane Zone)

24 GAGE GALVANIZED BERTHA STEEL STORM PANEL
(2" DEEP)

© 2017 TILTECO, INC.

TILTECO INC.

TILIT TESTING & ENGINEERING COMPANY
6355 N.W. 55th St., Suite 100, Fort Lauderdale, FL 33309
Phone : (352) 971-1530 Fax : (352) 971-1531
TILIT A TILIT Jr. P.E.
FLORIDA Lic. # 44167

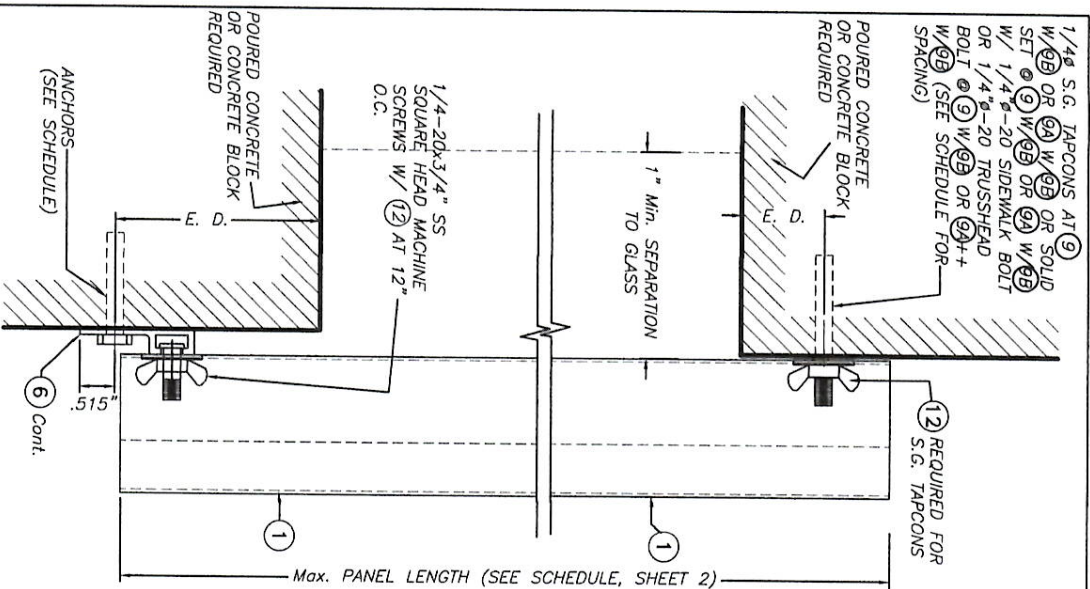
EASTERN METAL SUPPLY, INC.

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

07/25/17
DATE:
DRAWING No

REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 15-041	07/21/17	3		
2			4		

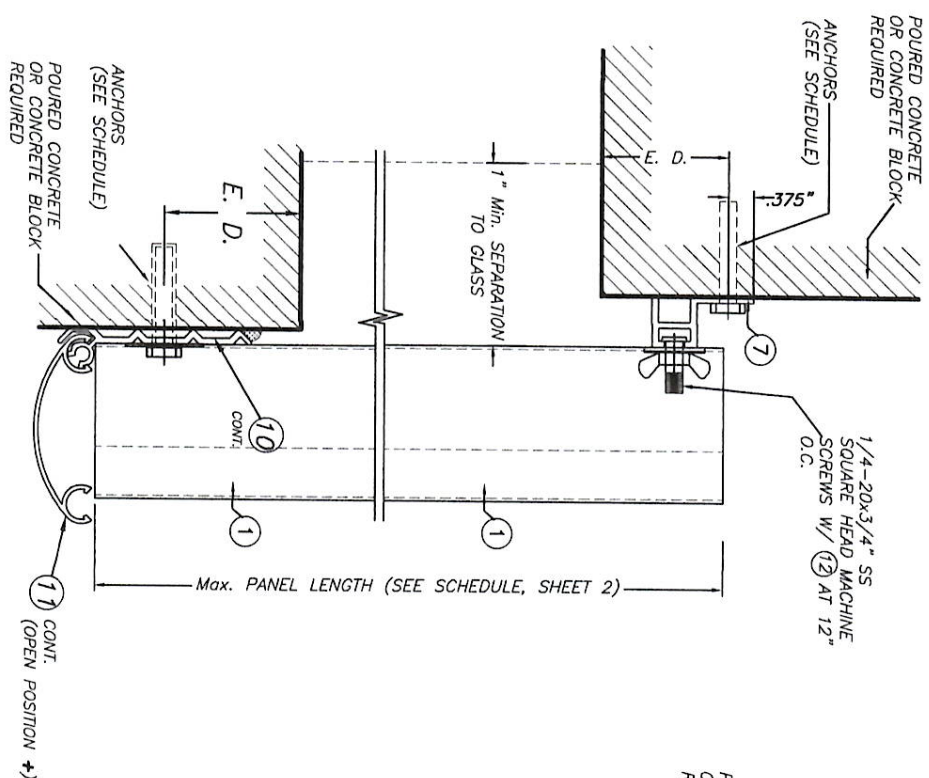
SHEET 3 OF 10



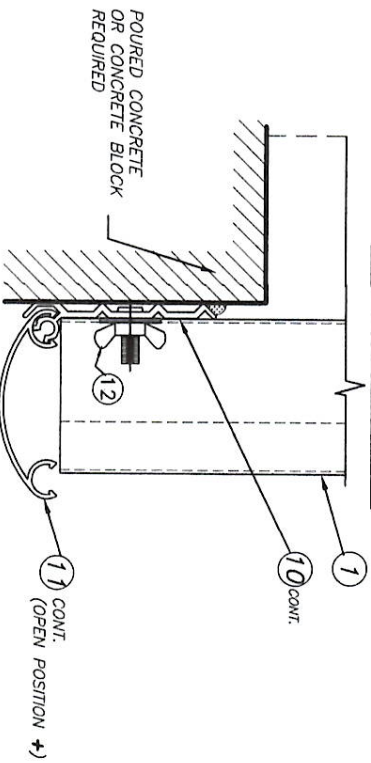
++ SIDE WALK BOLTS ARE 3/4"x3/32" THICK HEAD MACHINE SCREW W/LENGTH AS PER NOTES A.2 & B.2 (SHEET 1)

++ TRUSS HEAD BOLTS ARE 1/2"x1/8" THICK HEAD MACHINE SCREW W/LENGTH AS PER NOTES A.2 & B.2 (SHEET 1)

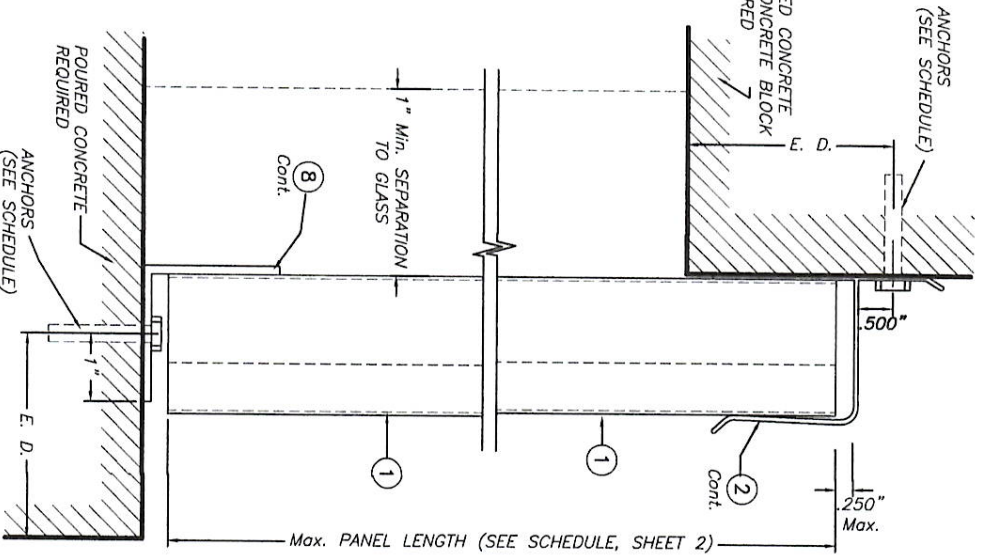
SECTION 1



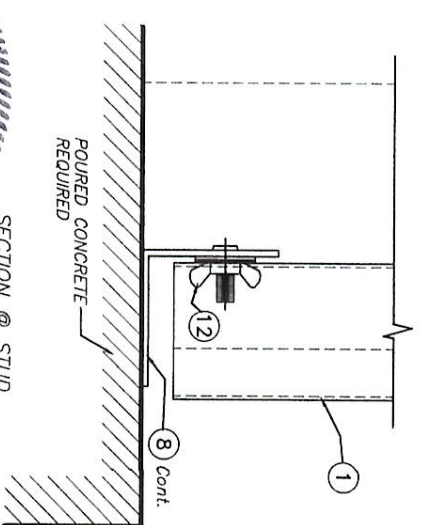
+ NOTE: FEMALE COVER CAP (11) TO REMAIN CLOSED AT NON HURRICANE CONDITIONS.



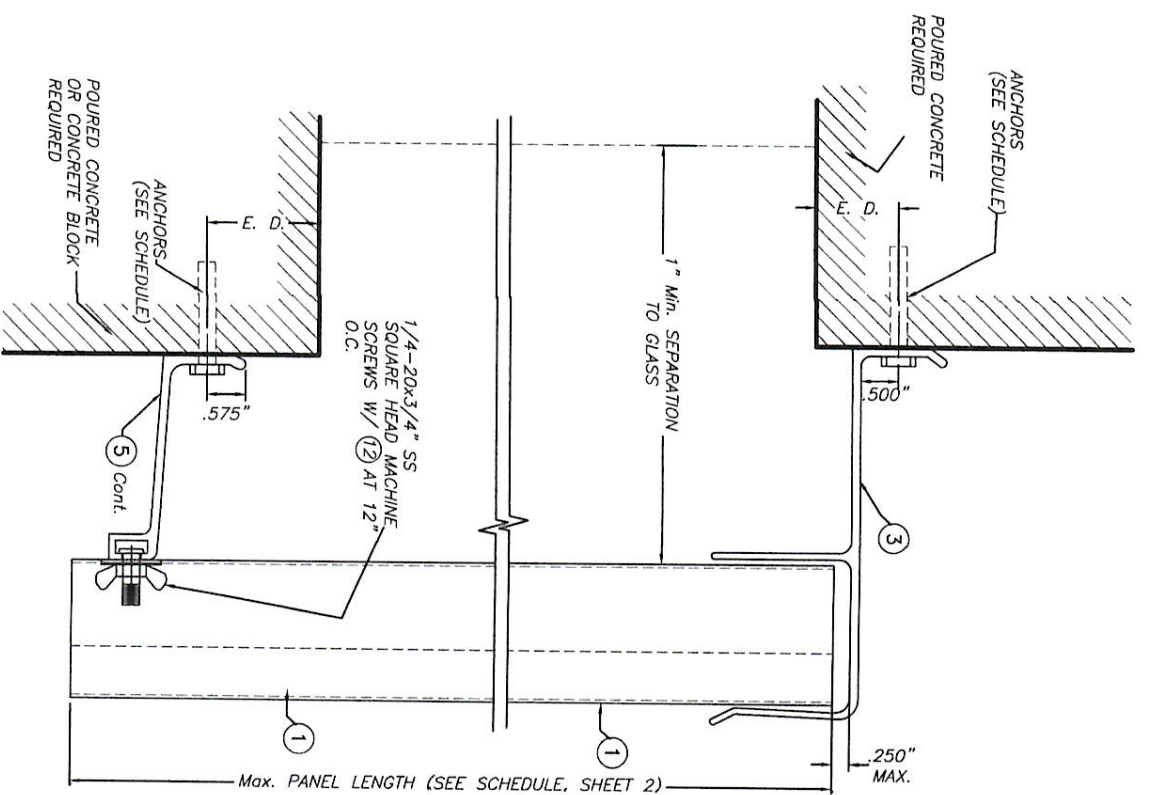
SECTION 2



SECTION 3



SECTION 3



BUILD OUT INSTALLATION SECTION 4

WALL MOUNTING INSTALLATION

NOTE FOR COMBINATION OF SECTIONS :

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

E. D. = EDGE DISTANCE (SEE SCHEDULE ON SHEET 7)



WALTER A. TILLET & ENGINEERING COMPANY

SECTION 3

FLORIDA BUILDING CODE (Non High Velocity Hurricane Zone)

24 GAGE GALVANIZED BERTHA STEEL STORM PANEL (2" DEEP)

EASTERN METAL SUPPLY, INC.

4268 WEST ROADS DRIVE WEST PALM BEACH, FL 33407

PH: (561) 533-6061 FAX: (561) 588-4780

REV. NO. 1 DESCRIPTION QLD 15-041 DATE 07/21/17

L.C.

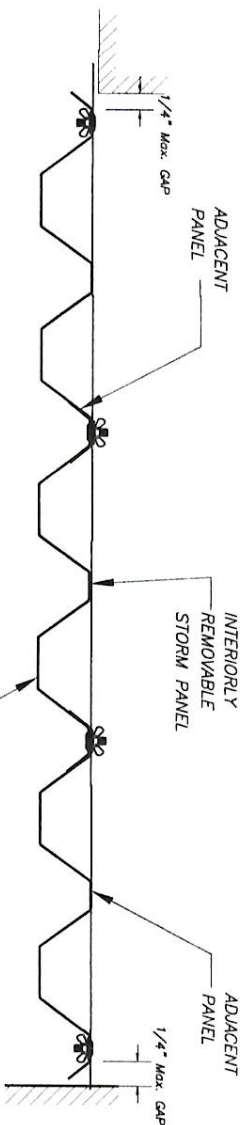
DRAWN BY:

DATE: 07/25/17

17-089

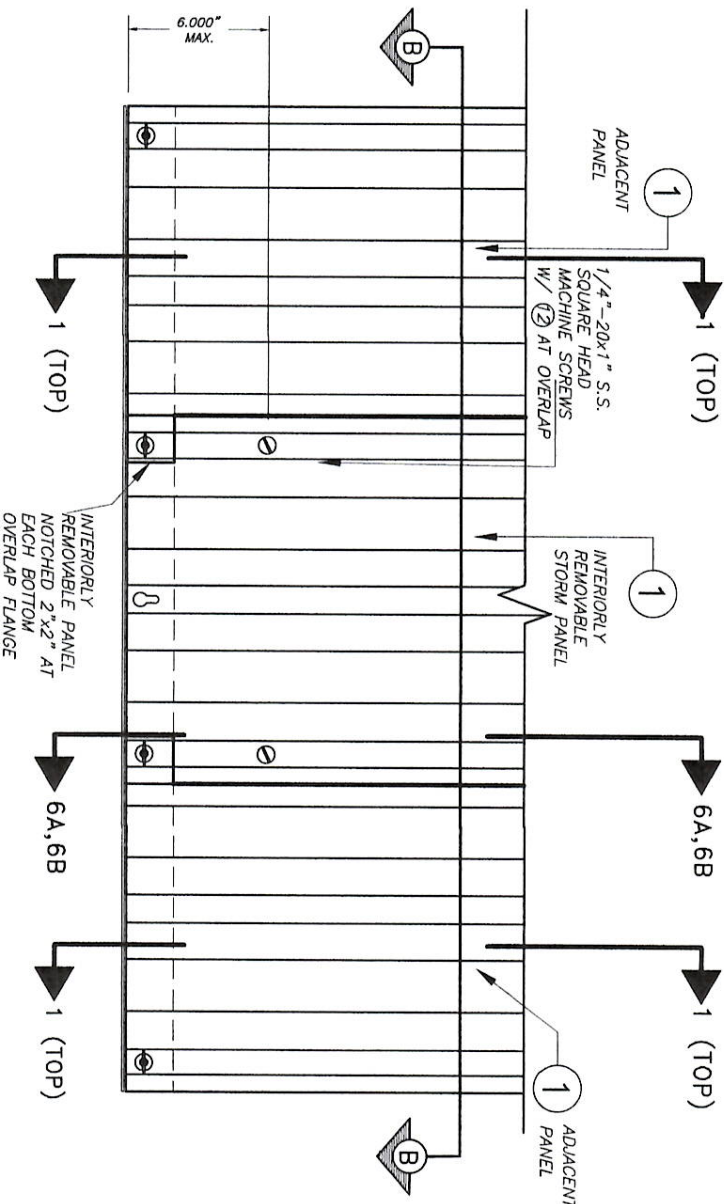
DRAWING NO

SHEET 4 OF 10



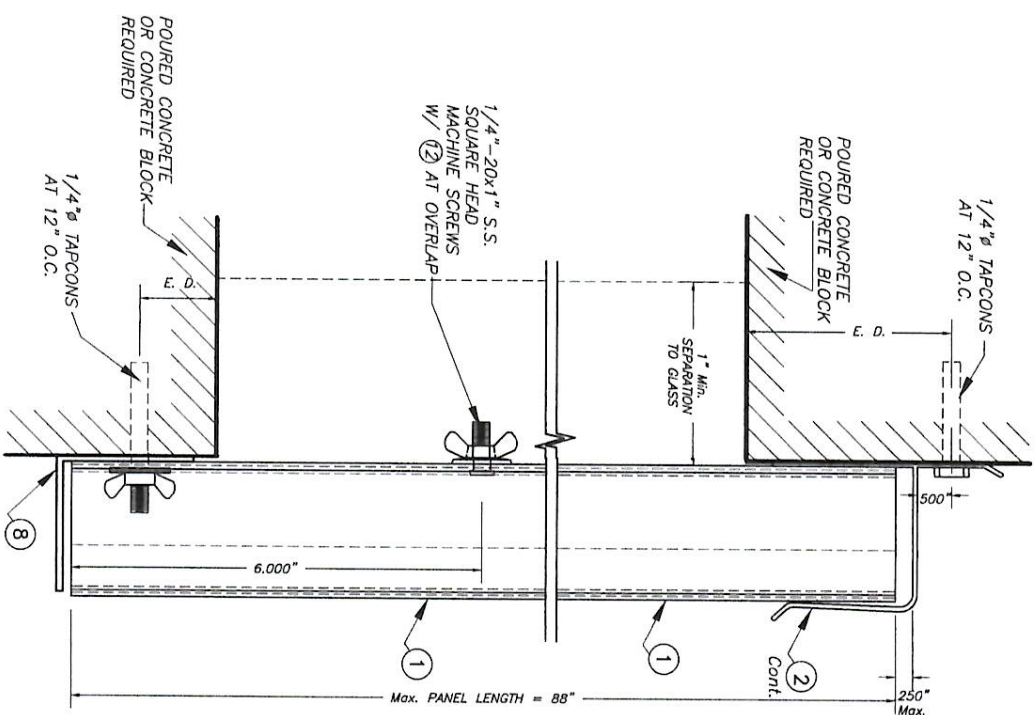
SECTION B-B

SCALE : N.T.S.



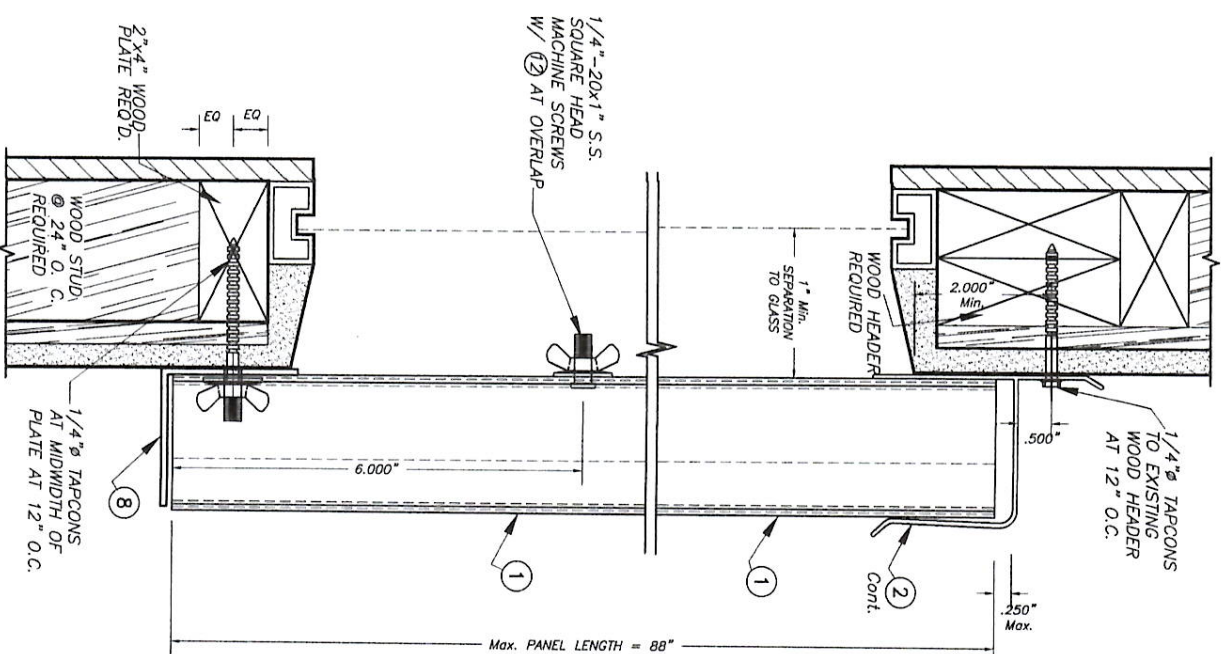
**INTERIORLY REMOVABLE STORM PANEL
PARTIAL ELEVATION**

SCALE : N.T.S.



**WALL MOUNTING INSTALLATION
SECTION 6A**

SCALE : 3/8" = 1"



**WALL MOUNTING INSTALLATION
SECTION 6B**

SCALE : 3/8" = 1"

++
SIDE WALK BOLTS ARE 3/4"x3/32" THICK HEAD
MACHINE SCREW W/LENGTH AS PER NOTES A.2 &
B.2 (SHEET)
++
TRUSS HEAD BOLTS ARE 1/2"x1/8" THICK HEAD
MACHINE SCREW W/LENGTH AS PER NOTES A.2 &
B.2 (SHEET)

MAX. A.S.D. DESIGN PRESSURE RATING = +57.0, -57.0 p.s.f.

FLORIDA BUILDING CODE (Non High Velocity Hurricane Zone)

24 GAGE GALVANIZED BERTHA STEEL STORM PANEL
(2" DEEP)

EASTERN METAL SUPPLY, INC.

4288 WEST ROADS DRIVE

WEST PALM BEACH, FL 33407

PH: (561) 533-6061 FAX: (561) 588-4780

DATE: 07/25/17

REV. NO. 1 DESCRIPTION OLD 15-041 DATE 07/21/17

REV. NO. 2 DESCRIPTION OLD 15-041 DATE 07/21/17

TILECO INC.

TILIT TESTING & ENGINEERING COMPANY

6355 W. 38th Ave. Suite 1530, Miramar, FL 33166

Phone : (305)971-1531 Fax: (305)971-1531

WALTER A. TILIT JR., P.E.

FLORIDA Lic. # 44167

L.C.

DRAWN BY:

DATE:

17-089

DRAWING NO

SHEET 6 OF 10

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

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 _p (ft.)
	REGULAR TAPCONS		SOLID SET		S.G. TAPCON			
	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY		
+40.0, -40.0 OR LESS	N/A	N/A	12"	12"	12"	12"	1 (TOP)	6'-0" OR LESS
	12"	12"	12"	12"	12"	12"	1 (BOTTOM)	
	12"	12"	12"	12"	12"	12"	2 (TOP)	
	12"	12"	12"	12"	12"	12"	2 (BOTTOM)	
	12"	12"	12"	12"	12"	12"	3 (TOP)	
	12"	12"	12"	12"	12"	12"	3 (BOTTOM)	
	12"	N/A	12"	N/A	12"	N/A	4 (TOP)	
	12"	12"	12"	12"	12"	12"	4 (BOTTOM)	
	12"	12"	12"	12"	12"	12"	5 (TOP)	
	12"	12"	12"	12"	12"	12"	5 (BOTTOM)	

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		SOLID SET		S.G. TAPCON			
	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY		
+40.0, -40.0 OR LESS	N/A	N/A	12"	12"	12"	12"	1 (TOP)	> 6'-0" UP TO 9'-10"
	12"	11"	12"	12"	12"	12"	1 (BOTTOM)	
	12"	11"	12"	12"	12"	12"	2 (TOP)	
	12"	12"	12"	12"	12"	12"	2 (BOTTOM)	
	12"	11"	12"	12"	12"	12"	3 (TOP)	
	12"	N/A	12"	N/A	12"	N/A	3 (BOTTOM)	
	12"	N/A	12"	N/A	12"	N/A	4 (TOP)	
	12"	11"	12"	12"	12"	12"	4 (BOTTOM)	
	12"	12"	12"	12"	12"	12"	5 (TOP)	
	12"	12"	12"	12"	12"	12"	5 (BOTTOM)	

MAXIMUM A.S.D. DESIGN PRESSURE (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		SOLID SET		S.G. TAPCON					
	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY		
+40.0, -40.0 UP TO +50.0, -50.0	N/A	N/A	12"	12"	12"	12"	1 (TOP)	6'-0" OR LESS		
	12"	12"	12"	12"	12"	12"	1 (BOTTOM)			
	12"	12"	12"	12"	12"	12"	2 (TOP)			
	12"	12"	12"	12"	12"	12"	2 (BOTTOM)			
	12"	12"	12"	12"	12"	12"	3 (TOP)			
	12"	N/A	12"	N/A	12"	N/A	3 (BOTTOM)			
	12"	N/A	12"	N/A	12"	N/A	4 (TOP)			
	12"	12"	12"	12"	12"	12"	4 (BOTTOM)			
	12"	12"	12"	12"	12"	12"	5 (TOP)			
	12"	12"	12"	12"	12"	12"	5 (BOTTOM)			

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		SOLID SET		S.G. TAPCON			
	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY		
+40.0, -40.0 UP TO +57.0, -57.0	N/A	N/A	12"	12"	12"	12"	1 (TOP)	> 6'-0" UP TO 7'-4"
	12"	11"	12"	12"	12"	12"	1 (BOTTOM)	
	12"	11"	12"	12"	12"	12"	2 (TOP)	
	12"	12"	12"	12"	12"	12"	2 (BOTTOM)	
	12"	11"	12"	12"	12"	12"	3 (TOP)	
	12"	N/A	12"	N/A	12"	N/A	3 (BOTTOM)	
	12"	N/A	12"	N/A	12"	N/A	4 (TOP)	
	12"	11"	12"	12"	12"	12"	4 (BOTTOM)	
	12"	12"	12"	12"	12"	12"	5 (TOP)	
	12"	12"	12"	12"	12"	12"	5 (BOTTOM)	

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		SOLID SET		S.G. TAPCON			
	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY		
+58.0, -58.0 OR LESS	N/A	N/A	12"	12"	12"	12"	1 (TOP)	2'-8" OR LESS
	12"	12"	12"	12"	12"	12"	1 (BOTTOM)	
	12"	12"	12"	12"	12"	12"	2 (TOP)	
	12"	12"	12"	12"	12"	12"	2 (BOTTOM)	
	12"	12"	12"	12"	12"	12"	3 (TOP)	
	12"	N/A	12"	N/A	12"	N/A	3 (BOTTOM)	
	12"	N/A	12"	N/A	12"	N/A	4 (TOP)	
	12"	12"	12"	12"	12"	12"	4 (BOTTOM)	
	12"	12"	12"	12"	12"	12"	5 (TOP)	
	12"	12"	12"	12"	12"	12"	5 (BOTTOM)	

** MAXIMUM ANCHOR SPACINGS ARE VALID FOR 3" EDGE DISTANCE FOR E. D. LESS THAN 3". REDUCE ANCHOR SPACING BY MULTIPLYING SPACING SHOWN ON SCHEDULE BY THE FOLLOWING FACTORS. (NOTE: MIN. E. D. FOR SOLIDSET ANCHORS IS 3") 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.

FACTORS		SOLID SET
ACTUAL E. D.	TAPCON (REGULAR OR S.G.)	
3"	.86	.75
2 1/2"	.71	.50
2"	.50	-

FLORIDA BUILDING CODE (Non High Velocity Hurricane Zone)

24 GAGE GALVANIZED BERTHA STEEL STORM PANEL (2" DEEP)

EASTERN METAL SUPPLY, INC.

4268 WEST ROADS DRIVE

WEST PALM BEACH, FL 33407

PH: (561) 553-6061 FAX: (561) 588-4780

TILECO INC.

TILIT TESTING & ENGINEERING COMPANY

6555 NW 36th St., Ste. 305, Virginia Gardens, FL 33166

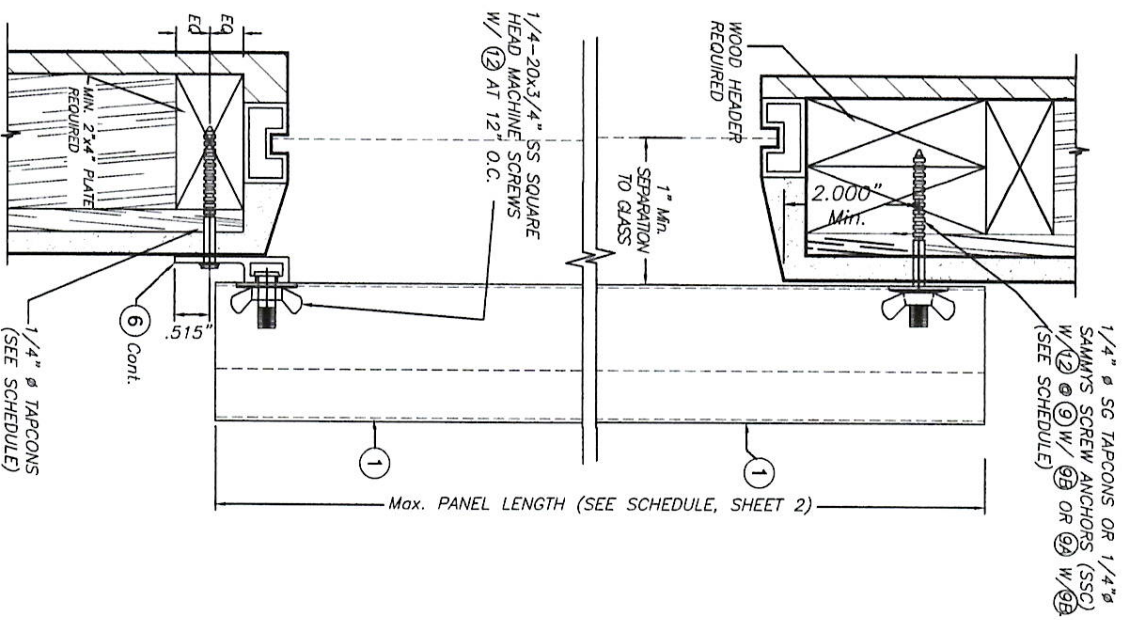
© 2017 TILECO, INC.

L.C. DRAWN BY: 07/25/17 DATE:

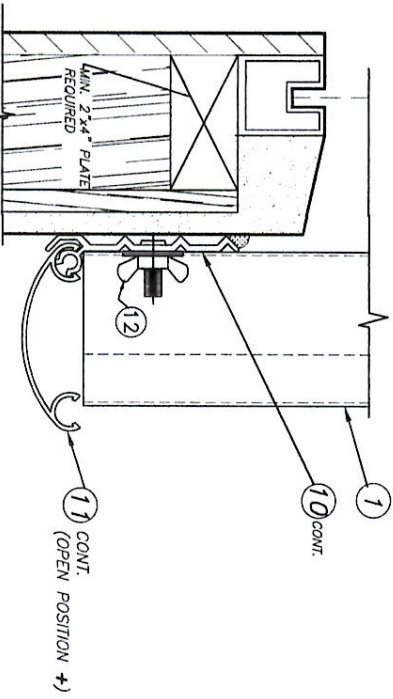
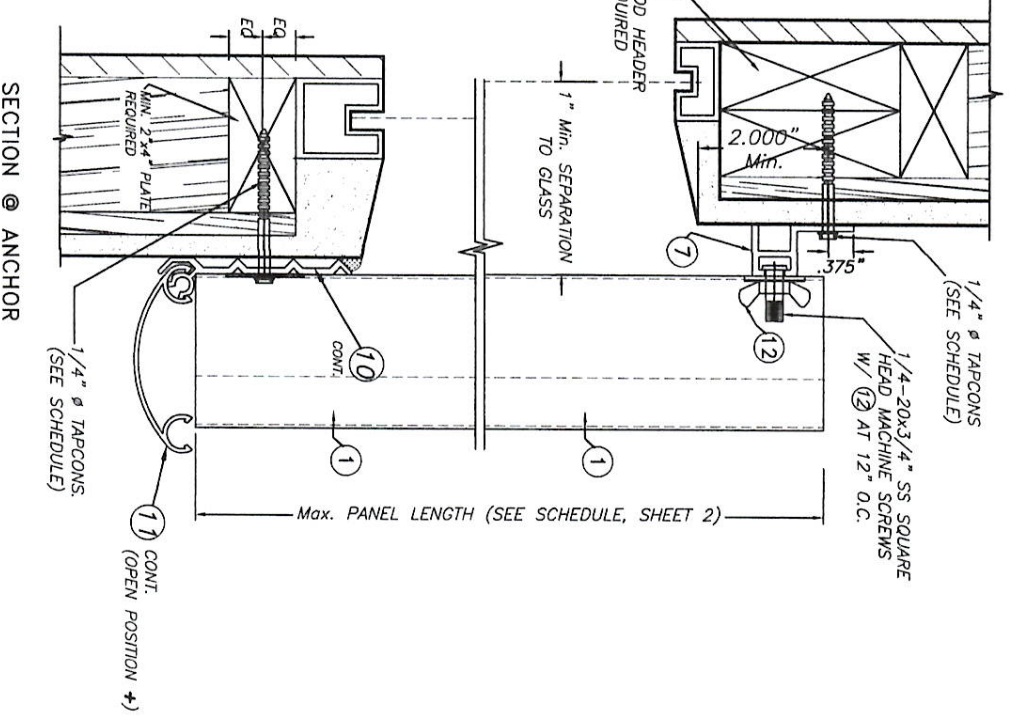
17-089 DRAWING No

SHEET 7 OF 10





ALTERNATIVE 1



WALL MOUNTING INSTALLATION

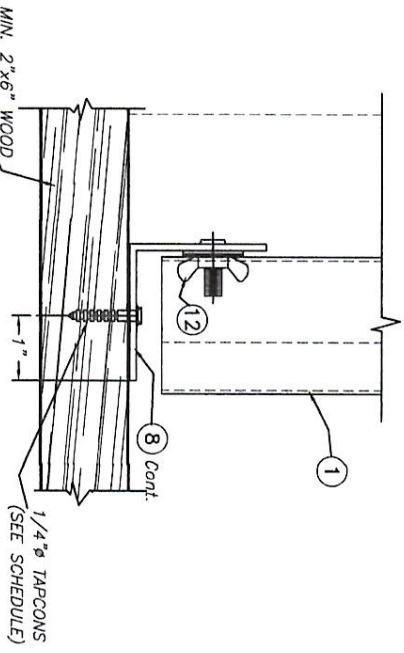
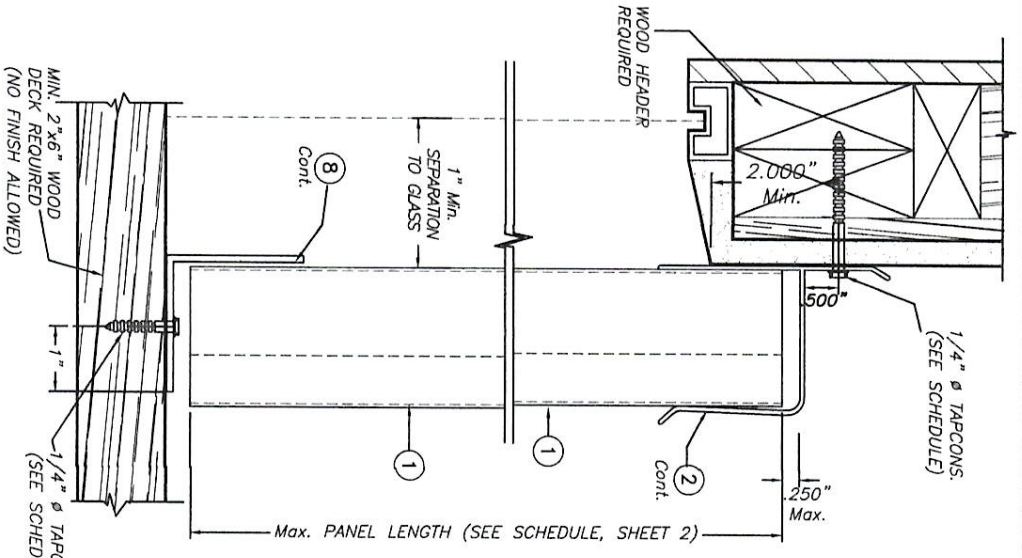
NOTES:

1. INSTALLATIONS ARE ONLY VALID FOR MAX. A.S.D. DESIGN PRESSURE RATING AND PANEL S LENGTHS AS PER SCHEDULES ON SHEET 2 (EXCEPT AS NOTED)
2. SEE ANCHOR SCHEDULE ON SHEET 10.
3. FOR NEW WOOD FRAME CONSTRUCTION: WOOD MEMBERS TO BE SOUTHERN PINE No. 2, W/ SPECIFIC DENSITY (G) OF 0.55 OR EQUAL.

ALTERNATIVE 2

+ NOTE: FEMALE COVER CAP (1) TO REMAIN CLOSED AT NON HURRICANE CONDITIONS.

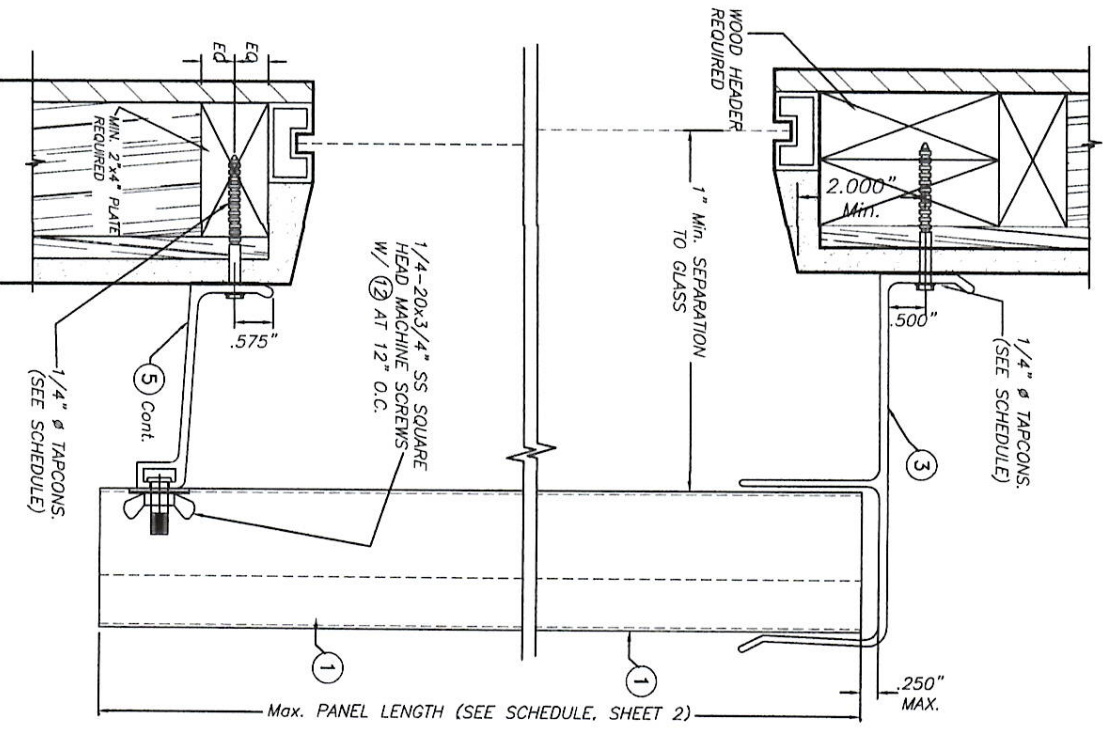
NOTE FOR COMBINATION OF SECTIONS : WALL/FLOOR MOUNTING SECTIONS CAN BE COMBINED IN ANY WAY TO SUIT ANY INSTALLATION.



WALL & FLOOR MOUNTING INSTALLATION

ALTERNATIVE 3

MIN. 2"x6" WOOD DECK REQUIRED (NO FINISH ALLOWED)



BUILD OUT INSTALLATION
ALTERNATIVE 4

FLORIDA BUILDING CODE (Non High Velocity Hurricane Zone)

24 GAGE GALVANIZED BERTHA STEEL STORM PANEL (2" DEEP)

EASTERN METAL SUPPLY, INC.

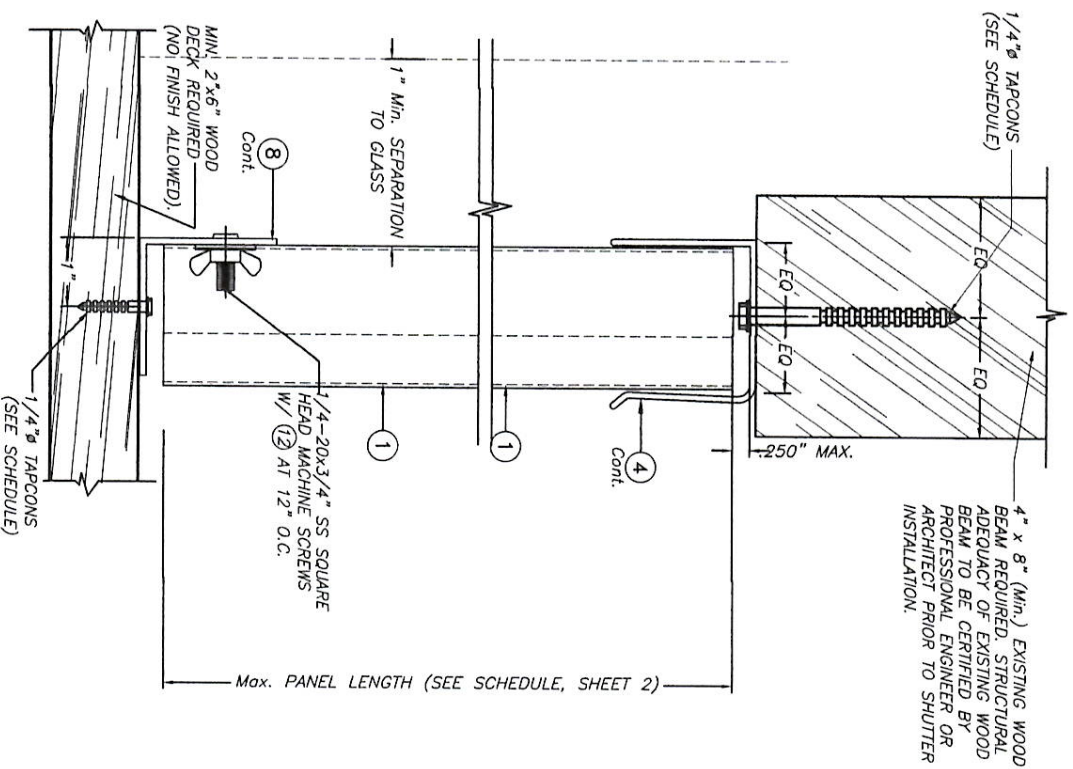
4268 WEST ROADS DRIVE
WEST PALM BEACH, FL 33407
PH: (561) 533-6061 FAX: (561) 588-4780

REV. NO.	DESCRIPTION	DATE	REV. NO.	DESCRIPTION	DATE
1	QUD 15-041	07/21/17	3		
2			4		

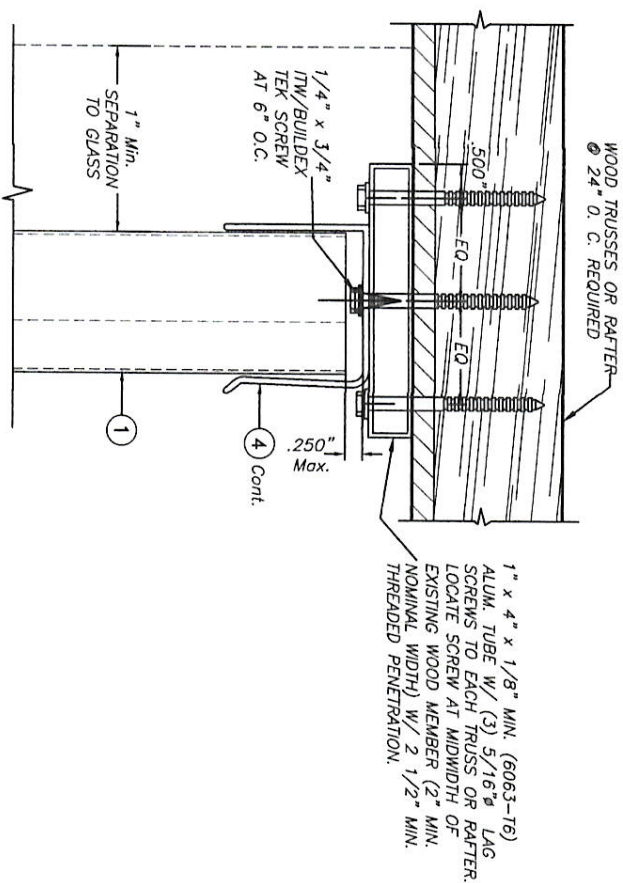
17-089
DRAWING NO

TILECO INC.
TILT TESTING & ENGINEERING COMPANY
6550 W. 38th Ave. Suite 1530 Fort Lauderdale, FL 33309
Phone: (954) 387-1530 Fax: (954) 387-1531
WALTER A. TILIT Jr. P.E.
FLORIDA Lic. # 44167

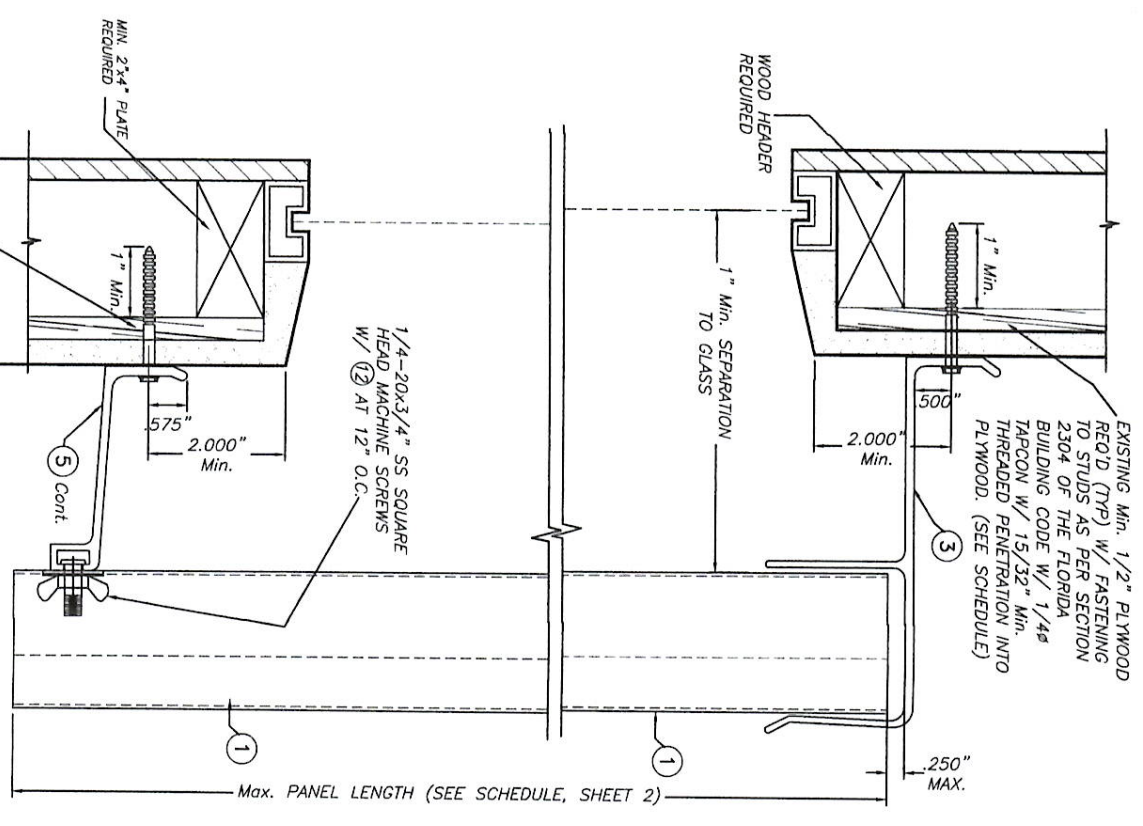
PROFESSIONAL ENGINEER
STATE OF FLORIDA
No. 44167
WALTER A. TILIT Jr. P.E.
FLORIDA Lic. # 44167



**CEILING & FLOOR MOUNTING INSTALLATION
ALTERNATIVE 5**



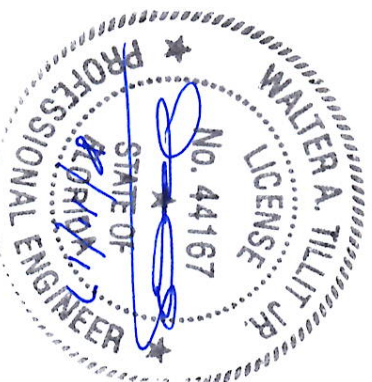
**OPTION TO
ALTERNATIVE 5
(TOP)**



**BUILD OUT INSTALLATION
ALTERNATIVE 6**

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 MAX. A.S.D. DESIGN PRESSURE RATING AND PANEL'S LENGTHS AS PER SCHEDULES ON SHEET 2 (EXCEPT AS NOTED)
 2. SEE ANCHOR SCHEDULE ON SHEET 10.
 3. FOR NEW WOOD FRAME CONSTRUCTION: WOOD MEMBERS TO BE SOUTHERN PINE No. 2, W/ SPECIFIC DENSITY (G) OF 0.35 OR EQUAL.



© 2017 TILTECO, INC.

TILTECO inc.

TILTIT TESTING & ENGINEERING COMPANY
6535 N.W. 36th St., Ste. 305, Virginia Gardens, FL 33166
Phone : (305) 871-1531
FAX : (305) 871-1531
WALTER A. TILTIT Jr., P.E.
FLORIDA Lic. # 44167

FLORIDA BUILDING CODE (Non High Velocity Hurricane Zone)

24 GAGE GALVANIZED BERTHA STEEL STORM PANEL
(2" DEEP)

EASTERN METAL SUPPLY, INC.

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

17-089
DRAWING No

DATE: 07/25/17

REV. No. 1 DESCRIPTION DATE REV. No. 2 DESCRIPTION DATE

SHEET 9 OF 10

MAXIMUM A.S.D. DESIGN PRESSURE RATING (p.s.f.) AND CORRESPONDING MAXIMUM ANCHOR
SPACING SCHEDULE FOR INSTALLATIONS INTO WOOD FRAME BUILDINGS

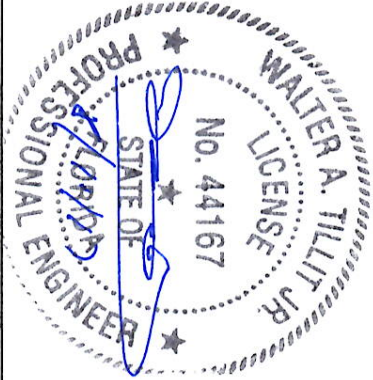
MAXIMUM A.S.D. DESIGN PRESSURE RATING (p.s.f.)	WOOD FASTENERS			APPLICABLE TO ALTERNATIVES # 4 ANY COMBINATION OF THEM	MAXIMUM PANEL LENGTH L ₂ (ft.)
	REGULAR TAPCONS	S.G.TAPCON	SCUMPS SSC		
+40.0, -40.0 OR LESS	N/A	12"	12"	1 (TOP)	6'-0" OR LESS
	12"	12"	N/A	1 (BOTTOM)	
	12"	12"	N/A	2 (TOP)	
	12"	N/A	N/A	2 (BOTTOM)	
	12"	12"	N/A	3 (TOP)	
	12"	12"	N/A	3 (BOTTOM)	
	12"	12"	N/A	4 (TOP)	
	12"	12"	N/A	4 (BOTTOM)	
	11"	11"	N/A	5 (TOP)	
	12"	12"	N/A	5 (BOTTOM)	
	6"	N/A	N/A	6 (TOP)	
	6"	N/A	N/A	6 (BOTTOM)	

MAXIMUM A.S.D. DESIGN PRESSURE RATING (p.s.f.)	WOOD FASTENERS			APPLICABLE TO ALTERNATIVES # 4 ANY COMBINATION OF THEM	MAXIMUM PANEL LENGTH L ₂ (ft.)
	REGULAR TAPCONS	S.G.TAPCON	SCUMPS SSC		
+40.0, -40.0 UP TO +57.0, -57.0	N/A	12"	12"	1 (TOP)	> 6'-0" UP TO 7'-4"
	12"	12"	N/A	1 (BOTTOM)	
	12"	12"	N/A	2 (TOP)	
	12"	N/A	N/A	2 (BOTTOM)	
	12"	12"	N/A	3 (TOP)	
	7"	7"	N/A	3 (BOTTOM)	
	12"	12"	N/A	4 (TOP)	
	12"	12"	N/A	4 (BOTTOM)	
	6.5"	6.5"	N/A	5 (TOP)	
	7"	7"	N/A	5 (BOTTOM)	
	6"	N/A	N/A	6 (TOP)	
	6"	N/A	N/A	6 (BOTTOM)	

MAXIMUM A.S.D. DESIGN PRESSURE RATING (p.s.f.)	WOOD FASTENERS			APPLICABLE TO ALTERNATIVES # 4 ANY COMBINATION OF THEM	MAXIMUM PANEL LENGTH L ₂ (ft.)
	REGULAR TAPCONS	S.G.TAPCON	SCUMPS SSC		
+40.0, -40.0 OR LESS	N/A	12"	12"	1 (TOP)	> 6'-0" UP TO 9'-10"
	12"	12"	N/A	1 (BOTTOM)	
	12"	12"	N/A	2 (TOP)	
	12"	N/A	N/A	2 (BOTTOM)	
	12"	12"	N/A	3 (TOP)	
	7.5"	7.5"	N/A	3 (BOTTOM)	
	12"	12"	N/A	4 (TOP)	
	12"	12"	N/A	4 (BOTTOM)	
	7	7"	N/A	5 (TOP)	
	7.5"	7.5"	N/A	5 (BOTTOM)	
	6"	N/A	N/A	6 (TOP)	
	6"	N/A	N/A	6 (BOTTOM)	

MAXIMUM A.S.D. DESIGN PRESSURE RATING (p.s.f.)	WOOD FASTENERS			APPLICABLE TO ALTERNATIVES # 4 ANY COMBINATION OF THEM	MAXIMUM PANEL LENGTH L ₂ (ft.)
	REGULAR TAPCONS	S.G.TAPCON	SCUMPS SSC		
+58.0, -58.0 OR LESS	N/A	12"	12"	1 (TOP)	2'-8" OR LESS
	12"	12"	N/A	1 (BOTTOM)	
	12"	12"	N/A	2 (TOP)	
	12"	N/A	N/A	2 (BOTTOM)	
	12"	12"	N/A	3 (TOP)	
	12"	12"	N/A	3 (BOTTOM)	
	12"	12"	N/A	4 (TOP)	
	12"	12"	N/A	4 (BOTTOM)	
	12"	12"	N/A	5 (TOP)	
	12"	12"	N/A	5 (BOTTOM)	
	6"	N/A	N/A	6 (TOP)	
	6"	N/A	N/A	6 (BOTTOM)	

MAXIMUM A.S.D. DESIGN PRESSURE RATING (p.s.f.)	WOOD FASTENERS			APPLICABLE TO ALTERNATIVES # 4 ANY COMBINATION OF THEM	MAXIMUM PANEL LENGTH L ₂ (ft.)
	REGULAR TAPCONS	S.G.TAPCON	SCUMPS SSC		
+40.0, -40.0 UP TO +50.0, -50.0	N/A	12"	12"	1 (TOP)	6'-0" OR LESS
	12"	12"	N/A	1 (BOTTOM)	
	12"	12"	N/A	2 (TOP)	
	12"	N/A	N/A	2 (BOTTOM)	
	12"	12"	N/A	3 (TOP)	
	10"	10"	N/A	3 (BOTTOM)	
	12"	12"	N/A	4 (TOP)	
	12"	12"	N/A	4 (BOTTOM)	
	9"	9"	N/A	5 (TOP)	
	10"	10"	N/A	5 (BOTTOM)	
	6"	N/A	N/A	6 (TOP)	
	6"	N/A	N/A	6 (BOTTOM)	



© 2017 TILTECO, INC.

TILTECO INC.

TILITE TESTING & ENGINEERING COMPANY

6350 NW 36th Street, Suite 1530
Miami, FL 33165
Phone : (305)871-1530 Fax : (305)871-1531

WALTER A. TILLIT JR. P.E.

FLORIDA Lic. # 44167

24 GAGE GALVANIZED BERTHA STEEL STORM PANEL
(2" DEEP)

L.C.

DRAWN BY:

17-089

DRAWING No

07/25/17

DATE:

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

REV. NO

DESCRIPTION

DATE

REV. NO

DESCRIPTION

DATE

1

OLD 15-041

07/21/17

3

2

4

SHEET 10 OF 10